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A MONETARY HISTORY OF CHINA

(Zhongguo Huobi Shi)

By

Peng Xinwei

Translated By
Edward H. Kaplan

Peng / A Monetary History of China

Center for East Asian Studies, Western Washington University

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(Zhongguo Huopi Shi)
中國貨幣史

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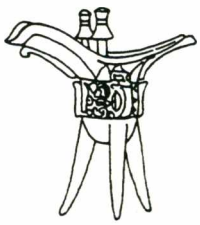
Volume One



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TRANSLATOR'S PREFACE

Translating this long, complex work, touching as it does on so many aspects of Chinese life, ranging from ancient philosophers to late Qing picaresque novels, has proven a daunting but rewarding task. I have learned a great deal about much more than Chinese money in the course of doing the translation. Nevertheless, I can hardly claim to have done justice to what is one of the great monuments of modern Chinese scholarship, and to its martyred author. Still, as Chesterton wisely observed, "If a thing is worth doing, it is worth doing badly."

Not the least of the virtues of making a translation of *Zhongguo huobi shi* available to the English-reading world is to celebrate a scholarly career which managed to transcend the limits of a regime which could have had no sympathy for the objects --the money-commodities and manufactured moneys-- which were the focus of that career, and which, as this book went through its second and third versions, came perilously close to abolishing altogether the market, the only place within which those objects can find their meaning.

Unfortunately, not much is known, at least to me, of Peng Xinwei's life. Perhaps a fuller account of his career will accompany the projected fourth and posthumous edition of his book. What follows is what I have been able to infer from the text, supplemented by one or more accounts from the Chinese numismatic world of which I have heard indirectly.

Born in 1907, in Yantian, Xixiang, Anfuxian in Jiangxi (cf. p. 884 of the Chinese text), Peng was educated at least partly abroad, apparently in Japan, and then settled in Shanghai to follow a career in banking. Peng's education in economics was essentially complete well before the so-called Keynesian revolution of the late 1930s, leaving him with a cast of mind essentially congruent with the approach of Carl Menger, who postulated the theory that money spontaneously evolved out of widely valued commodities without even the knowledge of the rulers initially, and that of Menger's successors within the Austrian School who, like Ludwig von Mises, integrated monetary theory into general economic theory, just as Peng himself subsequently integrated the history of Chinese money into the general intellectual and political history of China.

Peng's career in banking in China no doubt also allowed him to remain aloof from the Marxist ideas becoming endemic among the Chinese intelligentsia during the second and third decades of the republic. Though the men of his generation made the revolution without him, some time after 1949 Peng was obliged by the swallowing up of the private banks by the Leviathan state to begin to teach at Fudan University in Shanghai.

There he continued his lifelong avocation as collector of coins and as numismatist, and in the course of preparing the three editions of this book deepened his understanding of the wider applications of the history of money and of thought about money. The course of his intellectual life's evolution in the first post-1949 generation in China constitutes one of the more conspicuous evidences for the thesis that Marxism after all exerted remarkably little substantive influence at least on the best minds of that gloomy time. Peng uses some of the labels of Marxism --"feudalism," "slave society," etc.-- but merely for the protective coloration they might provide for an essentially non-Marxist sensibility and mind. Alas, he could not permanently succeed in avoiding detection as an original thinker.

Though his book has lived on, Peng Xinwei himself died during the Cultural Revolution, either directly or indirectly as a consequence of the violence which was so widespread on university campuses in the first years of that decade of chaos. Hence it is likely that his end came within a year or two of the publication of the third and largest edition of *Zhongguo huobi shi* in 1965. He finished working on that edition in autumn 1962. This translation is of that third edition.

A translation grant from the National Endowment for the Humanities allowed me to finish a rough draft of this translation in the early 1980s. The pressure of teaching duties and my own indolence as well as the size and difficulty of the task of checking and revising that initial draft have postponed its completion for more than a decade.

I am much indebted to Bruce W. Smith for reading over my manuscript and contributing a number of numismatic insights to the notes I have appended to it. I am also indebted to a number of Japanese friends for help with Japanese names, and to the editor of this series, Henry Schwarz, for his careful examination of the text. I must accept responsibility for what I am sure are the many errors remaining.

I understand that the late Professor Peng's colleagues in Shanghai are working on a revised and updated fourth edition of *Zhongguo huobi shi*. Perhaps I will someday be able to revise this translation in accord with their work, and on that occasion can include corrections of my errors offered by readers of this translation of the third edition.

Wherever possible I have translated rather than merely transliterated the names of coins. Collectors and numismatists may find this disconcerting, or at least somewhat annoying. My intent was to make the reading of the work simpler for beginning students and for other non-specialists who might find

Professor Peng's insights useful beyond the realm of monetary history and would not wish to be burdened by a surfeit of foreign words. Readers who are interested in doing so can use the English entries in the glossary-index to look up the *pinyin* transliterations and the original Chinese characters, and can then use the *pinyin* to Wade-Giles table that follows this section of prefatory materials to obtain the traditional labels used by collectors for referring to Chinese coins.

I have also wherever possible given the names of all books and articles cited by Peng in English. The reader may normally assume that such works are in either Chinese or Japanese unless the contrary is indicated in the text or footnotes, or unless the title appears without *pinyin* or Hepburn (for Japanese) romanization and characters in the glossary-index.

The page references in the glossary-index are to the page numbers of the Chinese third edition of 1965 and to the 1987 reprint of that edition. I have indicated the pagination of the original Chinese by placing the page numbers in boldface type within brackets on separate lines within the body of the text of my translation.

For ease in reading, I have placed Peng's notes at the bottom of the pages to which they refer, rather than at the ends of each subsection as in the Chinese original. This creates in the notes a separate sequence of page number references to the Chinese original.

Edward H. Kaplan
Bellingham, Washington, U.S.A.
March 1, 1992

[CHINESE] PUBLISHER'S EXPLANATION

This work was originally published by the United Masses (Qunlian) Publishing Company in 1954. After revision, it was published by us in 1958. After further revision, we published a third edition in 1965. Because of widespread demand by readers and to support the numismatic society, we decided to reprint the latter edition. Owing to the unfortunate demise of the author, Professor Peng Xinwei, during the ten years of disorder, it has not been possible to revise the text for this edition. Because the printing plates have been changed in size from the original 787 x 1092 mm 1/20 to 850 x 1156 1/32, the illustrations have been reduced in size in proportion. (The depictions of the coins in the original illustrations were the same size as the coins themselves. The degree of reduction in this edition is indicated on the plates themselves.) [For the translation I have used the larger plates from the third edition and placed a proportionately sized ruler within each plate so that readers can more accurately gauge the sizes of the coins. EHK] Also, for greater convenience in binding, the plates have been collected at the front of the text. [For the translation, I have placed each group of plates at the end of the subsection to which they are most relevant. EHK]

Shanghai People's Publishing Society
December 1987

PREFACE TO THE THIRD EDITION

This book was first brought out by the United Masses Publishing Company in 1954. I continued to add to and amend it, and it was reset in 1958 by the Shanghai People's Publishing Company. Using this second edition as a base, over the next few years I continued to revise and add to the work for this third edition.

The basic organization and general form of the book as a whole have not been changed in the course of these revisions. Only a few small emendations have been made. In the pre-Qin chapter, for example, a separate section on "Gold and Gold Coins" has been carved out so as to match the organization of later chapters. In the Tang Dynasty chapter, the "Silk Money" section has been moved in front of the one on "Gold and Silver" because during Tang silk had a somewhat more formal status as money than did gold or silver. In the Yuan Dynasty chapter, the second section, on "The Late Yuan Monetary Inflation" has been divided into two further subdivisions, "Depreciation of the *Zhiyuan* Bills" and "Depreciation of the Late Yuan *Zhizheng* Bills". The rationale for these rearrangements is evident.

The unique aspect of this third edition lies in what has been added to it. Under the rubric of monetary systems, the sections on pre-Qin bronze coins, Han coins, Jin through Sui coins, and Yuan coinage have all been expanded and rewritten. A section on "Three Kingdoms Era Coinage" has been added to the Han chapter. In the Qing Dynasty chapter, the first section, "Bronze Coins", has been broadened and subdivided under the headings "Standard Coins", "Taiping Heavenly Kingdom Coinage" and "The Late Qing Reform of the Coinage". Only the coinage sections of the Tang, Song, and Ming chapters have not undergone major revision because these had been rewritten for the second edition. I have made full use of the achievements of earlier monetary historians, have collated new material con-

cerning coins excavated in recent years, and have used the knowledge provided by numismatics to flesh out those aspects of the work dealing with monetary systems.

Each chapter also contains additional material on money's purchasing power. For the Han chapter in particular, I have gone into the Three Kingdoms era depreciation rather thoroughly under a separate heading. To the Ming chapter's section on purchasing power I have added a narrative making comparisons over time of rice-wheat price ratios, and also data on the prices of cotton cloth and raw cotton, cotton-grain price ratios, and the prices of copper, livestock, books, and agricultural land.

To the Qing dynasty chapter I have added a new section on "The Quantity of Money in Late Qing" which provides a rather deep analysis of the quantities of various kinds of moneys present during that epoch, and makes comparisons with data for other periods and for foreign countries. From these comparisons one may discern the place in Chinese history of the late Qing level of production for the market, as well as the place of China then among the other nations of the world. This is possible because the quantity of money of a given value present at any time must reflect the level of production and circulation of goods.

The biggest changes are in the sections on monetary theory. The first edition did not place much emphasis on these. Nor did the second edition add much to them. During those years I devoted most of my efforts to the coinage and purchasing power sections because these were most fundamental for understanding money's circulation. Only after clarifying these basic facts could I progress to the study of monetary theory. Otherwise I would have slipped into error and omitted too much. Even now, in terms of the work as a whole, the sections on monetary theory are not central, occupying as they do only a tenth of the whole. This is, however, a reasonable amount because the material on money's circulation in China is extraordinarily abundant, whereas in a feudal society like China's, monetary theory remained rather undeveloped.

My original plan was to give a straightforward summary of the development of the most typical monetary theories in China, as for example, objectivism, bullionism, nominalism, and quantity theory, placing emphasis on the theories rather than on the men who propounded them. I have not fully kept to that original plan because the men and the theories turned out to be inextricable from each other. In the history of mankind, in addition to the factors of space and time, events have generally been linked to particular individuals. Still, I have retained my original aim of avoiding the analysis of every statement on money made by every famous historical personage, nor have I unearthed every writer who made a genuine contribution to monetary theory. Nevertheless, relatively speaking, these sections have undergone the greatest change, more than doubling in length.

First of all, I added to the subdivisions on theory by increasing the number of persons discussed, and for those previously included I have made more detailed and deeper analysis of their theories. Second, I have broadened the scope of each section. Except for the one in the first chapter, the title of each of these sections was changed to "Monetary Studies", and in addition to the already present "Monetary Theory" headings, subsections on "Monetary History" and "Numismatics" have been added.

Monetary theory speaks to monetary practice. Hitherto there have been no monographs on this subject, nor has anyone studied it at all comprehensively. Given the great length of China's history, over the course of time officials or intellectuals have wittingly or unintentionally produced some ideas worthy of note. For example, paper money appeared first in China, and so the views of Chinese scholars on paper money, no matter how crude or shallow, include the world's earliest statements on the subject. Hence the history of Chinese monetary thought is worthy of summary. Fortunately, this subject has begun to be emphasized and scholars are advancing its study.

As to writings on monetary history, historically they are mainly to be found in the various "Treatises on Food and Money". These are much richer in content than are writings on monetary theory, but even so they are not complete, lack fully developed structure, and for the most part consist of fragmentary quotes from primary sources. No one has done a general summary of these works. My "Monetary History" sections cannot be said to constitute a scholarly history of this genre, but are merely intended to identify for students of the subject the most important of its works over the course of time. A true history of monetary historiography must await the work of posterity.

Numismatics has been a well-developed subject in China. It appeared in China about a millennium earlier than in Europe, and coins have been studied ever since without interruption. Even so, there has been no history of Chinese numismatics. There has not even been a relatively complete and well-organized monograph on the subject. And yet this would be a valuable work, since the quality of numismatic writing has been quite mixed down through the centuries.

It has been very fashionable since the Qianlong and Jiaqing periods of Qing to study and collect

coins. Forgers have also been numerous. They have not only forged rare items, they have even produced counterfeits of coins which have never existed at all. Undiscriminating and credulous numismatists have recorded everything which they have seen or of which they have heard; later writers have in turn copied their words, compounding the falsehoods. Hence very few of the old catalogs do not include forged coins. Even now there are still people who believe that China once had a coin inscribed "weight twelve-grain." I have here attempted to give a summary introduction to the important numismatic works over the course of history, along with an analysis and criticism of them. Though I was not able to indicate every forgery they contain, I have tried to engender caution among students of the subject.

Hence the third edition of this work has had its content almost entirely altered. The sections on credit have had the least added to them; first, because the book has concentrated on actual money, and though credit grows out of money, its nature is essentially independent of it; second, because sources on credit are not abundant. There is a fair amount of material only for late Qing, but so as to maintain proportion with the treatment of the subject elsewhere in the book, I felt I ought not to give a disproportionately detailed treatment of the topic for just that one short period. Someone ought to produce a monograph for this aspect of the subject.

In addition to these four subdivisions of each chapter, I have appended to this edition a "Chronology of Important Events in Chinese Monetary History".

I have also made some corrections of and additions to the illustrations. The several dozen pages of newly added illustrations are the work of my comrades in the Shanghai People's Arts Publishing Company. I here express my thanks to them.

September 1, 1962
Shanghai

PREFACE

Money's history is part of history in general, and one's aim in studying it is to aid in the understanding of history in general.

China's monetary history is worthy of our study because Chinese money has a long history, and though its development constituted an independent monetary culture, it both influenced and was influenced by other nations and peoples.

There are countries, like Babylon and Egypt, whose culture began earlier than China's, but up to now coins from their periods of remote antiquity have yet to be discovered. For the last century archeologists from imperialist countries like France and England have been excavating in these regions, have discovered and stolen a variety of artifacts to bring back to their own countries and display in their museums, but have failed to locate any coins from remote antiquity or indeed any coins earlier than the eighth century B.C.

And yet coins differ from other antiquities: First of all, they are robust and hard to destroy. This is one advantage of gold coins. Second, they must be plentiful because all wish to use them. Third, they must be widely distributed because they will be widely demanded. Hence if coins had been employed in antiquity, they would certainly have been discovered. In other words, if after so many years no Babylonian or Egyptian coins have been discovered, we may be sure that no coins had been minted prior to the eighth century B.C. The earliest Occidental coins were those issued in seventh and eighth century B.C. Lydia. This was during the reign of of King Ding of Zhou, by which time China already had a coinage.

According to Chinese tradition, money originated in China some four or five thousand years ago. The *Guan Zi* states that Tang [trad. 1766-53 B.C.] used the metal/gold of Zhuang Mountain to cast coins, and that Yu [trad. 2205-2197 B.C.] employed the metal/gold of Li Mountain for that purpose.

Sima Qian states that before Emperor Gaoxing [trad. 2435-2365 B.C.] there was already tortoise, cowry, metal/gold, coin/shovel, knife and spade money. Ban Gu says that during the time of Shennong [2737-2697 B.C.] there was metal/gold, knife, tortoise and cowry money. Zheng Qiao even goes so far as to say that Fuxi [2852-2737] and Gaoyang [2513-2435] called money "metal/gold" [*jin*], and that Youxiong and Gaoxing called it "money/commodity" [*huo*], Yao called it "fountain/spring" [*quan*], the men of Shang and Zhou called it "spades" [*bu*], and the men of the states of Qi and Lü called it "knives" [*dao*]. Though these writers make such statements flatly, there is no real basis for them. Modern excavations allow us to know that at the time of the Yellow Emperor and Gaoxing of tradition, our ancestors still could not use metal, and so how could they have employed metal coins?

China's earliest coin is unquestionably the cowry shell. We can see this from the structure of Chinese ideographs: The great majority of characters having something to do with value contain the pictograph for cowry, as for example the words for poor and cheap: Cowry plus divide becomes poor [*pin*]; cowry plus few becomes cheap [*jian*]. Obviously by the time of the formation of the written language of China, cowry shell had already become something of value.

Later, because the quantity of genuine cowry had become insufficient, people used imitations: oyster shells, soft stone, animal bones and finally bronze castings. These bronze cowries may be termed a kind of metal money. When real cowry was used, the *peng* was taken as its unit. A *peng* was originally a stringful. Eventually this probably referred to a definite quantity. An ancient ode contains the line "When I saw the prince, he conferred on me a hundred *peng*."

After the appearance of bronze cowries, however, it is possible that the term *peng* was replaced with the word *luo*,[a] meaning handful or pinch. In recent years bronze cowries have come out of Shang tombs, and on Western Zhou inscribed bronzes there has often appeared the phrase "[] such-and- such a number of *luo*." If this character or its alternate form []^{b} stands for bronze cowry, that would show that even before the tenth century B.C. China had the beginnings of a minted coinage.

In ancient times cowry shell was an article of adornment and also a luxury item. It is also frequently encountered in the records. Probably it later developed into a money used by the ruling class. The laboring people of those times could have used such major tools of production as shovels, knives, and spinning whorls to serve as measures of value and media of circulation. Such tools apparently took on the character of general embodiments of value among different regions or peoples, gradually became removed from their original function as commodities, and gradually became smaller. By the Spring-Autumn/Warring States period, they had evolved into formal spade-coins, knife-coins, and ring-coins. Among the spade-coins there is a large, hollow-socketed specimen without an inscription which could be a Western Zhou product. In any event, the origins of coin manufacture in China is no later than in foreign countries, and Chinese coins may have been the world's earliest.

Not only did money originate early in Chinese history, but it flourished there at an early time too. Some foreigners argue that although money came early to China, it did not have much of a social function because it did not circulate broadly there. This is not correct. When Liu Bang [founder of the Han dynasty] was head of Sishui, he wanted to pay a visit to his superior and so spread the lie that he had ten-thousand cash to give for an audience, thereby intimidating his way up to the gate where his superior greeted him. Because Xiao He had given Liu Bang two cash in his youth, he was later enfieffed with two thousand households. Zhao Yi of Eastern Han once said: "Though one fills one's mind with books, that's not as good as a pocket full of cash."

The monetary economy of Western and Eastern Jin was relatively weak, but in the wrathful spirit of its wording, Lu Bao's "On the Spirit of Cash" is not inferior to the denunciation of gold a thousand years later in Shakespeare's "Timon of Athens". During the Southern Dynasties, Zhou Wenyou inquired of a diviner. The diviner informed him that in the south he could become an aristocrat. To this Wenyou replied, "If money is sufficient, one may do so, but how could I hope for nobility?" There were those who "girdled themselves with a hundred thousand strings of cash and rode a crane-bird to Yangzhou." Obviously money fetishism had its origins very early in China.

The reason why foreign scholars make such errors is that modern Chinese historians write only on political history, neglect economic history and still more neglect monetary history. Ancient historians were not like this, but very few foreign historians are capable of making direct use of old Chinese historical materials.

China not only produced money early, it also independently developed it into a monetary culture. Money always appears within a characteristic context. When economic exchange has developed to a certain level, money necessarily appears. Hence money's origin is in principle always independent. This, however, only holds for the most primitive stage. Later, when production and exchange have advanced and broadened, should two peoples of unequal cultural levels come into contact, the people of lower culture will come under the influence of those of higher culture. We need only glance at the monetary history of ancient and modern nations to realize that very few nations have independently evolved their own money. Rather they have adopted other nations' systems.

If we turn to the origins and development of money, we find that in the Occident it originated in Asia Minor. From there it spread to the east and west. In the east, when the Persians conquered Asia Minor they learned how to make and use money, and the Assyrians learned about it from them. In the west the Greek colonists of Asia Minor carried the monetary culture back to Greece where they devoted themselves to its manufacture. It was only after its conquest by Alexander that Egypt began to mint coins. Hence its early coinage was entirely Greek in form. Even Persia and the other nations of the east had their coinages hellenized as a consequence of Alexander's conquests.

In ancient times Rome employed square pieces of copper. These were presumably its aboriginal form of money. Before long, however, it had entirely absorbed Greece's monetary culture. The modern Euro-American moneys have in turn grown out of the Roman monetary system. The English pound-

shilling-pence system evolved from Roman prototypes by way of the Carolingian Empire. The moneys of the Islamic nations of Asia were also born out of the Greco-Roman system. Even the names of the monetary units evolved from Greco-Roman originals. They differ in that Greco-Roman coins bear images of men, whereas because Islam forbids the worship of images, Islamic coins replace human images with phrases from the *Koran*. In all other respects these coins are Greco-Roman in form.

As for India, in remote antiquity it had an independent coinage, but after Alexander's conquests northern India's coinage became hellenized. Hence there are very few instances on this planet of a genuinely independent development and long term preservation of an independent monetary culture.

The path of China's monetary development is very clear. It did not, in any fundamental sense, undergo foreign cultural influence. We will not discuss cowry money because it has been employed by peoples all over the world, and so we cannot tell who was influenced by whom. China's earliest manufactured money, aside from bronze cowries, were knife, spade, and ring coins. The most important offshoot of the latter was the square-holed round coin. All three types originated in China. This is known because the spade coin evolved from an ancient Chinese agricultural tool, specimens of which have been excavated, and which are identical to early hollow socket spade coins. Knife coins are also identical to knives excavated from the Wastes of Yin. Both can be traced back to Stone Age prototypes. The same is true for ring coins. Spinning whorls excavated from the Wastes of Yin have this shape.

Nor did the later square-holed round coin appear adventitiously. The Half-ouncer coin of the First Emperor of Qin [*banliang*; Wade-Giles *pan-liang*] may be reckoned as representative of the first stage of its development.

Its shape represented a change from that of the ring coin in that it had a square hole, rather than the round hole of the ring coin. But this should not arouse suspicions of a foreign origin. Outer roundness and inner squareness resembled the roundness of Heaven and the squareness of Earth in the cosmology of the Chinese of those times.

In terms of nomenclature the Half-ouncer was not only the successor of the ring coin, but of the spade coin. There are one ounce and twelve grain ring coins, and there are three-hole spade coins which bear reverse inscriptions of one ounce or twelve grains. The ounce [*liang*] and grain [*zhu*] were Qin's units of weight. Twenty-four grains made one ounce; one ounce and twelve grains were one and a half ounces. The small three-hole spade marked twelve grains on its reverse had the same weight appelation as the First Emperor of Qin's Half-ouncer.

The use of weights as coin names continued in China right up to early Tang. Han coins included the Half-ouncer, Three-grainer, and Five-grainer. Six Dynasties coins included the Four-grainer, Five-grainer, and Six-grainer. It was not until 621 AD during Tang that the nomenclature was changed to incorporate the words "treasure" [*bao*], or "universal treasure [*tongbao*], or "original treasure" [*yuanbao*] or "heavy treasure" [*zhongbao*] in coin names. [This shift from identifying monetary units with units of weight was universal, and the logical consequence of state takeovers of coinage. The states could more easily depreciate coins if coin users were not constantly reminded that monetary units and weight units were the same. -EHK] This practice continued right down to the end of Qing.

The forms assumed by Chinese coins also differed decisively from those assumed in the West. Western coins tended to bear images of men, birds, beasts, flowers or trees, whereas Chinese coins bore nothing but inscriptions. If a bird or galloping horse should appear on a Chinese coin, people would tend to suspect it of not being genuine legal tender.

This also means that Chinese coins tend to carry evidence of the evolution of Chinese calligraphy. The inscriptions on pre-Qin coins are in ancient sealscript. They differ from the sealscript on oracle bones because they were made by different writing instruments. They differ from the writing on bronze vessels because the latter were written by members of the ruling class of that time whose cultural level was very high, whereas the coin inscriptions were written by local people involved in coin manufacture. Hence we have from coins evidence of the popular script at the time of their manufacture.

From the Qin Half-ouncer on, coin inscriptions were in the small seal script. By Six Dynasties times, however, the square style and clerkscript had also appeared on coins. Tang used only the clerkscript or the so-called "eight part" [*bafen*] script. Northern Song coins sometimes bore running or manuscript style inscriptions. The Taiping Heavenly Kingdom coins included simplified character inscriptions.

The great age and independence of China's monetary culture can also be discerned from the development of paper money. Credit money originated in China very early. Emperor Wu of Han's hide money already had the characteristics of a credit money. The "flying cash" [*feiqian*] of Emperor Xianzong of Tang is regarded by historians as a still more notable abuse of the concept of paper money.

Formal instruments of exchange appeared in the

tenth century. These were the Exchange Notes [*jiaozi*] of Northern Song. They were issued for fixed terms and had to be exchanged every two or three years for new issues. Hence they were not quite the same as modern paper money. But in 1247 fixed terms were abolished for Southern Song Account Notes [*huizi*] which were thereafter allowed to circulate indefinitely. But still earlier, in 1189, fixed terms for their exchange bills [*jiaoqiao*] had already been abolished by the Jin of the north, and since these notes were not exchanged for specie, they had become a pure paper money. During early Yuan times, the Italian Marco Polo came to China from Venice, the monetarily most developed place in Europe. When he saw China's paper money he was much impressed. Obviously China was the nation which adopted paper money earliest.

China's society underwent no fundamental change during the more than two millennia after Qin. Only after the Opium War did aggression by foreign capitalist powers force China to change into a semi-feudal-semi-colonial society. [In fact, Peng narrates enormous changes during these two millennia. He is merely repeating orthodoxy here. EHK]

For narrative convenience this book is not divided in accord with the stages of social development. I also differ from a number of foreign economists who divide history into a period of natural economy, a period of specie money, and a period of credit economy. This is because I take the whole period of the monetary economy for this book's subject, from the first appearance of money down nearly to the present. A system of credit is actually just a variant form of monetary system.

Nor do I treat the period before Yin and Zhou as the premonetary stage of the economy; the age from Yin-Zhou to Warring States as the first period of the monetary economy; Qin-Han to Qing as the flourishing stage, and the years since the beginning of the Republic as the late stage of the monetary economy. Nor, by taking into account the circumstances of money's evolution, do I even classify the Yin-Zhou as the stage of commodity money; Warring States to Five Dynasties or early Song as the age of coined money; the period after Song as the age of paper money; and the Republican years as the period of credit money.

Each of these characterizations has its shortcomings.

Instead, this work continues the common procedure of periodizing in terms of dynasties. I am not using this method just because it is customary, but also because ever since the authority to make and issue money first fell into the hands of rulers it has been an instrument for oppression of the people by the rulers. Changes in dynasty have caused most of the changes in money. Changes not linked to dynastic changes constitute exceptions. Most Chinese emperors did not desire to change their ancestors' laws.

Han dynasty money, for example, clearly differed from Warring States period money. After the defeat of Wang Mang, who had changed the system, Emperor Guangwu restored the Western Han monetary system. There was not another change in the coinage until the Tang dynasty. Song shifted to yet another style, but the system as a whole remained as before. The Yuan and Ming coinages each had their idiosyncracies. Qing coins are identifiable at a glance. Hence the method of periodizing by dynasty corresponds to reality.

The subject matter of each chapter is divided into four parts: First, monetary systems; second, money's purchasing power; third, monetary studies; fourth, credit and credit institutions.

From a modern perspective China's ancient money embodies no system to speak of, but if we employ a broader standard, any sort of historical arrangement, no matter how confused or illogical, can be characterized as a system. When I speak of China's monetary systems, it has been in these looser terms. Proceeding in this fashion we may discover several unique features in China's monetary systems.

First of all, in China the several functions of money have not been united in a single money. Since antiquity gold and silver have served as stores of value in China, and simultaneously as means of international payment. Sometimes they have also served as measures of value and standards of value. In ancient times, however, gold and silver were never made into coins in China. Nor were they used as media of circulation. The latter function was reserved for copper cash. Though gold and silver were sometimes coined, such coins only represented the outward form of money. They were never intended for circulation.

To a certain degree copper cash have fulfilled the various functions of money, but some functions were not primarily filled by copper cash, and sometimes copper cash were not used to meet them at all. For example gold and silver were mainly used as stores of value. Copper cash were only used for that purpose to a limited extent, and only coins up to the standard could be so used. People refused to hoard coins that were not up to the standard.

The most basic reason for this phenomenon was the absence of free coinage. Free coinage would not have allowed the purchasing power of copper cash to diverge from their instrinsic value. Sometimes private coining [in China not quite the same thing as free coinage. EHK] would even produce coins with

face values below the value of their metal content, but in general the face value of copper cash was higher than the value of their metal content to a very great degree. Therefore copper cash were not a very good store of value. This gave to copper cash a peculiar role, one different from foreign specie money. That is to say, copper cash's purchasing power was affected by its quantity more than was that of gold and silver specie money.

Specie and specie coins were not entirely unaffected by their quantity, but because the face value of specie and the intrinsic value of specie coins were roughly equal, they were very good stores of value. In areas using specie money, this store of value function could produce a moderating effect on the quantity of money, and so neutralized to some degree changes in the purchasing power of money which would have been caused by changes in the quantity of money.

Use of copper cash did not produce so large a moderating effect. Especially when such coins were reduced in weight or devalued, people simply refused to hoard them. They knew that such coins could not be passed on, and so it would be best to get rid of them immediately. This increased their velocity of circulation and reduced their purchasing power still further. Hence, in terms of its purchasing power, Chinese copper cash falls somewhere between specie and inconvertible paper money.

This is an important characteristic of ancient Chinese money. Only if one understands it can one clearly describe a number of phenomena in Chinese monetary history, as for example the fact that though Dong Zhuo's small coin was only reduced in weight to one-fifth, prices rose ten-thousand fold; or the case of Emperor Wu of Liang, whose iron coin was intrinsically worth no less than one-tenth the value of a copper coin, but caused prices to rise several hundred fold.

Nevertheless, we cannot deny that copper cash possesses some ability to regulate itself. At least copper cash which is up to standard possesses this faculty to some degree. Though a true system of free coinage was not present to guarantee a correspondence between coins' nominal value and intrinsic value, private coining and melting down of coins brought into play the effects of free coinage to some degree. Though private coins and private melting down of coins were illegal, they were difficult to suppress. Historically, what governments have actually banned has been private coining, and not the circulation of private coins themselves.

The various functions of money were divided among different objects, among which there were no definite relationships. Hence strictly speaking there was not really any coherent ancient system of money. Since there was no hierarchy between primary and secondary moneys, there was no standard system either. Theorists have liked to speak of the "mother-child mutual authority" [*zimu xiangquan*] system as entailing a primary-secondary money relationship. This is incorrect. We do not know what the original meaning of that term was. Later on it merely referred to a system involving large and small monetary units, and not primary and secondary moneys.

All of the ancient Chinese moneys were primary moneys. Hence, if one wishes to talk about standards, then Warring States, Qin, and Han may, by stretching terms, be said to have been on a gold-cash parallel standard, Six Dynasties, Sui, and Tang to have been on a cash-cloth parallel standard, Song, Jin, and Yuan to early Ming to have been on a cash-note circulation system, and mid- Ming to late Qing to have been on a silver-cash parallel standard. By parallel standard I mean that the several parallel moneys could all be employed without any limitations, and without a fixed exchange rate between them. Instead, the rate would vary blindly, following market prices of the moneys themselves. Some dynasties attempted to fix such exchange rates, but were unable to maintain them.

Another peculiarity of China's monetary systems was the localized nature of coin manufacture and circulation, which reflected Chinese society's feudal nature. The casting of coins in ancient times was managed locally. Pre-Qin knives and spades were made by individual cities, and many coin obverses carry place names. The Inaugural coin of Tang's huichang era, the Ming dynasty's Dazhong and the coins of Emperor Hongwu, and all of the Qing Dynasty coins during more than two centuries were all made by various prefectures, provinces, or branch offices, and bore on their reverses the name of the prefecture, province or office. Even the new style coins of late Qing and Republican times, like the silver and copper dollars, and paper bills were issued by various provinces and bore the name of the places of issue on their faces.

Chinese coins were not only produced locally, they also circulated locally. During Spring-Autumn-Warring States times the three ex-Jin states used spade coins, Yan and Qi used knife coins, Zhou and Qin used ring coins, and Chu used ant-nose coins. The lines of demarcation are quite clear. Similar localization also occurred during such periods of chaos as the Three Kingdoms, Northern and Southern Dynasties, and Five Dynasties-Ten Kingdoms.

Even under unified governments localized circulation of money remained a pervasive phenomenon. For example, ostensibly Song was a unified na-

tion, but its monetary system was fragmented. The thirteen circuits of Jingdong and Jingxi used copper cash. The four circuits of Chengdu used iron cash. Shaanxi and Hedong used both copper and iron cash. As for Southern Song's paper money, the southeast used Account Notes, Sichuan used Chuan Bills, the two Huai circuits used Exchange Notes, Hu-Guang used Hu Credit, and Hechi used Silver Credit.

Such localized circulation continued to exist right down to modern times. To take the late Qing and Republican period as an example, Silver Dollar Treasure came as Su Treasure Silver and Wuchang Treasure Silver; among Nominal Silver Ouncers, Shanghai used the *Gueiyuan*, Tianjin the *Xinghua*, and Hankou the *Yangli*. Among small denomination silver coins, the Jiang-Zhe region used Guangdong's double dime, the north used the single dime and double dime produced in Hubei and Hunan, Sichuan used the five-dime silver coin, and Hunan, Henan, and Manchuria did not even employ small denomination silver coins. Guangdong, on the other hand, only used small denominations and did not employ large denomination silver dollars.

The southern provinces used single copper boards; in the north double-value ones were employed. Henan used fifty-cash coppers; Sichuan only used hundred-cash and two-hundred cash ones. Even after the reactionary KMT government instituted the so-called lawful coinage system, the new money could only circulate in the southeast. Guangdong still used dime certificates and Guangxi used the Gueizhou money. Yunnan retained its Dian notes, and as for Tibet, Xinjiang, and Manchuria, they made even greater use of their own money. Right up to Liberation the nation's money remained localized in its circulation. Besides Tibet, Xinjiang also had its own paper money, as did Manchuria and Taiwan.

The third peculiarity of China's monetary systems is the lack of progress in techniques of coin manufacture. Chinese coins were made by hand, using casting molds. This too was characteristic of a feudal society. Using so primitive a method of coin manufacture it was difficult to obtain beauty of form, fineness of alloy was often lacking, and weights were not easily kept uniform.

This is not to say that handicraft methods cannot achieve beautiful objects. China's handicraft arts are world famous. Yin-Zhou bronzes, Song-Ming porcelain, have very high artistic value. There are also some very beautiful coins. For example, pre-Qin knives and spades, as well as coins of Wang Mang's and Emperor Huizong of Song's reigns are all of a very high level: In beauty of calligraphy and fineness of workmanship they are excellent works of art.

Not all those who made a living manufacturing coins could, however, be artists. Hence, generally speaking, Chinese coins were relatively coarsely made. Chinese numismatics has some specialized terms like "flowing copper", "error in the mold", "spread form", and "backwards," all of which were evoked by such primitive methods of manufacture. All these flaws can damage a coin's appearance. As for the size of the hole, the width of the raised edge, the thickness of the coin, not even the coins of Song Huizong's time could avoid difficulties in these respects.

Hence variant forms of the same Chinese coin are numerous enough to be un settling. For example, Northern Song's yuanfeng era only lasted eight years, but even if we only count those Yuanfeng Universal Treasure in Japan's *Shōwa Coin Catalog*, we find nearly three hundred variant forms. There are also several hundred variants of zhenghe and xuanhe era coins.

The multitude of variants exists because ever since Han times clay molds had predominated in coin manufacture, and virtually every mold differed from its fellows. Such primitive manufacturing methods made private coining extraordinarily convenient. Under the cruel oppression of the feudal rulers a great many good souls from among the masses were forced into private coining as a livelihood. During the reign of Emperor Wu of Han several hundred thousand people were sentenced to death for private coining, and several million engaged in the practice. In the year 758 in Chang'an alone over eight hundred individuals were executed for illegally melting down religious images to be cast into coins.

Because manufacturing methods did not progress, coins' alloys were extremely irregular. In ancient China the techniques of metallurgical analysis were not highly developed, communications were inconvenient, and so coins were frequently made right "at the mountain", that is to say, from virgin copper right at the source of the ore.

The copper ore was not only sometimes contaminated with lead and tin, but could even contain gold or silver. Hence the folk traditions which come down from ancient times stating that certain coins contained silver are entirely plausible.

At the beginning of the seventeenth century, when the Japanese banned the export of gold and silver, the Dutch imported more Japanese copper because it contained gold. During the same period Chinese in Zhangzhou smelted Japanese copper to obtain silver.

Hence Chinese coins come in various colors. This is because pure copper is red, and if you add lead or tin to it, it will turn greenish white. The proportion of lead and tin determines the color of

the copper coin. For example, the Xuanhe coins of Northern Song, are variously red, yellow, and white, and even among the yellow coppers there are various shades. Among Qing Dynasty Xianfeng coins, Fujian used purple copper, Xinjiang used red copper, and various other provinces favored different shades of green copper.

Because of the low level of manufacturing techniques as well as the flourishing of private coining, the weights of coins were very irregular. The First Emperor of Qin's Half-ouncer is a prime example of this. Not all Half-ouncers seen in modern times are Qin specimens. Most date to Han. The Han Half-ouncers were intentionally reduced in weight, so we will not consider them. Most numismatists consider any Half-ouncer which is thick and heavy and which has an inscription in high relief to be of Qin provenance. We may also say that any Half-ouncer weighing seven grams or more can be judged to be a Qin coin.

The late Qing specialist in bronze and stone inscriptions, Wu Dacheng, sought to establish the Qin weight standards by calculating the average weight of eight Qin Half-ouncers. His intentions were excellent, and this was an important issue because if we cannot clearly establish China's ancient system of weights and measures we cannot even begin to study China's economic history. The area under cultivation, the volume of production and its value, are all incapable of being compared over the course of time.

Unfortunately, the figure Wu obtained was unreliable. The reason for this was that the weights of even the Qin Half-ouncers were too variable. Using the treasury standard ounce, they ranged in weight from 0.1 to as much as or more than 0.6 ounces. From this we can conclude that not only are a number of surviving Half-ouncers not up to the standard weight, but that some even exceed the standard. Hence the average weight of eight coins may not be used to find the standard. Even the average weight of a still larger number of coins cannot establish the Qin weight standard. I have myself weighed sixty-four Qin Half-ouncers, and my average is much different from the one Wu Dacheng obtained. Even though my figure should be more reliable than Wu's, I do not consider it to be worth much.

Generally speaking, the weights of Chinese coins are very irregular. This was true even as late as the end of the Qing dynasty. For example, the Guangxu coin was supposed to weigh a maximum of 0.1 oz. Many, of course, did not rise to that standard, but there were also some which weighed as much as 0.13 oz. Among modern nations using new types of machinery to manufacture coins, tolerances of only three parts in a thousand are obtainable.

The fourth characteristic of Chinese monetary systems is that the weight of the primary money has remained virtually unchanged over the long term. Such a phenomenon is rarely encountered elsewhere. In the course of world monetary history several famous monetary units like the Roman *as*, the French *livre*, the English pound, and the Russian *den'ga* have all steadily been reduced in weight or value, and never been restored to their former levels. None of these monetary units has been used for very long.

None of these other coins can compare with China's money or standard coins in this respect, except for the Roman silver *denarius*. Let us look at the course of its reduction in weight and devaluation. During the Republican period, one *denarius* was one-sixth of a Roman ounce, or around 4.55 grams. Later it was reduced to one seventh of an ounce. Still later Nero reduced it to 3.453 grams and brought down its fineness from 99 parts to 80 parts. Such devaluation continued. By the third century it only contained two percent silver. Later on Diocletian and Constantine reformed the coinage but could only restore the standard of Nero's time.

During the Middle Ages the Carolingian Empire went back to a Roman style silver coin, the French name of which was the *denier*. Each coin only contained 1.55 grams of silver, and was gradually reduced in weight further. By the thirteenth century the Parisian *denier* weighed only 0.418 grams.

England and Germany also imitated the coinage of the Carolingian Empire. England called its coin the pence. In 1066 each coin weighed 1.4 grams. It too was gradually reduced in weight. By the beginnig of the seventeenth century it was down to 0.49 grams. Later it was transformed into a copper coin, and this copper pence was also reduced in weight from 26 grams in 1797 to 19 grams in 1806. In 1860 its weight was further reduced to 9 grams.

What about the main Chinese copper coin? Since Western Han's issue of the Five-grainer coin there were persistent attempts to maintain this weight. The best Western Han Five-grainer weighed about 4 grams. The average weighed a little less. Northern and Southern Dynasties Five-grainer coins for the most part weighed about the same.

Early Tang carried out a monetary reform and issued the Inaugural Universal Treasure. This Inaugural coin simply took the Five-grain coin as its standard, even to using the weight of its metal to influence China's standard of weights. This too was an unusual event in the world's monetary history. In ancient times the name of a country's money was usually borrowed from the name of a unit of weight, as was the case with the English pound, the French *livre*, the Italian *lire*, and the Chinese Half-ouncer and Five-grainer. But during the Tang Dynasty in

China, the system of weights was influenced by the monetary system. For units below the level of the catty and ounce, weight was no longer reckoned by the grain or fraction of a grain, but rather according to a decimal standard, with units called the cash [*qian*], fraction [*fen*], and hair [*hao*]. The *qian* was the weight of one copper cash. Ten Inaugural cash were equal to one ounce in weight.

From Tang on the copper cash basically remained about one *qian* in weight. The wude 4 [A.D. 621] Inaugural Universal Treasure was the same weight as the 1889 machine-made Kuangxu Universal Treasure from Guangdong. There had been no change over more than a millennium. If we start our reckoning from the Western Han Five-grainer, there had been no real change for two millennia.

What produced this situation was the fact that such a size and weight of coin proved to be rather useful in actual practice. Moreover, the people's reverence for antiquity obliged successful rulers to return to this standard as an act of virtue. Hence, Western Han Five-grainer coins were still in circulation during late Qing. It would be hard to imagine this as happening in Europe. Although Greece was still using the *drachma* as its monetary unit in late Qing times, one could not expect to find any *drachma* from the times of Alexander among them. If among Italian *lira* one could find a silver coin of Caesar's day, that would be considered a rare piece of luck. In fact this is something that could not occur. In countries like England or France, even two or three century old coins have disappeared from circulation.

Superficially, this last peculiarity of China's monetary systems is a great advantage, but we should not be deceived by this into supposing that China's monetary systems over the last few thousand years have been stable and that prices have been stable. Even if the weight and fineness of coins do not change, prices can be affected by changes in the value of the metal embodied in coins and even by changes in the value of goods themselves.

Actually, constancy in the weight of Chinese copper cash has only been evident over the long term. Over the short term, temporary changes have been very numerous, and these are more harmful for the monetary system than long term changes.

To speak more concretely, if during the course of a century the weight of a coinage is reduced to ten percent of what it had been and is then restored to its former level during each decade, this amounts to two changes in direction per decade, and twenty major changes in price over the course of the century. Instead, it would be better to gradually reduce the weight of the coinage to one tenth over the course of the century and not restore the original weight. This would cause harm, but less than the previous scheme would cause. This is because the most important thing for a standard of value is not to change. Changes in either direction are harmful. The history of Chinese coins most nearly resembles the former situation. Not only have there been frequent short-term weight reductions, but the cash's weight has some times even been pushed above 0.1 oz., and then restored to 0.1 oz.

Changes in money's purchasing power occupy a major portion of this book. Study of such changes is something new in China, but I have spent most of my time on it and devoted most of my space to it. My predecessors have mainly emphasized the superficial aspects of money. The subjects of numismatists' research have been the shapes of coins, the calligraphy of their inscriptions, and the names of coins at various times. These are merely copied out as into an account book, at times without even noting the weights and varying purity of the coins. As for the purchasing power of the coins, or why a particular coin was issued, the effect of its issue on the people's standard of living, how it affected government policy, it was even less likely that inquiry would be made on any of these subjects.

In fact, the form of an ancient coin is only its outer shell; its life or soul lies in the circumstances of its circulation, particularly its purchasing power. Its physical substance is worthy of our study, just as a fossil is deserving of a biologist's research. That is undeniable. If, however, we can learn from the fossil of a species of bird how in antiquity that bird flew, what sort of call it emitted, what its lifespan was, how it affected man's life, would not that be still better?

There are other people who study monetary systems, but lean toward research on their more recent aspects, such as the silver standard, the weight of the silver ounce, the purity of the silver ounce in different places, or the forms of paper money. For the most part they pass over pre-Qing events with a few sentences. Naturally they devote more attention to recent monetary economic theory than do students of ancient coins, but are blind to the consequences of money's purchasing power and changes in it, not understanding the links between the two.

Undoubtedly this is because source materials are not easy to gather, and also because monetary theory is not well developed in China. Money constitutes an institution in its own right. Hence its systematic study is very important.

One should not, however, overemphasize the importance of systems. Those who have devoted themselves to this problem since late Qing have suffered from this fault: They seem to believe that a system is everything. They suppose that the reason Japan

was able to rise to wealth and power within a short time lay in the reform of its monetary system. Hence proposed reforms follow one after the other. Students of money and its history concentrate on gathering laws and precedents, not even asking if these precedents had ever actually been carried into effect. It is as though if one merely determines on a good monetary unit, or selects a good type of money, then the result can be deemed a good monetary system.

These people do not realize that the virtue or success of a monetary system does not lie in the money's beauty of form or the size or weight of the monetary unit, but rather in the ability to preserve the money's purchasing power so that it does not destabilize the economic lives of the people. Hitherto most students of monetary history have neglected this point, and so have failed to explain or clarify some important historical phenomena.

For example, why did Emperor Wu of Liang's minting of iron coins cause prices to jump, just as did Emperor Wu of Han's minting of silver coins? Why did Dong Zhuo's minting of small cash constitute a monetary devaluation just as did Cai Jing's minting of large cash? Over the short term the purchasing power of Chinese money has undergone sharp changes. Since Han times, prices have jumped ten-thousand fold at least five or six times. As for the temporary small fluctuations induced by natural and man-made disasters, those are too numerous to mention individually.

In the course of history Chinese governments have employed all possible methods for carrying out monetary devaluations. At first they reduced weights to make small coins. They then used a disguised form of weight reduction and made large coins. Finally they went over to paper money to cause inflation.

Use of small coins would cause extreme reductions in the weight of coins. The early Han pod coin and Dong Zhuo's small cash both fall into this category. There are, however, limits to the degree of devaluation possible with this method. The early Han shift from the twelve grain Half-ouncer to the three grain pod coin only involved a four-fold inflation. Even a reduction to one grain would only have meant a twelve-fold inflation. Dong Zhuo reminted the Five-grainer coin into a one grain small cash. This represented only a five-fold inflation.

Large coins could involve more serious depreciation. Wang Mang's inlaid knife, for example, was given a face value of five thousand. Two of them ought to have commanded one catty of gold on the market. The Large Spring [*daquan*] of Sun Quan of the Three Kingdoms period and the large Xianfeng coin of Qing times both also belonged to this category. Ten-cash coins have not, however, amounted to much over the course of history.

Since Song times paper money has been employed to inflate the medium of circulation with hardly any limits to its expandability. There are two ways to inflate with paper money. One way is to inflate its quantity in the course of issuing new types of notes. Song, Jin, and Yuan all employed this method. The other way is to engage in direct expansion of the quantity of already existing kinds of notes. This method was employed with the Ming Dynasty's Great Ming Treasure Bills.

If students of Chinese history do not remain alert to changes in the value of money, they will easily reach erroneous conclusions. For example, the famous Japanese sinologist, Kawabara Jitsuzo, on the basis of a statement in *Miscellaneous Record In and Outside Court Since Jianyan* that at the time Song fled south annual receipts from the southeast were less than ten million but by around 1190 had increased to more than 65,300,000 strings, concluded that the increase was the result of the expansion of foreign trade. Actually, a large part of the increase was the result of monetary inflation. Similarly, Chinese historians ascribe the increased annual revenues during the latter years of Emperor Suzong of Tang to Liu Yan's Tribute Transport policy, but neglect the role of money in the matter.

The importance of studying the purchasing power of money cannot be exaggerated. Because money is the measure of value, the value of all forms of wealth is expressed in terms of money. At the same time money is also the instrument for making purchases. No goods or services may be obtained except by means of it. Even though a natural economy has held a dominant position within Chinese society for the last few thousand years, a monetary economy has predominated in the cities [and in those rural areas within the economic orbits of the cities. EHK]. Hence one may say that changes in money's purchasing power over time are the key to studying economic history.

For example, the standard of living of the people is a problem of critical concern for students of history. In pursuing this problem we must find out peoples' incomes in particular countries at particular times. These incomes are wholly or in part in the form of money. Hence we must first make clear money's purchasing power before we can calculate peoples' real incomes.

The income of Chinese farmers and workers has not increased much over the last two or three millennia. The income of a peasant household during peacetime has averaged only around one hectoliter of rice per month. In wartime, during bad years, or if rent was especially heavy, even this income could not be maintained. Hence the saying, "though there

are no vacant fields anywhere, the peasants still starve to death."

From Han to late Qing, the wages of labor varied according to the nature of the work, but could buy only from half to two or three hectoliters of husked rice per month per worker. Though this was what an individual received for his labor, it was in fact the disposable income of an entire family.

The income of a government official was, however, incomparably greater than this. Because previously historians have lacked exact understanding of money's purchasing power and of systems of weights and measures at different times, they have made erroneous judgments on the size of official salaries at various times. For example, the *Qing Dynasty Investigation of Literary Remains* states that official salaries were highest during Han, achieving levels not matched by Tang or Song.

This is incorrect. The reason for the error is that sometimes official salaries were stated in terms of commodities, but paid in money, while at other times they were stated in terms of money, but paid in commodities. Sometimes, in addition to official salary money, various commodities were given as supplements. Furthermore, standards of measurement differed over time. Hence if not corrected, historical data are meaningless.

Real official income for high ranking civil servants was actually highest during Northern Song; for low ranking officials it was at its maximum during high Tang. Both categories enjoyed much higher incomes than did equivalent Han ranks. After Northern Song these incomes kept on falling, reaching their nadir in Ming and Qing times.

To give some particulars, the Han dynasty Three Ducal Lords were called Ten- thousand *Hu* officers. Their monthly real income, converted into husked rice, was less than one hundred hectoliters during Western Han, and less than fifty hectoliters during Eastern Han. A high official of the first rank during high Tang could get 160 hectoliters. When added to his salary land revenues, his income probably approached the equivalent of 180 hectoliters. At the height of Northern Song, the six highest ranks could each obtain around four hundred hectoliters. At their peak levels, the income of first rank officials of Yuan times was only 110 hectoliters each. During early Ming they could also only hope to maintain a level of 110-120, but monetary inflation gradually reduced that figure thereafter. During the Qing period, peak salary for a first rank official was less than forty hectoliters.

As for low ranking officials, a Han dynasty hundred-picul minor functionary only received two or three hectoliters of rice. During the kaiyuan era of Tang a ninth rank official's salary was more than eleven hectoliters. If office lands income is added, the total must have been more than fourteen hectoliters. A Northern Song official of 1078-86 holding the rank of *chengwulang* could have a monthly income of ten hectoliters. Even during Yuan times a ninth rank functionary could still obtain around ten hectoliters. At the beginning of the Hongwu reign of Ming the figure was 8.5, and during the Qianlong reign of Qing it was seven hectoliters.

Hence Chinese official income figures describe a parabolic curve which rises from Qin-Han times to reach a peak during Tang-Song, and thereafter gradually falls. This parabola roughly corresponds to the rise and fall of Chinese power. Ruling class members always attempt to maximize their incomes. Because, however, financial resources did not hold up, they could not in the long run maintain their positions.

Naturally, the above figures only include formal salaries, and do not contain imperial gifts and the officials' own peculations. By late Qing an official's formal salary was not worth considering. This is because the formal annual salary of even a first rank Secretary of one of the Six Ministries was only 180 silver ounces. Even a double salary would only be 360 ounces, but in fact, as the saying went, "Finish three years as a prefect, get a hundred thousand snowflakes of silver."

There is one point which must be emphasized when studying the purchasing power of ancient Chinese money: the localized nature of changes in it. China's is a village-agrarian economy. It is like a large tree, one leaf of which may be eaten by caterpillars without the other leaves being affected. Monetary inflation was very similar to such a disease. There are a number of instances of inflation which were not national in their impact. The districts affected were limited to those where the bad money circulated. I suspect Dong Zhuo's small cash never circulated outside of the Chang'an and Luoyang districts. Other places continued to use the Five-grainer coins and their prices may have been entirely unaffected.

Nevertheless, there has been a long-term tendency for the purchasing power of Chinese money to gradually decrease. This was the general rule outside of China too, but in China the decrease may have been a little slower. Though there are a number of reasons for the purchasing power decline, one big factor was the loss in value of money itself. Changes in the value of Chinese money were irregular, not only in the short run, but also over the long term.

Taking the price of rice as one example, and converting all quantities into the modern hectoliter, during Qin and early Han one hectoliter only cost around a hundred cash. Coins were relatively heavy

then. During the reign of Emperor Zhao of Western Han [86-73 B.C.] a hectoliter was worth around two or three hundred cash. During Emperor Yuan's reign [48-32 B.C.] its price jumped to four or five hundred. Under Emperor Ai [6 B.C. to 1 A.D.] it reached six or seven hundred.

The money systems of Wei, Jin, and Northern and Southern Dynasties were in chaos, lacking any fixed standard, but high Tang [eighth century] was a time of low prices. During that period of more than a century, a hectoliter of rice cost only two or three hundred cash, which was lower than the average price during Western Han. After the An-Shih rebellions prices rose several fold.

Prices were also high during Song and Yuan. During Northern Song the price of a hectoliter of rice ranged from several hundred to a thousand cash. Southern Song and Yuan used paper money and so suffered still higher prices. Ming, however, was another period of contraction. Calculated in terms of the standard coin, a hectoliter of rice ranged from 2-300 to 5-600 cash. Prices slowly rose again during Qing. After 1800 a hectoliter generally ran to more than a thousand cash.

The fall in the value of Chinese money is displayed most clearly in terms of the purchasing power of silver. Calculating rice prices in terms of silver, during every century from Ming through Qing prices rose fifty percent. Calculating in terms of gold, rice prices were generally more stable.

There is one difficulty in studying Chinese prices. Most prices quoted before Ming involve unusual circumstances: If they are not prices after especially abundant harvests, they are prices during droughts, floods or during enemy sieges of cities. Such prices are not much help in studying money's purchasing power. Furthermore, price figures must be compared with people's money incomes before they gain any real significance. If it is difficult to collect Chinese prices, money incomes are even more difficult to estimate.

From Ming on price records gradually become more numerous, particularly that most important price, the price of rice, and that is most often stated in terms of silver. From 1436, when the ban on silver was lifted, right up to the abandonment of the silver standard in 1935, China formally reckoned prices in terms of silver for five centuries. For this period I have collected over a thousand rice prices. Hence for this half millennium our knowledge of money's purchasing power is relatively reliable.

Rather more material on the history of prices exists abroad. Even so, there is no unanimity in the conclusions of scholars. The thousand-odd rice prices collected in this book cannot be reckoned numerous for so long a period as five hundred years. In the future when it may be possible to search out still more material from archives in various places, people will be able to supplement the figures in this book, but I believe that the trend here shown for silver's purchasing power is a correct one.

The history of prices, especially the most important task of compiling grain prices, was completed for some countries as early as half a century ago, but in the various international statistical tables, the Chinese column which has hitherto been blank, can only now be filled in. Once money's purchasing power has been grasped, not only can one study peoples' incomes and living standards over time, one can go on to compare Chinese and foreign living standards as each rose and declined.

My initial conclusion after making such a comparison is that during Western Han the income of Chinese workers was higher than was the case in the Western world. During the feudal period, workers' living standards in Europe remained below those of Chinese toilers, but since the end of the fourteenth century European workers' money incomes have risen above those of Chinese laborers. European prices have also, however, been higher than China's. Hence the rise in the standard of living of European workers has occurred more recently. As this is not the main subject of this work, I will here say no more of it.

The monetary aspects of economic theory were not well developed in ancient times. Nevertheless prior to Tang and Song, China remained ahead of Europe, and in certain respects made important contributions to world monetary thought. Unfortunately, most of these were fragmentary discussions which were never turned into unified theory, and it was rare for later writers to build on previous achievements to make further progress.

The idea of "returning to the root", or giving primacy to agriculture, held sway for these several millennia because the official class's basic way of life remained underpinned by land rather than money. Only the merchants dared to openly and without misgivings devote themselves to making money. Merchants, however, could not write books and set up theories, and as the officials despised the merchants, it was all the more necessary for the officials to display their lack of concern with money.

There were two main trends within Chinese monetary theory. The first was the Han Dynasty Legalists' state determination theory. It supposed that money lacked any intrinsic value, and could only circulate because the ruler or government promoted or institutionalized it. This is very similar to the theories of such modern writers as G. F. Knapp. Western Han China's version of nominalism did, however, have a positive aspect in that its goal was

the unification of the monetary system. Hence it focused on the chaotic monetary institutions of the time and produced a theory to account for them.

The second trend was to propound quantity theories of money. Such theories were produced in the course of quarrels with devaluers and inflaters of the currency, and so were progressive for those times.

Most, however, of those who debated monetary problems in China placed emphasis on problems involving contemporary institutions. During Han, the right to mint coins lay at the heart of the debates. Since Song this position of primacy has been held by the paper money problem. Views on the nature of money and its value were raised only incidentally in the course of debates on these institutional problems.

Because the Chinese have frequently endured great calamities from the devaluation and inflation of money, most of them have been partisans of contractionist doctrines. Though they have rarely expressed themselves directly in theoretical terms, whenever Chinese historians have encountered periods of declining prices, they have invariably described such periods in utopian terms. Such judgments are manifestations of contractionism, and they also proceed from the bullionist position. In the course of Chinese history wars have always led to monetary devaluation. In times of peace prices have frequently declined.

This phenomenon was not altogether the result of progress in production techniqes, but has also been the result of contractionist sentiments. Because people were dominated by such ideas, they strove to reduce expenditures. In so self-sufficient an agricultural society as China's, however, monetary contraction causes little superficial harm. Though there must be some effect on production, people can at least enjoy low prices. [This argument holds in principle for industrial societies as well. Prices in England and America fell during much of the nineteenth century, even as production boomed. Despite this, most Westerners have, as Peng states below, favored inflation over deflation. EHK]

Inflation involving a tenfold price rise has been rare in English history, and industrialization occurred early there. Hence economists in capitalist nations tend to fear monetary contraction more than monetary inflation, and they openly advocate inflationary doctrines. Such inflationism is characteristic of a capitalist system, and is of most profit to capitalists [who expect the prices they charge to increase sooner than the prices they have to pay. EHK]. They hope annual price increases will increase their profits and expand their businesses. The result, however, is often to evoke war as a consequence of the struggle for profits. In the past some Chinese have acquired such erroneous views as a result of studying English and American books.

Hence, in my research on money, I have not emphasized monetary theory, but rather monetary history and numismatics. There have not been specialized works on monetary history in our tradition, but merely portions of historical works, like the *Historical Records*' "Treatise on the Balanced Standard", and the "Records of Food and Money" section of the *Han History* and subsequent dynastic histories, as well as the sections on coinage of the various general histories. This fine tradition within the premodern Chinese historical world was initiated by Sima Qian.

Because, however, those who wrote the later general and dynastic histories were not specialists in monetary history, they had no choice but to carry on in the tradition of Sima Qian and Ban Gu and merely compile available material on money. In addition to adding new material on their own dynasty, they would merely recopy the old material. Not only did monetary history not develop into an independent subject, in its content, form, and analytical methods, it did not rise very high in prestige.

By contrast, as soon as it came into existence, numismatics became an independent discipline. Later it was placed under bronze and stone studies (i.e. epigraphy), though it appeared earlier than epigraphy. We may, therefore, say that epigraphy grew out of numismatics. The sections on coins in the histories are not a part of numismatics because they were written on the basis of documentary material, whereas numismatics must be based on study of actual coins.

Numismatics makes a definite contribution to the study of history. In the history of the world there have been nations which, aside from their coins, have left nothing else behind. Their history can only be investigated on the basis of their coins. The ancient Bactrian and Yuehzhi Kushan monarchies are in this category. Even the Carthaginians, who fought with and in all respects were the equals of the Romans, have left nothing behind except for some beautiful coins. There are great nations for which, though they have written histories, in the view of historians, the study of their coins remains extremely important.

China is a country with an especially well developed historiography, but there are a great many gaps and errors in its written history which we depend on coins to supplement and correct. The frequency with which coins are minted, their size and weights, most sensitively reflect an epoch's fiscal policies and economic circumstances. They are primary and most reliable historical sources.

The monetary culture is also an important aspect

of the subject matter of numismatics. In the broad sense, what we mean by a monetary culture are the various advanced features which a society requires by the time it has developed to the point of using money. These include both its level of productive power and the formal institutions corresponding to that level of productive power. In the narrow sense, the term monetary culture refers to the artistic qualities of the coins, that is, their shapes, construction, inscriptions, and the images they bear.

The esthetic aspects of coins reveal to us the unique aspects of Chinese and European cultures. The Europeans have always considered their coins to be objects of art. This is particularly true of the ancient Greek coins which hold an important place among objects of art. Even during the Middle Ages, when esthetic qualities of coins were in decay, some European coins, particularly gold coins, still reflected the style of Byzantine art.

The ruling classes of some Chinese Dynasties also treated coins as art objects. Numismatists down through the ages here have also studied coin shapes and inscriptions, and have noted their esthetic qualities. It is no accident that some modern numismatists are also painters. Nevertheless the beauty of Chinese coins differs from that of European coins.

These differences are also present in other aspects of culture. Whether you look at literature or the pictorial arts, these differences are always present. Toward the end of the Qianlong reign, the plenipotentiary of the English King George III, Macartney, brought several portrait paintings to China. Chinese court officials, who were used to seeing traditional line drawings, upon seeing the chiaroscuro of these paintings supposed that the artists had carelessly smeared them.

The idiosyncracies of both cultures are also evident in their music. A man who enjoys a tune from the traditional Chinese opera *Alarming Dream in the Floating Garden* would not necessarily be moved by an aria from the European opera *Camille*. These are two different kinds of music with different boundaries.

There are similar differences between Chinese and European coins. A person who has grown to like Chinese knife, spade, and round coins might feel when he encounters European coins that they are insipid and tasteless. The reverse might also be true.

Numismatics and monetary history are still more inseparable. Not only must the history of monetary systems and the history of prices rest on a foundation of monetary theory, they must also be based on numismatics. In other words, it is not enough merely to search out materials from ancient written records. Coins themselves must be examined. In the past, however, those who studied monetary theory and those who studied coins were two entirely different sets of people. This was as true in China as abroad.

Monetary theory is a young discipline in China. The ancient writings did contain some fragmentary discussions of money, and by Han there were some monographs on monetary systems, but the making of monetary studies into an independent discipline engaged in full scale research activity is a very recent affair. The material known to past students of money has for the most part been foreign material. If one knew even a bit of Chinese history, that was considered something of an accomplishment, and of course there was no question of studying the coins themselves. Merely reading the dynastic histories' "Records of Food and Money" or even looking further afield for other extant written works is not enough, however, to provide complete and accurate accounts of monetary history.

Changes in prices sometimes cannot be fully explained by such methods. This is because prices are ratios between specie or coins and other commodities. A rise in prices may not necessarily have a monetary cause. It may be because of a change in value of the commodity itself. When, however, changes in the value of money induce changes in prices, the circumstances surrounding the change in the coins' nature must be explained before you can clearly understand the problem.

For this, dependence on book knowledge alone is insufficient. Though history books sometimes record data on a coin's weight and purity, this is merely the standard weight or purity, and changes in prices often occur precisely because a coin's actual weight and purity are not up to the standard. The history books rarely record the extent to which a period's coin age differs from the standard weight and purity. If by chance such data are recorded, they are usually neither detailed nor complete. Without numismatics this problem cannot be studied at all.

For example, the history books merely describe the lightened Western Han Half-ouncer as resembling an elm pod and call it the pod coin. If, however, you page through the "Treatise on the Balanced Standard" and the "Record of Food and Money", you cannot find out to just what extent these pod coins were lightened. You can only grasp this point from the objects themselves.

In studying Chinese monetary history, one must understand foreign as well as Chinese numismatics. For example, concerning the various foreign silver coins circulating in Chinese ports at the beginning of the Qianlong reign of Qing, the history books merely record such names as "horse coin", "flower border coin", and "cross coin". Later writers merely

copied these terms. What coins did these labels refer to? From what country did they come? Hitherto no one has been able to answer such questions because to do so would have required the study of foreign numismatics. And yet these questions must be answered because simply knowing these labels is of no use at all. At most they allow us to know that foreign money was circulating in China, and that is all. We must also know what coins these were and what countries they came from. Only then can we know with which countries China then engaged in commerce, which countries were active in international trade or which countries' coins enjoyed world-wide circulation.

Actually China's numismatics was the world's first. As far back as the Northern and Southern Dynasties there had appeared such specialized works as *Mr. Liu's Record of Coins* and *Gu Xuan's Coin Catalog*. This was more than eight centuries earlier than any comparable European works. Though these early works were very brief, not even approaching the lengths of the dynastic histories' "Records of Food and Money" subsections on coins, nevertheless the latter were compilations of source materials, the authors of which might be completely ignorant of money, whereas the numismatists' writings were the fruit of direct research.

In a feudal society all scholarship progresses very slowly. Chinese numismatics was no exception. It was not until Five Dynasties and Song times that the next step was taken. For the most part, however, mere copying of previous work continued and creative work was rare. Numismatic works of value were particularly scarce during Ming. It was not until the Qianlong years of Qing when, owing to the vogue enjoyed by the methods of the school of textual verification, there was a notable improvement. Only then did Chinese numismatics begin to enjoy unprecedented development. Men like Weng Shupei devoted almost their entire lives to numismatics.

In addition to examining the coins themselves, they conducted broad searches through the written records. These numismatists were, nevertheless, men of wealth and leisure, and almost all of them were pursuing this as a hobby. Moreover, due to the limitations of their times, they lacked a foundation in modern social science, and their methods were not altogether precise. Hence, over the past century there has been little progress. Very few monetary theorists and monetary historians have had any contact with numismatics, and so their accomplishments have not been large. Only if the documents and the objects are brought together, if theory and practice are joined, if monetary theory and numismatics are linked, can the truth come to be understood.

Nor has anyone made a thorough investigation of credit and credit mechanisms. Instruments of credit such as loans, deposits, or mercantile money are sometimes called monetary instruments in foreign countries. In the past the economic world has been somewhat out of touch with Chinese economic history. For example, in the case of the Chinese traditional banks, the money shops [*qianzhuang*], both students of their history and leaders of the financial community often did not know their history and would keep saying they had only been in existence for a century. This was as inaccurate as would be a statement that the Qing dynasty had only been in existence for fifty years.

Chinese credit and credit institutions originated much earler. At first, virtually every aspect of the trade had its own separate organizaions. Loans, deposits, money conversion or exchange, and money remittance from one place to another each had their own organizations. It was not until late Ming and early Qing that there was a trend toward their consolidation. Of these basic forms of credit, loan-making was best developed. Both private lending and pawnbroking had very long histories. Next came money conversion. In ancient times it was managed by gold and silversmiths. There were exchange shops [*duifang*] during Song. The appearance of the traditional banks since Ming times gives further evidence of the liveliness of the money exchange trade. Money remittance flourished during the Tang. After the Northern Song put paper money into circulation the remittance business stagnated, and did not revive until the establishment of the Qing dynasty note houses [*piaohao*].

Least well developed was deposit. Though the method of entrustment [*jifu*] had existed since ancient times, and there were safe deposit shops [*guifang*] during Tang, it is questionable whether entrustment was a genuine form of deposit, and the nature of the safe deposit shops has still not been entirely understood. It was not until the Qing Dynasty that there was a genuine deposit trade. The officials and rich men of feudal China were unwilling to entrust their wealth to others, and preferred to bury it inside walls or underground, at times even without telling their wives or children. Most of the gold and silver amassed by the mid-sixteenth century corrupt minister Yen Song and his son was hidden in a cellar. Copper cash were treated much the same as gold and silver. Great families buried gold and silver. Lesser households buried copper cash.

The foreign expressions "ready money" or "walking around money" all mean "to have ready money actually in hand". These locutions express money's function of providing cash balances. Such expressions were not used in ancient China. The money hoards of Chinese officials and rich men in

the old days can in a sense be taken as manifestations of their liquidity preferences --of their preparations for emergencies. Emergencies were, however, rare, and money hoarded to assure a person's liquidity instead became dead and could only have a constricting effect on prices. This was a consequence of the undeveloped state of the deposit trade, but was at the same time a cause of that lack of development.

Peng Xinwei
Shanghai
February 18, 1954
Revised and enlarged for the second and third editions.

a.乎 b.蕢,遺

CHINESE TRANSLITERATION CONVERSION TABLE

Pinyin	Wade-Giles	Phonetic
a	a	ah
ai	ai	aye
an	an	ahn
ang	ang	ahng
ao	ao	ow
ba	pa	bah
bai	pai	buy
ban	pan	bahn
bang	pang	bahng
bao	pao	bow(-wow)
bei	pei	bay
ben	pen	bun
beng	peng	bung
bi	pi	bee
bian	pien	be-yen
biao	piao	be-yow
bie	pieh	be-yeh
bin	pin	been
bing	ping	bing
bo	po	baw(dy)
bou	pou	Bo(bo)
bu	pu	boo
ca	ts'a	It's a boy
cai	ts'ai	tsahy
can	ts'an	tsahn
cang	ts'ang	tsahng
cao	ts'ao	tsow
ce	ts'e	tsuh
cen	ts'en	tsehn
ceng	ts'eng	tsehng
cha	ch'a	chah
chai	ch'ai	chahy
chan	ch'an	chahn
chang	ch'ang	chahng
chao	ch'ao	chow
che	ch'e	chuh
chen	ch'en	chehn
cheng	ch'eng	chehng
chi	ch'ih	chrr
chong	ch'ung	choong
chou	ch'ou	choh
chu	ch'u	chew
chuai	ch'uai	chwahy
chuan	ch'uan	chwahn
chuang	ch'uang	chwahng
chui	ch'ui	which way
chun	ch'un	which win
chuo	ch'o	chaw
ci	tz'u	bits
cong	ts'ung	tsoong
cou	ts'ou	it's o.k
cu	ts'u	jujitsu
cuan	ts'uan	tswahn
cui	ts'ui	tsway

Pinyin	Wade-Giles	Phonetic
cun	ts'un	tswin
cuo	ts'o	tsaw
da	ta	dah
dai	tai	dye
dan	tan	dahn
dang	tang	dahng
dao	tao	Dow(-Jones)
de	teh	duh
dei	tei	day
deng	teng	dung
di	ti	dee
dian	tian	dee-ehn
diao	tiao	dee-ow
die	tieh	dee-eh
ding	ting	ding
diu	tiu	dee-oh
dong	tung	doong
dou	tou	dough
du	tu	do
duan	tuan	dwahn
dui	tui	dway
dun	tun	dwin
duo	to	daw
e	e,o	ugh
ei	ei	say
en	en	undo
eng	eng	lung
er	erh	uhr
fa	fa	father
fan	fan	The Fonz
fang	fang	fahng
fei	fei	Fay
fen	fen	fun
feng	feng	fehng
fo	fo	fore
fou	fou	foe
fu	fu	foo
ga	ka	ga
gai	kai	guy
gan	kan	gahn
gang	kang	gahng
gao	kao	hoosegow
ge	ke,ko	guh
gei	kei	gay
gen	ken	gehn
geng	keng	guhng
gong	kung	goong
gou	kou	go
gu	ku	goo
gua	kua	gwah
guai	kuai	gwaye
guan	kuan	gwahn

Pinyin	Wade-Giles	Phonetic
guang	kuang	gwahng
gui	kuei	gway
gun	kun	gwin
guo	kuo	gwaw
ha	ha	hah
hai	hai	hi
han	han	hahn
hang	hang	hahng
hao	hao	how
he	he,ho	heh
hei	hei	hay
hen	hen	huhn
heng	heng	hehng
hong	hung	hoong
hou	hou	hi-hoh
hu	hu	who
hua	hua	hwah
huai	huai	hwave
huan	huan	hwahn
huang	huang	hwahng
hui	hui	hway
hun	hun	hwin
huo	huo	hwaw
ji	ji	gee
jia	chia	gee-ah
jian	chien	gee-ehn
jiang	chiang	gee-ahng
jiao	chiao	gee-ow
jieh	chieh	gee-eh
jin	chin	gin
jing	ching	jingle
jiong	chiung	gee-uhng
jiu	chiu	gee-oh
ju	chü	Jew
juan	chüan	jywaan
jue	chüeh	jyweh
jun	chün	jywin
ka	k'a	kah
kai	k'ai	kahy
kan	k'an	kahn
kang	k'ang	kahng
kao	k'ao	cow
ke	k'e,k'o	keh
ken	k'en	Lincoln
keng	k'eng	kehng
kong	k'ung	koong
kou	k'ou	co-sponsor
ku	k'u	coo
kua	k'ua	kwah
kuai	k'uai	kway
kuan	k'uan	kwahn
kuang	k'uang	kwahng
kui	k'uei	kway

Pinyin	Wade-Giles	Phonetic
kun	k'un	kwin
kuo	k'uo	kwaw
la	la	lah
lai	lai	lye
lan	lan	lahn
lang	lang	lahng
lao	lao	lahw
le	le	leh
lei	lei	lay
leng	leng	lung
li	li	lee
lia	lia	lee-yah
lian	lien	lee-yen
liang	liang	lee-ahng
liao	liao	lee-ow
lie	lieh	lee-eh
lin	lin	lin
ling	ling	ling
liu	liu	lee-oh
long	lung	loong
lou	lou	low
lu	lu	loo
luan	luan	lwahn
lun	lun	lwin
luo	lo	law
lü	lü	lee-yew
lüe	lüeh	lih-yew-eh
ma	ma	ma
mai	mai	my
man	man	mahn
mang	mang	mahng
mao	mao	mah-ow
mei	mei	may
men	men	muhn
meng	meng	mehng
mi	mi	me
mian	mien	me-en
miao	miao	me-ow
mie	mieh	me-eh
min	min	min
ming	ming	ming
miu	miu	me-oh
mo	mo	maw
mou	mou	Moe
mu	mu	moo
na	na	nah
nai	nai	*night*
nan	nan	*non*sense
nang	nang	nahng
nao	nao	now
ne	ne	neh
nei	nei	nay
nen	nen	nun
neng	neng	nehng
nong	nung	noong

Pinyin	Wade-Giles	Phonetic
nou	nou	no
ni	ni	knee
nian	nien	knee-n
niang	niang	knee-ahng
niao	niao	knee-ow
nie	nieh	knee-eh
nin	nin	nin
ning	ning	ning
niu	niu	knee-oh
nu	nu	noo
nuan	nuan	nwahn
nuo	no	gnaw
nü	nü	knee-yew
nüe	nüeh	nyweh
pa	p'a	pah
pai	p'ai	pie (π)
pan	p'an	pahn
pang	p'ang	pahng
pao	p'ao	pow(-wow)
pei	p'ei	pay
pen	p'en	pun
peng	p'eng	pehng
po	p'o	paw
pou	p'ou	Poe
pi	p'i	pee
pian	p'ien	pee-en
piao	p'iao	pee-ow
pie	p'ieh	pee-eh
pin	p'in	pin
ping	p'ing	ping
pu	p'u	poo
qi	ch'i	chee
qia	ch'ia	chee-ah
qian	ch'ien	chee-en
qiang	ch'iang	chee-ahng
qiao	ch'iao	chee-ow
qie	ch'ieh	chee-eh
qin	ch'in	chin
qing	ch'ing	ching
qiong	ch'iung	chee-oong
qiu	ch'iu	chee-oh
qu	ch'ü	chee-oo
quan	ch'üan	chywaan
que	ch'üe	chyweh
qun	ch'ün	chvwin
ran	jan	rahn
rang	jang	rahng
rao	jao	rahw
re	je	ruh
ren	jen	ren
reng	jeng	rung
ri	jih	ihr
rong	jung	roong
rou	jou	row
ru	ju	rue

Pinyin	Wade-Giles	Phonetic
ruan	juan	rwan
rui	jui	rway
run	jun	rwin
ruo	jo	raw
sa	sa	sah
sai	sai	sigh
san	san	sahn
sang	sang	sahng
sao	sao	sow
se	se	suh
sen	sen	sehn
seng	seng	sung
sha	sha	sha
shai	shai	shy
shan	shan	shahn
shang	shang	shahng
shao	shao	shahw
she	she	shuh
shei	shei	shay
shen	shen	shehn
sheng	sheng	shehng
shi	shih	shr
shou	shou	show
shu	shu	shue
shua	shua	shwah
shuai	shuai	shwai
shuan	shuan	shwahn
shuang	shuang	shwahng
shui	shui	shway
shun	shun	shwin
shuo	shuo	shaw
si	szu,ssu	szz
song	sung	suhng
sou	sou	sew
su	su	sue
suan	suan	swahn
sui	sui	sway
sun	sun	swin
suo	so	saw
ta	t'a	tah
tai	t'ai	tie
tan	t'an	tahn
tang	t'ang	tahng
tao	t'ao	*tow*el
te	t'e	tuh
teng	t'eng	tuhng
ti	t'i	tea
tian	t'ien	tee-en
tiao	t'iao	tee-ow
tie	t'ieh	tee-eh
ting	t'ing	*ting*le
tong	t'ung	toong
tou	t'ou	*tow*path
tu	t'u	too
tuan	t'uan	twahn
tui	t'ui	tway

Pinyin	Wade-Giles	Phonetic
tun	t'un	twin
tuo	t'uo	taw
wa	wa	wah
wai	wai	wah-yee
wan	wan	wahn
wang	wang	wahng
wei	wei	way
wen	wen	won
weng	weng	wehng
wo	wo	waw
wu	wu	woo
xi	hsi	syee
xia	hsia	syah
xian	hsien	syen
xiang	hsiang	syahng
xiao	hsiao	syow
xie	hsieh	syeh
xin	hsin	syin
xing	hsing	sying
xiong	hsiung	syoong
xiu	hsiu	syoh
xu	hsü	syu
xuan	hsüan	sywaan
xue	hsüeh	syweh

Pinyin	Wade-Giles	Phonetic
xun	hsün	sywin
ya	ya	yah
yan	yen	yen
yang	yang	yahng
yao	yao	yow
ye	yeh	yeh
yi	i	yii
yin	yin	yin
ying	ying	ying
yong	yung	yoong
you	yu	yoh
yu	yü	yew
yuan	yüan	ywaan
yue	yüeh	yweh
yun	yün	ywin
za	tsa	bir*ds-ah*
zai	tsai	bir*ds-eye*
zan	tsan	dzahn
zang	tsang	dzahng
zao	tsao	dzow
ze	tse	dzuh
zei	tsei	dzay
zen	tsen	dzehn
zeng	tseng	dzehng

Pinyin	Wade-Giles	Phonetic
zha	cha	jah
zhai	chai	jahye
zhan	chan	jahn
zhang	chang	jahng
zhao	chao	jow
zhe	che	juh
zhei	chei	jay
zhen	chen	juhn
zheng	cheng	jehng
zhi	chih	jr
zhong	chung	joong
zhou	chou	Joe
zhu	chu	Jew
zhua	chua	jwah
zhuai	chuai	jwave
zhuan	chuan	jwahn
zhuang	chuang	jwahng
zhui	chui	jway
zhun	chun	jwin
zhuo	cho	jaw
zi	tzu	dzz
zong	tsung	dzoong
zou	tsou	dzoh
zu	tsu	dzoo
zuan	tsuan	dzwahn
zui	tsui	dzway
zun	tsun	dzwin
zuo	tso	dzaw

HISTORICAL TABLE OF WEIGHTS AND MEASURES

WEIGHTS:

(ancient times, at least through Han)

1 *lei* = 10 millet seeds

1 *zhu* = 10 *lei*; = 0.64 g (Han Dynasty)

24 *zhu* = 1 *liang* (ounce)

1 (Han Dynasty) ounce = 19.2 grams (Western Han), = 16.4 grams (Wang Mang); = 15.36 grams (Han Dynasty, according to *The Cambridge History of China*, volume 1)

16 *liang* (ounces) = 1 *jin* (catty); 20 *liang* (ounces) = 1 *yi* (Warring States)

1 *liang* (ounce) = 37.3 grams (Tang, Song, Yuan Dynasties) = 1.3 English ounces (Ming Dynasty)

1 *qian* = 0.1 Tang Dynasty ounce

1 *momme* (Japan, Ashikaga) = 0.98 Chinese ounce

1 treasury ounce = 37 grams (Qing Dynasty)

1 customs ounce = 37.68 grams (Qing Dynasty)

1 Canton ounce = 37.57 grams (Qing Dynasty)

1 English ounce = 31.1 grams

1 *dan* = 50 kilograms (Qing Dynasty)

1 *shi* = 4 *jun* = 29.5 kg (Han Dynasty)

1 *jun* = 30 *jin* = 7.37 kg (Han Dynasty)

1 *jin* = 16 *liang* = 245 grams (Han Dynasty); = 0.5 kilograms (Qing Dynasty)

1 *liang* (ounce) = 1/16 *jin*

1 *jin* (catty) = 1-1/3 English pounds (Ming & Qing Dynasties)

1 *dan* (picul) = 100 catties

1 picul by volume of unhusked rice weighed 120 *jin* (60 kg) during the nineteenth century

VOLUME:

1 picul (*dan/shi*) = 0.3425 hectoliters (Han Dynasty)

1 picul (*dan/shi*) = 0.948 hectoliters (Yuan Dynasty)

7 *dou* = 1 picul (Yuan Dynasty)

28 *dou* = 1 picul (late Ming Dynasty)

1 picul (*dan*) = 1.0355 hectoliters (Qing Dynasty)

1 *hu* = 1/2 *dan*; = 19.968 liters (Han Dynasty)

1 *dou* (peck) = 0.1 *dan* = 1.996 liters (Han Dynasty)

1 *sheng* (pint) = 0.1 *dou* (Qing Dynasty) = 31.6 cubic inches (English) = c. 0.99 quart

10 *ge* = 1 *sheng* (Han Dynasty)

1 *ge* = 19.968 cc (Han Dynasty)

LENGTH:

1 *cun* (inch) = 0.1 *chi* = 23.1 mm (Han Dynasty)

1 *bu* (double pace) = 5 *chi*; = 6 *chi* = 1.38 m (Han Dynasty)

1 *chi* (foot) = 23.1 cm (Han Dynasty) = c. 12.3 inches (Ming Dynasty, *The Cambridge History of China*, vol. 7) = c. 14 English inches during nineteenth century

1 *zhang* = 10 *chi* = 2.31 m (Han Dynasty)

1 *li* = 1/3 English mile = 0.415 km (Han Dynasty)

AREA:

1 *mou/mu* = c. 1/6 acre

1 *shang* = 6-12 *mou* (in Manchuria, according to John DeFrancis, *Chinese Social History*, 1956)

1 *qing* = 100 *mou*; = 11.39 English acres (Han Dynasty)

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(after Mathews' Chinese-English Dictionary)

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jiayou 嘉祐 1056

Yingzong 英宗 1064
yeping 冶平 1064

Shenzong 神宗 1068
xining 熙寧 1068
yuanfeng 元豐 1078

Zhezong 哲宗 1086
yuanyou 元祐 1086
shaosheng 紹聖 1094
yuanfu 元符 1098

Huizong 徽宗 1101
jianzhong 建中 / jingguo 靖國 1101
chongning 崇寧 1102
daguan 大觀 1107
zhenghe 政和 1111
chonghe 重和 1118
xuanhe 宣和 1119

Qinzong 欽宗 1126
jingkang 靖康 1126

Southern Song Dynasty 南宋 (153 years) 1127

Gaozong 高宗 1127
jianyan 建炎 1127
shaoxing 紹興 1131

Xiaozong 孝宗 1163
longxing 隆興 1163
qiandao 乾道 1165
chunxi 淳熙 1174

Guangzong 光宗 1190
shaoxi 紹熙 1190

Ningzong 寧宗 1195
qingyuan 慶元 1195
jiatai 嘉泰 1201
kaixi 開禧 1205
jiading 嘉定 1208

Lizong 理宗 1225
baoqing 寶慶 1225
shaoding 紹定 1228
duanping 端平 1234
jiaxi 嘉熙 1237
chunyou 淳祐 1241
baoyou 寶祐 1253
kaiqing 開慶 1259
jingding 景定 1260

Duzong 度宗 1265
xianchun 咸淳 1265

Gongdi 恭帝 1275
deyou 德祐 1275

Duanzong 端宗 1276
jingyan 景炎 1276

Dibing 帝昺 1278
xiangxing 祥興 1278

Yuan Dynasty 元 (88 years) 1206

Taizu 太祖 (Chinggis Khan) 1206

Taizong 太宗 1229

Dingzong 定宗 1246

Xianzong 憲宗 1251

Shizu 世祖 (Kublai) 1260
zhongtong 中統 1260
zhiyuan 至元 1264

Chengzong 成宗 1295
yuanzhen 元貞 1295
dade 大德 1297

Wuzong 武宗 1308
zhida 至大 1308

Renzong 仁宗 1312
huangqing 皇慶 1312
yanyou 延祐 1314

Yingzong 英宗	1321
zhizhi 至治	1321
Taiding 泰定	1324
taiding 泰定	1324
zhihe 致和	1328
Mingzong 明宗	1329
tianli 天曆	1329
Wendi 文帝	1330
tianli 天曆	1330
zhishun 至順	1330
Shundi 順帝	1333
yuantong 元統	1333
zhiyuan 至元	1335
zhizheng 至正	1341
Ming Dynasty 明 (276 years)	1368
Taizu 太祖	1368
hongwu 洪武	1368
Huidi 惠帝	1399
jianwen 建文	1399
Chengzu 成祖	1403
yongle 永樂	1403
Renzong 仁宗	1425
hongxi 洪熙	1425
Xuanzong 宣宗	1426
xuande 宣德	1426
Yingzong 英宗	1436
zhengtong 正統	1436
Daizong 代宗 / Jingdi 景帝	1450
jingtai 景泰	1450
Yingzong 英宗 (resumed government)	1457
tianshun 天順	1457
Xianzong 憲宗	1465
chenghua 成化	1465
Xiaozong 孝宗	1488
hongzhi 弘治	1488
Wuzong 武宗	1506
zhengde 正德	1506
Shizong 世宗	1522
jiajing 嘉靖	1522
Muzong 穆宗	1567
longqing 隆慶	1567
Shenzong 神宗	1573
wanli 萬麗	1573
Guangzong 光宗	1620
taichang 泰昌	1620
Xizong 熹宗	1621
tianqi 天啓	1621
Zhuangliedi 莊烈帝	1628
chongzhen 崇禎	1628
Qing Dynasty 清 (268 years)	1644
Shizu Zhanghuangdi 世祖章皇帝	1644
shunzhi 順治	1644
Shengzu Renhuangdi 聖祖仁皇帝	1662
kangxi 康熙	1662
Shizu Xianhuangdi 世祖憲皇帝	1723
yongzheng 雍正	1723
Gaozong Chunhuangdi 高宗純皇帝	1736
qianlong 乾隆	1736
Renzong Ruihuangdi 仁宗睿皇帝	1796
jiaqing 嘉慶	1796
Xuanzong Chenghuangdi 宣宗成皇帝	1821
daoguang 道光	1821
Wenzong Xianhuangdi 文宗顯皇帝	1851
xianfeng 咸豐	1851
Muzong Yihuangdi 穆宗毅皇帝	1862
tongzhi 同治	1862
Dezong Jinghuangdi 德宗景皇帝	1875
guangxu 光緒	1875
--	1908
xuantong 宣統	1908
Republic of China 民國	1912

[1]

1.0 THE GENESIS OF MONEY

1.1 The Initial Stages of the Monetary Economy

1. The Social Background For Money's Appearance

Money evolved out of the exchange of goods. The exchange of goods was the necessary precondition for its existence. Of course the exchange of goods can occur without money by use of barter. Barter, however, entails many inconveniences. In particular, as the variety of goods being offered for exchange increases, barter's difficulties are multiplied. Hence money must in fact make its appearance not long after exchange begins.

At what stage of Chinese society's development did exchange appear? This is a hard problem to resolve. An ancient book says that in the time of Shennong (3218-3079 B.C.) "in mid-day to make a market there came the people of the world, there assembled the goods of the world, exchanges were made and then the people dispersed."[1] It is also said that in the time of Yao (2357-2258 B.C.) "people took what they had to exchange for what they lacked, and took what they had made to exchange for that in which they were deficient."[2]

Of course these statements are not reliable, and even if true, they are not very relevant here, since they refer to the exchange of goods for goods, which has nothing to do with money. As for statements that even by the time of Shennong there were gold (or metal), knives, tortoise, and cowry to bridge supply and demand;[3] or that even before Emperor Gaoxin (2436-2367 B.C.) there were tortoise shell, cowry, gold/metal, cash-coin, knife, and spade moneys which promoted exchange;[4] or that the Yellow Emperor gathered copper to cast knives;[5] or that Yu and Tang used metal or gold to cast money;[6] there is no basis for any of them.

We have learned from recent excavations that at approximately the time traditionally assigned to Shennong and the Yellow Emperor, the most advanced of the peoples of China had just entered the Neolithic Age. Though the craft of monochrome

[2]

painted pottery already existed, not only can we not prove the existence of money, we cannot even establish that there was exchange.

Not even the reference to "issue of Deer Platform Coins" [*fa lutaiqian*; *lutai* perhaps was the name of the Zhou treasury] of King Wu of Zhou may be believed.[7] That is merely a Warring States era version of a mere hagiographic tradition. Some say that the character translated as "cash-coin" [*qian*] actually refers to an agricultural tool.[8] This explanation is not satisfactory either. The original text juxtaposes this word with the word for grain. If the quotation is authentic at all, then this word can only refer to some form of money. The text is not, however, reliable. Though a number of objects have been recovered from Western Zhou tombs in recent years, there have been no coins among them.

We know from investigating the circumstances of a number of primitive tribes that when these

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[1] *Book of Changes*, Appendix, latter part.

[2] *Huai Nan Zi*, "Popular Teachings of Qi."

[3] *Former Han History*, 24, "Treatise on Food and Money." "Of the eight policies of government in the "Great Plan" [a portion of the *Book of Documents*; cf. p. 327 of the Legge translation], the first is called food and the second commodity-moneys [*huo*]. The former refers to edible objects planted by farmers; the latter refers to things like spades [or plain cloth], cloth which may be worn, and metal or gold, knives, tortoise shell and cowry, which may be used to distribute wealth, spread profit, and bring dearths and supplies together. These two policies produce that which is fundamental for the people, and have flourished since the generation of Shennong."

[4] *Historical Records*, 30, "Treatise on the Balanced Standard." "The roads for exchange between farmer and artisan were opened, and tortoise-shell, cowry, metal/gold, cash-coin, knife, and spade money arose. These arose in remote antiquity, even before the time of Emperor Gaoxin, but no record of them survives."

[5] According to the *Record of Early Studies* [*Chuxueji*, a Tang anthology of pre-Sui writings], "The Yellow Emperor gathered the copper of Shoushan and began to cast it into knives."

[6] *Guan Zi*, "Mountain Sovereignty" [*shanquan*]: "Tang had seven years of drought; Yu had five years of flood. The people were so short of food that they were selling their children. Tang used the metal/gold of Zhuangshan to cast money and redeem the people from selling their children for lack of food. Yu used the metal/gold of Lishan to cast money and redeem the people from selling their children for lack of food."

According to the *Bamboo Annals*, "In the twenty-first year of Tang the Successful of Yin-Shang there was a great drought. Metal/gold was cast into money."

[7] The *Book of Zhou* (quoted in the *Taiping Yulan*, 835), the *Six Strategies* (quoted in the section on productive trades of the *Compendium on the Various Arts*, 66), the *Annals of Master Lü*, *Historical Records*, and *Huainan Zi* all contain the statement that he "issued Deer Platform coins and distributed the grain of Juqiao [a place where the bad last king of Shang had amassed large amounts of grain]." The "Basic Annals of Zhou" in the *Historical Records* substitutes the word "wealth" [*cai*] for "cash-coin" [*qian*] in this sentence.

[8] Tang Lan, "A Preliminary Investigation of the Use of Copper Agricultural Tools in China's Ancient Society," *Palace*

people still use only stone tools, they practice a form of communal production and communal consumption. Such a society may frequently not even possess the family, its males and females mating promiscuously. Most tools for everyday use are distributed equally. There is neither private wealth nor the need for exchange. Naturally, money would not be present. Should there be some unmet needs among the tribes, exchange of ceremonial goods or taking of goods by force may occur. Money would not be employed. Such a society is generally called a primitive communist society.

The development of human society occurs in definite stages. Eventually warfare will appear among the tribes of primitive society, and as a consequence prisoners will be taken. These prisoners will become slaves of and expend effort on behalf of the victors. If a society has a great many slaves, they will perform a major portion of the labor, and this society may be labeled a slave society. A slave society can give rise to commerce and money.

The level of development of a slave society depends, however, on the level of productive power of the times. Of course men take slaves to appropriate their labor. In early times human productivity was very low. A man's labor might be insufficient even to maintain his own person. At such times prisoners were invariably killed. The reason why prisoners eventually began to be spared must have been because the tools of production had progressed and productivity had risen, causing slave labor to produce surplus value. If this surplus value was sufficient only to support the slaveowner and his family, it could not give rise to large scale exchange, and hence to money. We can label this a low level slave society.

Only if the surplus of goods is greater than the amount consumed by the slave master and his family, can goods be exchanged with other slave masters. Such exchanges need not involve money. Goods may be exchanged for goods. As, however, the scale of exchange grows and its frequency increases, money can appear.

[3]

There are some ancient countries, proven to have been slave societies, like Babylon, Egypt, Israel, Greece and Rome, all of which used money.[9] We may label these high level slave societies.

What was the situation for ancient Chinese society? The incompleteness of the historical record prevents any definitive statement. Several different views are expressed by students of the history of social development. Some say that prior to Xia there was a primitive communal society, and that from Xia on, owing to the specialization of production, there appeared exchange between clans of the same

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Museum Magazine, No. 2.

[9]By the time of Hammurabi (c. 2300 B.C., roughly corresponding to the traditional date for Yao in China) gold and silver were being used in Babylon. We can note the stage of development of that period's monetary economy from the terms of the Code of Hammurabi.

(a) At that time there were two instruments of payment: silver and grain. English translations frequently employ the term "money." I do not know what the original word was. Nor do I know if the term translated as "gold" in article 117 is the same as the one translated as "money" earlier. Gold is only mentioned twice, and as used for money only on this one occasion.

(b) Silver and grain had different functions: In addition to its use as an intermediary of exchange, all fines were calculated in terms of silver. Artisans' wages and other labor prices were reckoned in grain, as was rental of a cart. Long term labor, various artisans' wages, and rental of boats were calculated in silver. Loans were likely made in both silver and grain. If silver was borrowed, repayment of principle and interest could be made in grain.

(c) Silver was measured by weight, in units called the *mina* and the *shekel*. There was no manufactured money. Coined money appeared in Babylonia only after it came under Greek influence. During the Hyksos period (2100-1600 B.C.) Egypt used metal intermediaries of exchange (Cf. Maiyinde's *Mathematics* [*Shuxueshu*]). Gold, silver and copper were used by weight and fabricated into ring shapes. The units of weight were the *kate* (Egyptian ounce) and the *uten* (Egyptian pound). Each time payment was made the metal would be weighed. It was only from the time of Alexander that Egypt began to formally manufacture money.

Israel used gold and silver as general representatives of wealth. Silver in particular was often used as a measure of value, instrument of payment, and medium of exchange. The word for silver

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had virtually the same meaning as money (*Book of Genesis*). Hence the word for silver in the *Old Testament* is translated into English as "money." At that time, however, Israel had no manufactured money. Gold and silver were measured by weight, using the *shekel* as their unit.

During Greece's Homeric age, gold, brass, steel, iron, and tin were all used by weight as instruments for making payments (cf. *The Iliad*). It was only in the sixth century B.C., under the influence of Asia Minor, that manufactured money came into use.

In the fifth and fourth centuries B.C. Rome was using pieces of copper as money, also by weight. Not until the fourth and third centuries B.C. were dies used to stamp out the *as*, the original weight of which was one *as libra* or Latin pound. This later became the Roman pound. Only from the third century B.C., under Greek influence, did the Romans mint silver coins.

ethnic group, which in turn led to the appearance of money.[10] Others say that even Yin was still primitive communist, that it was not until the end of Yin that slave society had evolved, and that it was still later, with the rise of commerce, that true money finally appeared. Some believe that Western Zhou was already a feudal society. Still others suppose that even Western Han was still a slave society. These scholars simply lack enough historical data.

We need not here consider the case of a primitive communist society, since there is no money in such a society, and so it is irrelevant to our concerns. Theories asserting the presence of money during Xia are entirely conjectural and without foundation. Because we have no way of knowing whether or not there was exchange during Xia, how can we say whether there was money?

We can discern something of conditions under the Yin from the oracle bone records, but because these materials are incomplete, a number of problems remain unresolved. We know only that the Yin progressed from an animal herding to an agricultural style of life, but retained many animal herders' traits. This is evident from their use of sacrificial animals. The Yin custom of moving their capital is also widely known. By King Pan Geng's time opposition to this practice was present. Agriculture had probably become somewhat developed by then, so there were people who were unwilling to abandon the agricultural land which had required such toil to open. Words like grain, millet, wheat, silkworm, mulberry, silk, and cloth are common in the oracle inscriptions, and references to agriculture are not infrequent.[11]

Most people would agree that Yin was a slave society, especially in its final years, Yet in a slave society all or most of the productive labor should be performed by slaves.[12] The divinations contain many references to "masses of cultivators" [*zhong shu*]. The word *shu* means to grow crops. Judging by its shape, the ideograph *zhong* depicts men under a sun, which might be glossed as men laboring out in the countryside. Of course such men need not necessarily have been slaves. In later inscribed bronzes, however, *zhong* are sometimes given as rewards.[13] So it is possible that *zhong* were sometimes slaves.

Still, the mere existence of slaves cannot establish that there was a slave society.

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All or most of the land must be cultivated by slaves before we can say that a slave society existed, Otherwise all we can say is that slavery existed, but not that there was a slave society. Slavery has existed right down to the twentieth century.

The Yin often fought wars with peoples like the Guifang, prisoners from among whom constituted most of their slaves. The social economy of those times did not, however, require large-scale slave labor, since production then was almost entirely limited to agriculture, and an agricultural society is very largely self-sufficient, giving rise to no large-scale commerce. Nor was there then any neighboring industrially developed state in need of agricultural products. We cannot discern the existence of any international trade from the divination texts.

Conditions in China differed from those in Greece and Rome during ancient times. The latter engaged in large scale foreign trade, used gold and silver as money, and enjoyed a high level of material life. They used slaves so as to exploit their labor, the products of which they exchanged for foreign gold, silver, and luxury goods which they would themselves consume. During Yin times China had

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[10]Qian Bocan, *An Outline of Chinese History* (2nd. ed., 1946), I, p. 115.

[11]Guo Moruo, *Ten Appraisals*, section one, "Subjective Appraisals of Studies of Ancient Societies."

[12]In his *The Bronze Age* Guo Moruo cites four examples. (In *Ten Appraisals* he repeats the first three.)

(a) "Day *yisi* divination by Gu: The king issues a great order to the mass, saying be energetic in the fields! He receives the harvest. Eleventh month." (*Compendium of Yin Materials*, Slip No. 866, First 7.30.2; continuation 2.6.5.)

(b) "Day *wuyin* divination by Bin: The king travelled and gave the masses grain in Qiong." (*Complete Collection of Divinations*, Slip no. 473,First 5.20.2.)

(c) "Diviner []. Minor officials order the masses to cultivate grain. First month." (*Ibid.*, Slip no. 478, First 4.30.2.)

(d) "Day *bingwu*, divination by Diviner Zhong: Masses cultivate grain in []." (*Ibid.*, Addendum 2.)

Guo uses the two words "masses of cultivators" [*zhong shu*] to establish that the Yin employed large scale slave labor in their agriculture (*Ten Appraisals*). In oracle bone texts, however, the word *zhong* seems to be qualitative rather than quantitative, since at times it signifies only one person (cf. the Yao *ding* tripod inscription). Hence its use cannot establish the presence of large numbers. Still less can it be used to prove the existence of slavery. In his preface to *Collections of Oracle Inscriptions From the Wastes of Yin* in *Collected Reports on Chinese Archeology*, Dong Zuobin states that the terms *ren* and *zhong* were both used to label Yin people. A *zhong* was a Guifang people's unit composed of three *ren*, and carried no implication that they were slaves. [Zhao Jibin, *Lunyu xintan* (Beijing, 1974) argues that *ren* was only applied to members of the Shang and Zhou ruling class. EHK]

[13]According to the Yao *ding* inscription, when Kuang Ji

no measurable foreign trade. Nor was its material standard of living high. Productive life's scope was limited to agriculture, fishing and hunting.

If many slaves had been present, the surplus value they could have yielded would have been limited to the five grains, fish, and livestock. There was no place then where these things could have been exchanged for luxury goods. Nor could slave owners have increased their own consumption of foodstuffs. If such goods were accumulated year after year, the only result would have been for them to go to waste. Hence, even if China was a slave society then, it must have been a low level slave society. Slaves were not, as in Greece and Rome, used to produce commercial goods, but only goods for household consumption, and on no great scale. If exchange did occasionally occur, it was mainly barter, and genuine money could not yet have appeared.

Historians also disagree about the social organization of the Zhou dynasty. Some say it was an early feudal society.[14] Others call it a slave society.[15] Such disagreements arise from primary sources containing references to both feudal practices and slavery. This is particularly true of Western Zhou. Such contradictions are actually easy to explain. Originally there were two peoples, Yin and Zhou. Zhou inherited Yin's society. A social system cannot be changed in a day or with a single order. Hence Zhou society retained a great many traces of Yin slave society. This sort of thing is quite common.[16] After the middle years of

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Western Zhou [post-ninth century B.C.] most vestiges of these earlier institutions were eradicated. During the several centuries between the move to the east and the last years of the Spring-Autumn epoch, one might almost say that a genuine feudal society came into being.

This genuinely feudal society was not entirely like that of European feudalism. Europe had already formed the embryo of a feudal society at the time of the Roman Empire, not just in those areas under Roman control, but also in the territory of the Germanic peoples. It was not, however, until the eleventh through the thirteenth centuries that European feudal society reached its full development. At no time did China have as strict a feudal society as Europe's, though the fundamental characteristics were almost identical in both places.

A feudal society has two characteristics: Politically, the sovereign power is dispersed, but as soon as war breaks out, nobility, landlords, and agricultural serfs are all morally obliged to join in the hostilities. After the late tenth century B.C., the authority of the Western Zhou central government gradually withered, and most of the sovereign power fell into the hands of the nobility, but the position of ceremonial head was retained by the Zhou monarchs. Events of the Spring-Autumn era show this very clearly. This is why Dukes Huan of Qi and Wen of Jin could use the name of the Zhou house to pressure the other small states into honoring Zhou.

As for the economy, exchange was not important, and a monetary economy had not yet become developed. Most payments were made in goods or in land, because a feudal society aims to make each of its units self-sufficient. Rather than the more aggressive economy called forth by a slave society, feudalism produces a conservative economic system. During Yin, cowry shell was already in use. Though we cannot yet prove that cowry had by then developed fully into a money, it had very nearly done so.

If Zhou had been a slave society from beginning to end, its commerce and monetary economy would certainly have progressed a long step beyond the late Yin-early Zhou level. In fact, however, right through the Spring-Autumn era, not only did the Chinese monetary economy fail to undergo any new development, it seems to have been conspicuously undeveloped. The *Spring-Autumn Annals* says nothing at all about money, though such commodities as silk and ordinary cloth are frequently mentioned. A most important characteristic of a feudal society is the presence of a natural economy. In such a society land is the most important form of wealth.

Let us take a look at the society of the age of the *Book of Odes*. This is the society of the several centuries before the middle years of the Spring-Autumn era. Of course 305 short poems cannot reflect everything that went on during several centuries, but they at least allow us to discern the general outline of events. In this society evidence of a natural economy is extraordinarily abundant. If there was exchange,

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engrossed Yao's grain, causing a complaint, Kuang Ji demanded five fields, one *zhong* and three servants [*chen*] in recompense.

[14]Qian Bocan, *An Outline of Chinese History*, ch. 1, "Early Feudal Society," p. 269.

[15]Guo Moruo, *The Bronze Age: Zhou Society Inferred From Zhou Agricultural Poetry*, p.101. *Ten Appraisals*, "Subjective Appraisals of Studies of Ancient Society."

[16]Guo Moruo cites instances in Western Zhou bronze inscriptions of the bestowing of servants and land to prove that Western Zhou was still a slave society. (*The Bronze Age*, p. 98.) These may actually just have been surviving Yin practices. Right down to Northern and Southern Dynasties and Sui and Tang times, gifts of slaves were still being made. Moreover, bestowal of land is one trait of a feudal society. A key characteristic of a feudal society is to take land as the main form of wealth.

it was "taking cloth to trade for silk thread."[17] If payments occurred, most
[6]
"were set out in grain."[18]

Some say that the word *bu* in the phrase "taking *bu* to trade for silk thread" refers to the manufactured money, spade coins, which eventually were also known by that name. Spade coins may by then already have appeared, and particular individuals could have possessed large spade coins, but to say that "ignorant commoners" could use bundles of hollow-socketed spades to buy silk thread would be to overidealize the society of that period and to exaggerate the degree of development of the monetary economy. Wang Chong of the Han dynasty glosses this phrase as "to exchange what one has for what one lacks."[19]

Some may say that the word for grain [*su*] in the phrase "set out in grain" also means money. The *Guan Zi* contains the sentence "grain is heavily demanded and the myriad of goods lightly demanded." Since this sets grain off against goods, might it not imply that grain was being used as money? In a non-monetary economy, there is generally one good among all those being exchanged which serves as the denominator for the value of all. This is the embryonic form of money, but because it is not yet a general denominator of value, it is not yet true money.

The "First Month" section of the "Minor Odes" of the *Book of Odes* mentions a "rich man" [*furen*].[20] Does this term "rich man" mean someone with bundles of hollow-socket spades in his hands? No. It does not, as would be the case in later times, refer to someone with money, but rather to someone with abundance of wealth in material objects. In fact the poem is alluding to someone who "has good spirits . . . fine viands . . . houses . . . grain." The earliest rich men must have been men who had fields. Does not the character for "rich" derive from the character for "field?" The "Musical Rituals" section of the *Record of Rituals* says:

> If one inquires as to the riches of the ruler, the answer is quantities of land and the produce of mountains and marshes. If one inquires as to the riches of the high officials, to reply that they have the power to engross food, utensils for sacrifice and clothing would not be false. If one inquires as to the riches of the knights, the answer would involve the numbers of their chariots. If one inquires as to the riches of the common people, one would reply with the number of their livestock.

Money is not included anywhere on this list. As for the character which later came to mean coin or cash-coin [*qian*], when it is used in the phrase "hoarded under the house are *qian* and hoes" in the section on "Officials and Workmen" in the *Hymns of Zhou*, everyone knows that in this context it refers to an agricultural implement and not to manufactured money.

During Spring-Autumn times, states often imported grain. Did they buy it with money? No. The original meaning of the character *di* was "to bring in rice." Rice might be brought in via exchange, but only under the conditions of a developed monetary economy would the rice be bought with money. The *Dialogues of the States* mentions that during a famine in Lu, Zang Wenzhong asked Duke Zhuang to use famous utensils [*ming qi*] to seek out imports of grain from Qi. By "famous utensils" he meant sacrificial liquor, sceptres, jade, chimingstones, etc. Obviously he intended an exchange of objects.

Some say that the "cloth" [*bu*] recorded in the *Rituals of Zhou* as handled by shopkeepers under labels translatable as spun-cloth, general-cloth, redemption-cloth, punishment-cloth, shop-cloth and hamlet-cloth should all really be taken as references to spade coins, that is, as manufactured money.[21] Some even say these were names for credit moneys.[22] All such claims are far-fetched. The

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[17] *Book of Odes*, "Airs of the States: Wei." "A simple-looking lad you were, bearing cloth to trade for silken thread; but came you not to trade for thread, came thee for my hand instead." [Translation adapted from Legge, p. 97. Peng to the contrary, many modern numismatists take this as a reference to coins. EHK] To state that the term *bu* here refers to cloth rather than spade coins is not to deny that moneys, including spade coins, were already then in circulation. A thousand years later barter was still going on.

[18] *Odes*, "Minor Odes:" "Set out in grain, and how can one get the grain."

[19] Wang Chong, *Balanced Discourses* "Knowledge of Measures."

[20] The original text reads: "They have their good spirits, and their fine viands along with them. They assemble their neighbors, and their relatives are full of their praise. When I think of my solitariness, my sorrowing heart is full of distress. Meanlike, those
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have their houses; abjects, they will have their emoluments. For heaven is pounding them with calamities. The rich may get through, but alas for the helpless and solitary." [Translation quoted from Legge, pp. 319-320.]

[21] *Rituals of Zhou*, "Local Officials," annotated by Zheng Xuan.

[22] *Rituals of Zhou*, "Local Officials, Recording Masters:" "All dwellings without vegetation will have hamlet-cloth [*libu*]." Zheng Zhong notes: "A *bu* was a document with a seal affixed,

Rituals of Zhou is wrongly ascribed to a time before the Warring States period, and its references to *bu* may be fabrications. If *bu* existed, they most likely were cloth rather than coins, and surely not some sort of credit money.

[7]

During Spring-Autumn times, silk and plain cloth were important instruments for making payments, especially within the ruling class. Large amounts of these commodities were used during late Zhou. The Sons of Heaven [Zhou kings] gave them as rewards to retainers.[23] The nobles employed them as tribute to the Son of Heaven.[24] According to tradition, Yu and the nobles carried jade and cloth from Tu Mountain to the multitude of states.[25] These legends probably also took form during Spring-Autumn and Warring States times.

Gifts among private individuals and between states were mostly made in silk and plain cloth. The phrases "the master requites his guests with bundles of cloth and sets of hides,"[26] and "serves them with hides and silk"[27] both refer to this. Even marriage among commoners involved such use of cloth.[28] This clearly attests that manufactured money was then still not being extensively circulated.

Some modern foreign scholars have misinterpreted the meaning of the terms animal hide and silk in such passages, and imposed on China patterns derived from foreign history by saying that ancient China used a money made of animal hide or used animal hides as money. Some are even more specific, saying that ox-hide was used as money.[29] This is not true. Though the two words "hide" [*pi*] and "silk" [*bi*], the latter of which also eventually came to mean money, appear together more than once in pre-Qin writings,[30] they always refer to two different objects. Hide means animal hide or fur, but not necessarily ox-hide. Silk means silk cloth, and not money. These two commodities were still only instruments for making payments, and were not used formally as money.

It might be appropriate to consider here the origins of the modern term for money, *huobi*. During Spring-Autumn and Warring States times the characters *huo* and *bi* embraced two different though

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two inches wide and two feet long. It was used as money to trade for goods."

[23]*Rituals of Zhou*, "Heavenly Officials and Great Ministers:" "Nine forms of rewards were used equally. . . The sixth form was silk and plain cloth." (The note states these were used to reward the efforts of guests and retainers.)

[24]*Book of Documents*, "Exhortation of King Kang:" "The king went out to within the Ying Gate. The Grand Guardian led the nobles of the west to enter on the left of the Ying Gate. Duke Bi led the nobles of the east to enter on the right of the Ying Gate. All had *bu* cloth of yellow and crimson upon their chariots. The guests offered their scepters and silks." [Somewhat changed from Legge, p.562.]

[25]*Zuo Chronicle*, seventh year of Duke Ai.

[26]*The Book of Ritual*, "Ritual of a Knight's Capping."

[27]*Mencius*, "King Hui of Liang," latter part: "Formerly when the Great King resided in Bin and the Di people attacked, he served them with hides and silk. . ."

[28]*Rituals of Zhou*, "Local Officials and Supervisors," latter part: "All those men and women who marry bring in silk and pure cloth, none exceeding five ounces.

[29]H.B. Morse, in his *The Trade and Administration of China* (1913), p. 117, says that in ancient times China employed inscribed animal hides as money. Clearly, this was to mistake the hide money of Emperor Wu of Han for something from remote antiquity. Similarly, other foreign scholars have mistaken the knife and spade coins of Wang Mang for Spring-Autumn and Warring States era coins. Their understanding of Chinese history is muddled. There are, however, also Chinese who have entertained such notions, Wei Juxian (*China's Soft Money*) being one such.

[30]There are quite a few references in pre-Qin writings to hide and silk:*The Dialogues of the States*, "Dialogues of Qi:" "Judge my lands' borders, and return what he has taken by conquest. Rectify its marked boundaries. Do not receive its produce, but provide much hides and silk so as to quickly invite inspection by the nobles."

Record of Rituals, "Monthly Orders:" "This month it is recorded that sacrificial animals are not to be used. Employ scepters, jade rings, and still more hides and silk."

Guan Zi, "The Mountains Reach:" "And the hides and silk of the nobles are not used as clothing. . . When hides and silk are not worn within the empire, the state is shallowly established."

Mo Zi, "Queries of Lu:" "Abundant are the hides and silk. Urgently are they sent as ceremonial gifts to neighboring nobles on all sides." *Ibid.*, "The Highest Virtue:" "Abroad hides and silk are given to the neighboring nobles on all sides in exchange."

In addition, the *Historical Records*, "Treatise on the Balanced Standard" states: "Anciently, hides and silk were used as gifts by the nobility." But Zhu Xi in his collected notes to the *Mencius* says: "The word 'hides' refers to the skins of tigers, leopards and deer. 'Silk' means cloth."

Evidently the ancients had this matter clearly in their grasp. The *Historical Records*, "Annals of Qin" contains the statement: "Duke Mou heard that Bai Lixi was a man of virtue, and wished to buy him for a heavy price. Fearing that the men of Chu would not give him up, he sent someone to speak to Chu as follows: 'You have our servant Bai Lixi. We ask that you accept five black ram skins to redeem him.' The Chu subsequently assented and gave him up." Here the sheepskins appear to assume the role of money, but in fact were still functioning as a commodity.

not very clearly distinguished concepts. *Huo* may have derived from *hua*, meaning "to change, transform." By Warring States times its meaning seems to have come to approximate its present one.

As used by the *Book of Changes* in the sentence "Go to the people of the world; gather the world's *huo*," *huo* embraces all commodities, including natural commodity moneys. The phrase in the "Announcement of Zhong Hui" section of the *Book of Documents* "do not plant *huo* for profit," only means to not covet wealth. In the *Rituals of Zhou*, *huo* is defined as encompassing gold and jade. Right down to Han times it still meant valuables or goods which embody wealth. The term's meaning was not restricted to just money or even commericial goods. Only in the name for Wang Mang's Treasure-money [*Baohuo*] is the word used as the name for an actual money.

Because the ancients did not know how to distinguish between money and wealth in general, in practice they often blurred the two concepts together. Ban Gu wrote: "*Huo* refers to plain cloth and silk which may be worn, as well as to gold, knives, tortoise and cowry shell which are used to divide wealth, distribute profit, and supply dearths from surpluses."[31] His comprehensive definition of wealth also included money. Xu Shen wrote that the ancients "made *huo* out of cowry and treasure out of tortoise shell."[32] In this context *huo* must have meant money.

As for the word *bi*, as I have noted above, during Warring States times it meant animal hide or cloth and not yet money. Some say it also denominated gold, jade, ivory, leather, and weapons,

[8]

which would put it very close in meaning to *huo*. Because silks had become an important instrument for making payments by Spring-Autumn and Warring States times or even earlier, and that is one function of money, in the view of the ruling class a very important function, the word *bi* gradually took on the connotation of money.

This would explain the statement in the *Guan Zi* that the Former Kings [i.e. the sagely first rulers] "used pearls and jade as their superior *bi*, gold as their middle *bi* and knives and spades as their lower *bi*." Similarly, Sima Qian writes that the First Emperor of Qin used gold as his superior *bi* and bronze coins as his inferior *bi*. Emperor Wu of Western Han issued a hide-*bi*. All of these, except for the inferior level, were merely instruments used to make payments, and did not circulate generally. Hence for the most part the label *bi* retained its original connotation. The two-syllable word *huobi* only came into use later.[33] In ancient times the word *qianbi* was preferred for money.

The practice of exchange of goods and the use of money were not entirely absent from among the people during Spring-Autumn times. Money was present in Europe during feudal times, but the monetary economy was just not very important then. A feudal society can in fact give rise to money, but money may then destroy that society. During Western Zhou, the ruling class incited the conquered Shang people to "set their carts and oxen to move afar and carry on trade so as to filially nourish their parents." Later on there occurs the phrase "three fold [profit] like a merchant." Evidently commerce had undergone a certain degree of development.

Some inscriptions on knives and spades resemble those on oracle bones, and these may well be pre-Spring-Autumn in date. The evolution of knife and spade coins from agricultural implements might have required a very long span of time. We may surmise from this that such commodity moneys could already have been in use by late Yin or early Zhou times. Even before the appearance of manufactured money, cowry shells had already taken on monetary or quasi-monetary functions. Bronze cowries were already being cast during Yin times.

It is also possible that the transition from agricultural tools to knife and spade coins need not have required a very extended period of time. First of all, not many actually functional knives and spades have been excavated. Nor are hollow-socketed spade coins numerous. This is evidence that the period during which they circulated could not have been very long. Furthermore, money is a most volatile object. It spreads rapidly. Once the circumstances are right, if one area adopts manufactured money, other places may swiftly imitate it. Within fifty years of the appearance of coins in Lydia, their use had spread along the edge of the Mediterranean and around the entire Aegean coast.

Even by Spring-Autumn times, commodity production and exchange were perhaps not as well developed in China as in the Greek world. Communications are generally not as fast or convenient by land as by the inland sea route, but once the circumstances were ripe for the two civilizations to adopt manufactured money, we cannot say that its general spread required only fifty years among the Greeks

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[31] *Han History*, "Treatise on Food and Money."

[32] Xu Shen, *Explanations of Words*.

[33] Who first used *huobi* in its modern sense as "money" still awaits investigation, but up to the Tang period the two component characters still had different usages. Cf. chapter 4.3.1 below.

and five hundred years among the Chinese.

In the old days Chinese numismatists

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used to ascribe Chinese knives and spades to the age of the legendary rulers of the third millennium B.C., and it was late Qing times before this error was corrected. Recently there has again been a tendency to push their age back, and this trend is worthy of note.

[12]

2. Yin-Zhou Era Cowry and Bronze

The Yin and Zhou dynasties extended over a very long period of time. Conditions during Yin can only be partly inferred from divination texts. The brevity of these texts does not permit detailed study of institutions. The presence of many long inscriptions on Zhou bronzes allows us to understand Zhou more clearly. Speaking generally, prior to mid Spring-Autumn times, most Chinese survived on the basis of a natural economy. We can see this from the kinds of gifts made. In the order of their frequency of appearance in bronze inscriptions, these gifts were: cowry, metal, sacrificial liquors, horses, bows, arrows, servants, fields, chariots, furs, sceptres, clothing, cauldron-tripods, cloth, and oxen. The earliest moneys should, one supposes, have evolved from these commodities.

Cowries are encountered more frequently among ancient gifts than are any other items.[1] We cannot tell if these cowries ever served as money, or if they became money, when that happened. Divination texts are too abbreviated to answer this question. Bronze inscriptions speak only of the affairs of kings and nobles. This makes it difficult to investigate the economic life of the people. By early Zhou, however, cowries were in use as instruments of payment, and the etymology of Chinese characters allows us to infer a relationship between the cowry and the idea of value. Most characters linked to the notion of value contain the cowry pictograph. [For the cowry pictograph's many variant forms cf. subsection 1.1.3 below. EHK] Hence at the time the Chinese writing system was taking shape, the cowry shell had already become a symbol of value.

Cowry became associated with the Chinese people very early. It was already in use by the early Neolithic, and in the period to which Xia is traditionally ascribed.[2] But just because Xia used cowry does not mean it had money. A long period must have elapsed from the time cowry first came into use until it was transformed into money. This is because commodity production is a prerequisite for money to arise, and an item must meet various social preconditions, the least of which is to have some use, before it can become a money. Tiny cowry shells can neither feed the hungry nor clothe the cold. Of what use were they?

Judging from the practices of some modern tribes, cowry may be used as an article of adornment.[3] There is no doubt that this was the case in ancient China as well. Such use may be inferred from the structure of the characters for "to adorn" [*bi*] and "pearls or shells strung together" [*ying*], as well as from statements in ancient sources referring to shell-pattern embroidery and to woven cowry.[4] The use of cowry as an article of adornment

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[1]Fukuharu Shigeru's *Historical Bibliography of Bronze Inscriptions* alone records more than one hundred occasions when strings of cowry were used as gifts. Metal is second, with only 33 instances. Tied for third are horses and sacrificial liquors, each mentioned twelve times. Bows are mentioned seven times, arrows six, fields and servants five times each.

[2]Cowry shells were frequently found in the excavation of Yangshao village. Anderson dates Yangshao to 1,000 to 1,500 years before Yin-Shang, which would place it in the third millenium B.C. (J.G. Anderson, "A Prehistoric Village in Honan," *The China Journal of Science and Arts*, I, 508.)

[3]In chapter nineteen of his *Children of the Yellow Earth* Anderson gives a detailed description of the use of cowry shell for adornment among various peoples of the world, basing his account on a number of monographs on cowry, such as Stearn's *Ethno-Conchology: A Study of Primitive Money* (1889); O. Schneider's *Muschelgeldstudien* (1905); and J. W. Jackson's *Shells as Evidence of the Migration of Early Culture* (1917).

[4]*Book of Odes*, "Minor Odes:" "Luxuriant and elegant is the workmanship of this cowry embroidery." *Ibid.*, "The Praise Songs of Lu:" "The duke's followers number thirty thousand; cowry helmets, strings of pearls; an abundance of followers increasing greatly."

Book of Documents, "Tribute of Yu:" "Between the Huai and the sea there is only Yangzhou . . . their baskets of woven cowry."

Record of Rituals, 45, "The Great Ritual of Funerary Clothing:" "Adorn the coffin with three pools [?] on dragon screens, spread three embroidered [?] with wild fire patterns, three sacrificial robes. On a plain brocade add six false wild light red loops, arrange five bright colors and five cowries, two embroidered coffin feathers, two sacrificial design coffin feathers, two painted coffin feathers, all borne on a sceptre, with fish leaping brushed onto the pools. The coffin is loosely covered with six light red covers." In contemporary Chinese rural

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indicates that it had value in use, which in turn would have qualified it for use as money.

We can go on to ask why the ancients were so attracted to cowry shell. There were a number of objects from the natural world available to the ancients which could have served as articles of adornment, including no small number which were more beautiful than cowry shell. Why then was cowry universally selected? And why, from among the several hundred kinds of cowry, did people prefer the species whose name is translated as the "monetary cowry?" Some Chinese say that because Chinese civilization began in the northwest, far from the sea, cowry was extremely hard to obtain, and was therefore considered precious.[5]

Such an explanation displays a lack of imagination. Use of cowry shell was not limited to China. Peoples all over the world have used it. In Asia, aside from China, cowry has been excavated in India, Burma, Ceylon, Borneo, and the East Indies; within the borders of the Soviet Union, in Turkestan, in the foothills of the northern Caucasus, in the neighborhood of Kiev, and in the southeastern part of the Gobi.[6] On the American continent, the Indians of Alaska and California also used cowry. Cowry money was used along the coast of Africa and in the northern part of Australian New Guinea and in the Solomon Islands.[7] Cowry shells appear in the remains of late Paleolithic and early Neolithic Europe.[8] This shows that cowry was used both in places where it was found naturally and elsewhere. Furthermore, surely cowry was not the only thing which was hard to obtain.

Some foreigners suppose that because cowry shells resemble the orifice through which babies are born, primitive man saw them as the fountainhead of life, and wore them on their bodies as talismans of good fortune. Primitive man even believed cowries could help women give birth and increase their fecundity. Sometimes cowry were used as burial goods so that the dead could obtain renewed life.[9] This sort of explanation is very plausible. Right down to modern times in China, monetary cowry has been treated by some as an object for warding off evil. In the Shaoxing region it is called "devils see and fear," and children wear it on their wrists.

Of the ancient cowry excavated in China, only the sides with the serrated cracks are intact. The backs are either ground flat or at least have a hole drilled through them. And yet the back is the most beautiful part of the cowry shell. If it was not intended for use as a symbol of something, the cowry's point of greatest beauty would not have been damaged. Therefore, some believe that any ancient Chinese cowry having a hole through its back had a monetary function, and that if its back was ground flat, it was used for adornment.[10] I cannot agree with this. The amount ground off the back might have varied according to local custom.

There is another, more pragmatic reason why cowry shell might have been used as money: It met several of the fundamental prerequisites of money: First, it was useful in its own right. Second, it came already divided up into natural units. Third,
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it was strong and durable. Fourth, it was convenient to carry, since the quantity of cowry was not great in ancient times and worn on the person it added to one's beauty.

One might argue that cowry-producing regions can gather indefinitely large amounts of the shell, and so its use as money, would inevitably give rise to inflation. Such reasoning, however, shows lack of understanding of the socio-economic circumstances back then. During the period when cowry was employed, man's way of life was simple and production was undeveloped, so that very few goods could enter into exchange. Nor had a monetary economy as yet developed. Hence even for those items which could be exchanged, barter had to be used. If the owner of an object did not need cowry, he could refuse to sell. It was by no means the case that one could fulfill any desire in exchange for several strings of cowry carried on the person. Finally, there are many kinds of cowry in the sea, and monetary cowry is not found everywhere.

Some say that variations in the size of cowry shells inhibit standardization of their value. This too shows lack of understanding of conditions back then. The concept of value was still very weak and blurred. No account would be taken of slight variations in size. Even in the twentieth century, the concept of value remains unequally developed. Some people would insist on a particular row of seats whether in a theater or a trolley car, while others would not care one way or the other. Even the Half-

areas monetary cowries are still sometimes sewn into children's hats.

[5]Luo Zhenyu, *Yonglu Diary*.

[6]J. Gunnar Anderson, *Children of the Yellow Earth*, p. 298.

[7]*Encylopedia Britannica* (14th ed.), "Shell Money."

[8]A.R. Burns, *Money and Monetary Policy in Early Times*, p. 3.

[9]Elliot Smith, *Evolution of the Dragon*, pp. 145, 223.

[10]Harry E. Gibson, "The Use of Cowries as Money During the Shang and Chou Periods," *Journal of the North China Branch of the Royal Asiatic Society* (1940), 34.

ouncer coins of the First Emperor of Qin were of varying sizes.

Chinese cowry money probably evolved through two stages: During the first stage cowry was used solely as an article of adornment. This must have been the case during and prior to Yin-Shang. In the second stage it was used as money. This probably occurred during the transition from Yin to Western Zhou. Even after cowry assumed a monetary role, it could still continue to have been used for adornment, just as was later the case with gold and silver.

A cowry shell is itself a natural unit. In ancient times, before the invention of metal smelting, this gave it an advantage for use as money. Because the ancients usually strung cowries together, a string of them also became a unit, called the *peng* during late Yin and early Zhou times. The characters for cowry and string were frequently used together.

Though the character for cowry occurs frequently in divination texts, strings of cowry are mentioned only rarely,[11] and in such brief sentences that the meaning of the term cannot be discerned. Because all that is said is that cowry strings were conferred, it is possible that either a payment or a gift was intended. By Yin times, however, the cowry shell had become a precious object, and in divination texts the word for cowry was sometimes almost synonymous with the modern word for wealth.[12] On bronze inscriptions the character *zhu*[a], meaning "to store up, hoard," incorporated the cowry pictograph, as does its modern form[b]. What one hoards, of course, are objects of value. For the cowry to be used in this context indicates that it had by then become a symbol of value.

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Bronze inscriptions are more detailed, but most merely mention bestowing a certain number of strings of cowry to be used to make a certain person's ceremonial bronze. By overinterpreting such passages we might say that cowry had become money in the full sense, since these strings of cowry were being used to purchase copper and other raw materials, as well as labor.

In fact, however, so arbitrary an explanation will not do, because several dozen different things are referred to on bronze inscriptions as gifts, and practically all of them are linked to the fabrication of ceremonial bronzes. Gifts of horses and furs[13] were used to have bronzes made, as were bows[14] and fields.[15] Sometimes simultaneous gifts of metal, chariots, bows and arrows are commemorated as being devoted to the making of a ceremonial bronze.[16] If cowry had become a full money, then so too had horses, furs, bows, arrows, chariots and servants.

The quantities of strings of cowry mentioned in Yin divination texts and bronze inscriptions are not large, no more than ten strings on any one occasion.[17] There are two possible explanations for this: The first is that too few Yin vessels have survived, and perhaps those recording large numbers of cowries have not yet been discovered. The second possibility is that many things were used as money then. However the number of strings of cowry frequently bears no relation to the size of the bronze vessel. Sometimes a small number of strings pays for construction of a large vessel, and sometimes the

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[11]"Day *gengxü*, divination by [] []. Bestow many females, land, cowry strings." (Slip No. 469, latter, T.8.5. Cf. Guo Moruo, "Compilation of Oracle Records," *Shihuo*.)

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[12]"Day *bingxu*, the diviner divines. Cowry arrived today. Will it rain on day *gengyin* or not?" (Goto Tomataro, "Studies in Tortoise Shell and Ox-bone Inscriptions" [*Kiko jukotsu moji kenkyu*], *Tōyō gakupo*, 4.1.

[13]The Yi *zun*: "At the beginning of the second month, first day *dingmao*, the duke's secondary wife mandated Yi to control fields, and so Yi was gifted with horses and furs to display the bounty of the duke's secondary wife to use to make a bronze vessel." (Fukuharu Shigeru, *Historical Bibliography of Bronze Inscriptions*, "Wine Vessels."

[14]The Jing *you*: ". . . the king bestowed on Jing a bow. Jing made deep obeisance, head to the ground, and dared to use it to display the king's bounty by making a holy bronze." *Ibid.*

[15]The Mao *dui*: ". . . .four gifts of female *zun*, one dragon grain holy bronze vessel, and a gift of ten mares and ten oxen; as a gift from Zha, one field; as a gift from the palace, one field; as a gift from Yi[], one field; as a gift from [], one field. Mao made obeisance with his hands, and dared to display Earl Ai's bounty by using them to make a holy *dui*, made for Mao's use for ten-thousand years." *Ibid.*

[16]The Tong *dui*: "Ten beautiful things, and in the first month the Great King bestowed on Tong metal, chariots, bows and arrows. To display the king's bounty Tong used these to make a holy bronze vessel for Father Wu." *Ibid.*

[17]The Zaiguo *jiao*: "Day *gengshen*, the king was in the east room. The king bestowed on Zaiguo five strings of cowry. They were used to make a holy bronze vessel for Father Ding. In the sixth month, the excellent king worshipped twenty times. The next day he bestowed another five." (*Remains of Yin Writing*, latter part, 23.)

The Yi *jia*: "Day *guisi*. The king bestowed on the minor servant Yi ten strings of cowry, used to make a holy bronze vessel for Mother Gui. The excellent king worshipped six times. The auspicious day was in the fourth month." (*Tao Studio Record of Bronze Inscriptions*, IV, 32.)

Divination text: "Mother [] ten strings, more than ten children." (Erratum 623, Hu Houxuan, *Collected Essays on Oracle Bone Studies and Shang History*, 1.)

reverse is the case. This phenomenon continues into the Zhou dynasty. Hence it is possible that Yin gift cowry still functioned as a commodity --as an article of adornment which had no monetary significance.

The line in the ancient ode "when I have audience with my lord, he bestows on me a hundred strings," cannot positively be said to refer to a payment in money. It would be best to view cowry as an object of value or a form of wealth which could serve as both money and article of adornment. Cowry shell is a primitive form of money. Its function as a general and special embodiment of value may change over time. Its nature cannot be unambiguously made clear each time it is used to make a payment.

Nor is the presence of the string as a unit enough to establish cowry's use as money. The origins of the character *peng*[c], meaning string of cowry, seems to have no connection with cowry's monetary nature. Its root meaning was probably one or two strings linked together.[18] It was only later that it became the unit for measuring cowry. There is no single accepted theory as to how many cowry constituted a string. Some say it was two;[19] others ten.[20] Most suppose it to have been five.[21]

The two-cowry theory is not very plausible, as is clear from the calligraphy of *peng* alone. The five cowry theory also seems unreasonable since the doubled shape of the ancient form of the character *peng* would seem to require an even number like six, eight or ten cowries per string. Later, however, after cowry had evolved into money, the number could well have changed, and there is

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no reason why there could not have been five per string.

At the beginning of Zhou the size of gifts made in strings of cowry increased. Even when not reckoned by the string, they sometimes amounted to as many as two hundred cowries.[22] When enumerated by the string, they could reach a hundred strings.[23]

Though *peng*, or string, was the measure word for cowry, it could also sometimes stand alone, apart from the word for cowry. This does not refer to the term's usage in the phrase "bestowed on me a hundred strings," but rather to its usage in the *Book of Changes*: "In the southwest strings are obtained; in the northeast strings are lost." Here not the monetary unit, but money itself is meant.

The Zhou were culturally backward compared to the Yin. In the days of the ancient dukes they still lived in wilderness caves, but once they had adopted the culture of the Yin, within a space of fifty or

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[18]In bronze inscriptions the character *peng*[c] is written as though two strings of cowries are linked or one is doubled over. Cf. *Archeological Illustrations*; Shang Chengzuo, *Illustrations of Twelve Masters' Bronze Inscriptions* (Publications of the Institute for Research on Chinese Culture, Jinling College). Wang Guowei states that during the Yin dynasty the graphs *jue* (meaning two pieces of jade fastened together) and *peng* were the same ideograph, because jade and cowry were both money then, and both were strung together with cord. Only later were separate graphs created for the two. Cf. his "On the Characters for Strung-Jade and Strings of Cowry," *Observation Hall Collected Grove*, Observation Three. He is not entirely correct. Though the two may have had a common origin, jade was not used as money. All we can say is that in ancient times jade and cowry were both precious objects.

[19]Under the heading cowry, the *Explanations of Words* notes that the ancients put two cowry on a string.

[20]Wang Guowei says that "under the Yin system five cowries made one link [*xi*] and two links made one string [*peng*]. This must be so because in ancient writing the graph *peng* resembles two links, but five cowries cannot be divided evenly among two links." Cf. his "On the Characters for Strung-Jade and Strings of Cowry."

Based on the calligraphy of *peng* in divination and bronze texts, and deeming the *peng* to have been divided into two strings, each hanging from one end of a stick and holding ten cowries, Harry E. Gibson concludes that there were twenty cowries per *peng*. He also cites the *Investigation of Literary Remains Continued*'s quotation from Zhu Guochen's "Yongchuang Small Articles" to the effect that southerners used eighty cowries per string. Cf. Gibson's "The Use of Cowries as Money During the Shang and Zhou Periods," 40.

Though Gibson's position is the result of a painstaking chain of inferences, it can only serve as the basis for further investigation. It is possible that the use of cowry in Yunnan during Yuan and Ming times has no direct connection with its use in ancient China. Of course we cannot absolutely deny the possibility that the ancient Chinese learned the use of cowry from the Miao people, and that the Miao later retreated into the southwest, thereby establishing a link between Yunnan and the ancient Chinese system, but I am instead inclined to believe that modern use of cowry in Yunnan reflects Indian influence.

[21]The *Zheng Commentary* to the Mao edition of the *Book of Odes* says: "When the ancients used cowry as money, five cowries made a *peng*."

[22]The Yiwei *dui*: "For a sacrificial ceremony Yiwei bestowed on Jishih two hundred cowries, used to make a holy bronze vessel for Father Ding." Cf. Fukuharu Shigeru, *op. cit.*

[23]The Duke of Zhou's Eastern Campaign *ding* tripod: "When the Duke of Zhou was campaigning against the Eastern Yi, the Earl of Feng struck at Guxian, wounded the duke, who returned to the Zhou ancestral temple. On day *wuchen* the Duke of Qin was toasted with a hundred strings of cowry, which was used to make a holy bronze *ding* vessel." Cf. Wu Kaisheng, *Record of Collected Interpretations of Bronze Inscriptions*.

sixty years they had jumped up into the agricultural stage and snatched the sovereign power from Yin.

In monetary terms, the early Zhou belonged to the same stage of development as Yin. Strings of cowry remained the main instruments of payment. We may even say that cowry had become a genuine money. The "Bronze Inscription of Earl Qiong of Ju" records the earl as using thirteen strings of cowry to make a bronze vessel in a way which conveys the air of an account being settled.[24]

In addition to cowries, bronze was also employed as an instrument of payment during the Yin-Zhou transition. Bronze utensils were already in wide use during Yin. At the beginning of Zhou raw copper came to be frequently used for gifts in the same way as cowry had been and was second only to strings of cowry in frequency of use for that purpose. It was then merely referred to as metal [*jin*]. At first these gifts of raw copper probably bore no monetary connotations, the metal merely serving as the raw material for casting ceremonial vessels or as a material recompense for labor.[25]

Though metal began to be used in China very early, even during the period when bronze vessels were ubiquitous, most payments were still made in cowry, or at least mainly in cowry. This is hard to explain from a modern perspective. In modern times metal smelting techniques are well developed, and most superstitions have been eradicated, so everyone knows that metal is more suitable as a money than cowry. Metal has all of cowry's advantages and in greater measure, but cowry lacks metal's advantages. For example, cowry lacks metal's divisibility.

Nevertheless, commerce then was still only in an early stage of development, the number of exchanges was not great and the scale of exchange was small. Nor was the concept of value as well developed as in modern times. For technical reasons, metal's divisibility could not be fully utilized. Cowry's advantage was that it came in naturally occurring units. Because this was not true of metal, it did not immediately take on monetary status. In other words, before there was a system of weight units, it was inconvenient to use metal as money.

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We cannot yet determine when China first had a unit of weight, but one probably began to evolve when bronze vessels became abundant during Yin. Units of weight tend to evolve first out of measures of size or volume and later take the weight of objects whose volume is frequently measured, such as plant seeds, as their standard weights. Babylon, Arabia and England all took the wheat kernel as their standard.[26] Israel used beans.[27]

It is said that in China the unit was millet, with ten millet seeds constituting a *lei*, and ten *lei* making one *zhu*, or grain.[28] Units then developed which were multiples of the *zhu*, such as the ounce [*liang*], catty [*jin*], pinch [*yuan*] and *jun*. This was the theory of Han scholars. There is, however, no agreement as to how many *zhu* made one *yuan*.

There are two main theses, or perhaps there were two standards: One holds that 11 13/25 *zhu* made up one *yuan*, and that 100 *yuan* equals 3 catties. The other holds that 3 *yuan* equals 20 ounces.[29] The lat-

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[24]Bronze *yi* of Earl Qiong of Ju: "Earl Qiong of Ju made a precious holy vessel using ten and three strings of cowry." Cf. Fukuharu Shigeru, *op. cit.*

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[25]The Gongwei *dui*: "Gongwei came from the east to serve as minister in the new city, where metal was conferred on him, which he used to make a treasure vessel for Father Yi." *Ibid.*

[26]The Babylonian Code of Hammurabi took wheat as its unit. In thirteenth-century England the weight of one pence equalled 32 grains of round dry wheat selected from the center of the ear. Cf. William Ridgeway, *The Origin of Metallic Currency and Weight Standards* (Cambridge: The University Press, 1892).

[27]The shekel used by ancient Israel for religious purposes was equal to twenty bean seeds.

[28]According to the *Explanations of Words*, one *zhu* "was measured by the weight of ten parts of millet. It is also said that ten seeds of millet make one *lei*, and ten *lei* make one *zhu*. It is also said that eight *zhu* make one *zi*, and 24 *zhu* one *liang*. Meng Kang states that one yellow flute [*yue*] can hold 1,200 grains, equalling 12 *zhu*."

The *Huainan Zi*, "Teachings on Astronomy" states: "The ancient way of measuring weight . . . took twelve millet seeds to make one *fen*, twelve *fen* to make one *zhu*, and twelve *zhu* to make one half-ounce . . . Sixteen ounces make one catty [*jin*]. . . Thirty catties make one *jun*. . . Four *jun* make one picul [*dan*]."

[29]The "pinch" or *yuan* is written several different ways, and there are various definitions of it.

The first holds that 3 *yuan* weighed 1 catty 4 ounces. Under the entry for *yuan* using the metal radical, the *Explanations of Words* states: "The *Rituals of Zhou* says that a weight of three *yuan* is twenty ounces in the north." Later writers garbled this into one *yuan* being equal to 20 ounces in the north. The *Kangxi Dictionary* perpetuates this error, and on its authority some hold to a 20-ounce theory.

The second is a 6-ounce theory. The *Small Erya Dictionary* states: "A double *ju* is called a *yuan*. One *ju* weighs three ounces." In fact this theory is probably a variant on the first one.

The third is the 11 13/25 *zhu* theory. That is, that 100 *yuan* weighed 3 catties. Cf. the entry under *yuan* in the *Explanations of Words*. Xu Hao's notes to that work equates one *yuan* with twelve *zhu*. Though superficially very reasonable, since 11 13/25 is an odd fraction, to adopt an even number is to assume that the

ter is said to have been based on some northern standard, and so may be a unit of only local significance, but the former seems to have been a unit in general use. The *Officials of Zhou* alludes to a sword weighing nine *yuan*. Hence the second theory seems closer to the mark. One *jun* (sometimes written without the metal radical) would then be equal to thirty catties or a thousand *yuan*, but some say a *jun* was equal to a large Half-ouncer.

Western Zhou bronze inscriptions frequently contain the units *yuan* and *jun*. The Qin bronze (a vessel of the time of King Cheng) bears the sentence "The king bestowed a hundred *yuan* of metal." The Yao *ding* (of King Xiao's time) contains the words "three *yuan*" and "use a hundred *yuan*." The []d *ding* refers to "conferring one *jun* of metal." The Lingzi *pan* bronze mentions "one *jun* of metal." The Shou bronze speaks of "ten *jun* of metal," as does the []e *dui*.

No vessels have yet been found, however, bearing the catty or ounce units. Evidently these units must have developed later. The character for catty which appears on the Zheng Ren *ding* is not there used as a unit of weight.[30] The character *liang* on the Shou and Jiyun *ding* bronzes is used in its other sense, meaning "a pair," and in both cases refers to a measure word for horses.[31]

The word "metal" [*jin*] in bronze inscriptions refers to copper rather than gold. Copper was an important object then, the raw material for ceremonial bronzes and weapons. It was precisely because of this great usefulness that it took on the function of means of payment. In bronze inscriptions it is sometimes referred to as the "red metal" [*chi jin*]. Both the Bohuaifu and Lu bronzes contain the phrase "gift of red metal." The Yao *ding* contains the sentence "conferred red metal on Yao."

Of the greatest significance was the linking of bronze and cowry to make bronze cowries. Bronze cowries have been excavated from Yin tombs, but there is nothing concerning them in the written primary sources. There is an unusual ideograph in some bronze inscriptions, which appears in many variant forms, and because it has many strokes, it has been transformed into various modern characters.[i] All of these seem to be variations on the same character. Still others make it into [],[j] [],[k] or [].[l] Some even go so far as to translate it as "cowry," but this is obviously an oversimplification. Actually it most resembles a character shaped like [].[m] What, however, might this character really correspond to in the modern orthography?

Some say it is the character *huo*,

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meaning commodity or money, and that it referred to bronze cowries. This is possible, but in context this character obviously differs in substance from the words for metal and cowry. In other words, it has a different function. I have never seen this character used as the object of "bestow." A certain number of *yuan* of it are always "taken." The Bi bronze contains "took five *yuan* of []n." The Yang and Fansheng bronzes and the Hai *ding* all have the phrase "took five *yuan* of [].o" The []p bronze has "as punishment five *yuan* of []q were taken." The Duke Mao *ding* has "took []r *yuan* of [].s" Only the Yao *ding* substitutes "use" for "take" in the phrase "used []q to shift and sell five persons, using a hundred *yuan*."

Why was the word "take" used instead of "bestow?" Apparently this object was not being paid by a superior to an inferior, but from an inferior to a superior, and was a kind of tribute or tax. Hence I think this may be the ancient form of *fu* meaning tax or contribution, but written as []t or []u rather than []v. If this is the case, such a payment need not have been in bronze cowries. It could have been in lumps of raw copper or copper in other shapes, one of which might have been the cowry shape. The context within which the Yao *ding* places the term is to have it "used" for a certain quantity of horses, metal, or 100 *yuan*, which might make it a specific thing, and that thing might well be bronze cowries

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yuan, *zhu* and ounce all belonged to the same system of weights. This is where his error lay. Though both Plate-gold [*yuanjin*] and ounce-denominated clay funerary money have been excavated in the same region, the two moneys were not contemporaneous. When one unit of weight is translated into another system's unit, there is frequently a long remainder, and sometimes no fixed remainder can be obtained. If the ancient *yuan* equalled twelve *zhu*, why did not the primary sources simply say so, and not speak of a figure containing a fraction?

[30]The Zheng Ren *ding* reads: "Day *bingwu* the Heavenly Ruler and high official []f *jin*. The Heavenly Ruler rewarded Zheng Ren [and?/of?] Jin with cowry used to make a sacred vessel in honor of Father Ding." The arrow-shaped character is read by some as "ten"g and by others as "at".h Chen Jieqi interprets the character for catty, *jin*, as a man's name. Wu Dacheng thinks it refers to another of *jin*'s meanings, ax or adze, and that ax-money is meant. Okudaira Masahiro says it is a place name. Cf. his *Record of East Asian Coins*, 2, p. 30.

[31]The Shou bronze: "Fifth month. As there was death through violence, on day *xinwei* the king sent the minor official Shou to the Yi. The Yi treated him as a guest by offering a pair of horses and ten *jun* of metal. To requite the Son of Heaven's mandate Shou dared to have cast a bronze in his fief."

The Jiyun *ding*: ". . .bequeathed to the minor official Ling was a gift of cowry and a pair of horses. Ling bowed his head to the ground. . ."

after all.

Generally speaking, from the perspective of a monetary economy, late Yin and early Zhou China belonged to the same stage of development as ancient Babylon, Egypt and Israel. These countries all used metal by weight. Babylon and Israel used the shekel as their unit of weight, much as China employed the *yuan*. Their cultural level was also probably about the same. Even if China was already using bronze cowries, it must have been measuring them by weight, and so they could not have been a genuine manufactured money.

Payments in metal may have been made in other forms aside from lumps of raw copper and bronze cowries. Weapons may also have been used.[32] Among the people at large, bronze tools probably gradually became media of circulation and payment, because as agriculture developed, tools became more important than articles of adornment, particularly from the perspective of the laboring masses themselves. Hence in the course of exchange, agricultural tools such as shovels and knives and perhaps also spinning whorls could evolve into goods embodying value in general. In given areas particular tools were most commonly used, and these tools became that locality's money.

This stage had likely been reached by the time of the transition from Yin to Zhou, probably after Zhou's conquest of Yin. The Yin were more advanced than the Zhou in both metallurgy and agriculture. Once, after the conquest, the Zhou saw the tools possessed by the Yin, particularly the bronze tools, they would have valued them greatly since they themselves possessed only stone implements. [Peng is mistaken on this point. Recent archeological discoveries demonstrate that the Zhou had access to bronze for several centuries before the conquest, and often used it to make ceremonial objects. Nor were everyday tools often made of bronze, even by the Yin. This only became somewhat common after mid-Zhou. EHK]

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Not even all of the Yin people had bronze tools. In the end, these tools became goods embodying value in general. It was only later on, perhaps not for several centuries, that these tools developed into specialized moneys.

After Zhou moved its capital to the east, not only did the monetary economy fail to progress, it showed signs of regressing, or at least so it seems from the primary written sources. The word metal [*jin*] still means just copper in Spring-Autumn sources, and not money. It was raw material for making things with value in use --weapons or other implements. For example, in the eighteenth year of Duke Xi of Lu, the Viscount of Chu bestowed metal on the Earl of Zheng. Afterward, fearing the earl would use it to make weapons, the viscount made a treaty with him under which the earl promised not to do so. Instead the earl had musical instruments made from it.[33]

Similarly, in Duke Wen's ninth year, Earl Mao of Wei sought metal, and it was also feared that he wished to manufacture weapons with it. In those times all of the powers were risking everthing they had in the cause of military expansion, and bronze was crucial as a raw material for weapons. Wangsun Yu said "metal is sufficient to ward off military disorder, and so is treasured."[34] Guan Zi also said, "the beautiful metal (i.e. copper) is used to cast swords and spears, and is tested on dogs and horses."[35]

By and large, then, bronze had become a general necessity, and hence served as an instrument for payment, but those who accepted it mainly used it to make utensils and not to circulate further. The hollow-socketed spade circulated only among the people. The statement in the *Book of Zhou*'s "Punishments of Lü" that "to be pardoned from the punishment of tatooing, the fine is a hundred *yuan* to examine the facts of the case," and the statement in the *Book of Documents*, "The Great Punishment" that "to remit the punishment of castration, the fine is 600 *yuan*," both refer to weights rather than manufactured money.

Some books link tortoise and cowry,[36] or cowry and jade,[37] and say that tortoise and jade were also

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[32]*Dialogues of the States*, "Dialogues of Qi:"Guan Zi said for heavy punishments to be redeemed, use one rhinoceros horn spear; light punishments are to be redeemed with one embroidered leather adorned spear; minor offenses to be redeemed with portions [*fen*] of metal, upon payment of which an offense should be forgiven."

[33]*Zuo Chronicle*, Duke Xi of Lu, year 18.

[34]*Dialogues of the States*, "Dialogues of Chu," latter 18.

[35]*Ibid.*, "Dialogues of Qi," 6.

[36]*Rituals of Zhou*, "Death of the Sovereign" [*Daxingren*]: "Its tribute is in monetary-goods [*huowu*]." The note states: "Monetary-goods were tortoise and cowry." Guo Pu's *Eulogy on Veined Cowry*: "The former people made it. Tortoise and cowry were money [*huo*], were deemed precious for their patterned veins, and valued according to their size."

[37]*Book of Documents*, "Pan Geng:" "Here are those ministers of my government, who share with me the offices of the state; and yet only think of hoarding up cowries and gems." [Translation, Legge, p. 240.]

Ibid., "The Account of Kongshi": "Disorderly government will be due to my having

money in ancient times.[38] Such statements are not entirely without basis. Gifts of tortoise[39] are indeed mentioned on bronze inscriptions, as are gifts of jade[40] and jade sceptres,[41] but these were merely payments in kind and may not be considered as monetary in nature.

In ancient times tortoise shell was used for divination, and though a valuable object, was not money. The *Record of Rituals* says "the nobles used tortoise as treasure."[42] The Han scholar Xu Shen speaks of "monetizing [i.e. using *huo* as a verb] cowry and treasuring [*bao*] tortoise."

Jade is a beautiful stone which is hard in substance and difficult to carve. It was highly valued by the ancient aristocracy. It does not, however, exist in naturally determined units. To determine its exchange value in accord with the size and beauty of each piece is to retain its status as an object being bartered and not to circulate it as money. Large slabs of jade have never been dug up.

Hence gifts of sceptres or jade rings simply involved valuable commodities rather than being monetary exchanges. Eventually jade became a symbol of authority or a ritual implement used by the aristocratic class. Made into specific shapes to be worn at the waist, these shapes and the designs carved on them often indicated the wearer's rank or station in life. Even among aristocrats,

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it could not be worn at random. Ordinary people could not wear it at all. There was a saying then that "a commoner without guilt is nevertheless guilty if he wears a jade ring.[43] Given such serious prohibitions, how could jade have served as a medium of circulation?

Some modern historians say that the ancient figure Wang Hai used cattle and silk as money,[44] but they provide no basis for such statements, and one may infer that money must not have been in use then.

a 阐 b 貯 c 𢦏 or 拜 d 叟 e 屡 数
f 視 又 西 ↓ g 十 h 在 i 賞, 償, 遺, 遺
j 賈 k 債 l 賤 m 賚 n 償 o 遣 p 黷
q 償 r 卅 s 賞 t 賚 u 遺 v 賦 w 亾

3. The Varieties of Cowry and their Sources

More than one hundred fifty varieties of cowry are presently known to exist. Most of them live in the shallow waters of the Indian and Pacific Oceans.

Most of the peoples on all of the world's continents have used cowries, but different peoples have used different varieties. The cowry used for money by the Indians of Alaska and California on the American continent was the large toothed-cowry (*Dentalium pretiosum*).[1] Different kinds of cowries

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ministers who are good at administration, taking the place of the ancestors, and giving no thought to being loyal above all else, but merely studying to get cowries and jade, and speaking only of what they covet."

[38]Ban Gu says: "*Huo* means spades, silk and metal, knives, tortoise and cowry." Cf. *Former Han History*, "Treatise on Food and Money." On the basis of the Pan Geng section of the *Book of Documents* and the structure of the character *bao*, or treasure, Wang Guowei concludes that "during Yin jade and cowry were both used as money." Cf. his "On the Words for Strung-Jade and Strings of Cowry," in *Observation Hall Collected Grove*. This, however, blurs the distinction between money and wealth. Though the character for treasure contains the characters for jade and cowry, this does not mean that every treasure had to be money.

[39]The Lady Wen *yi* bronze: "Day *bingyen*. The viscount bestowed tortoise and cowry to be used to make a treasure bronze for Lady Yi. In the eleventh month there were three." Cf. Fukuharu Shigeru, *op. cit.*

[40]The Niao Qiegui bronze: "Qiu bestowed jade on Niao. It was used to [?][W] a bronze for Qiegui." *Ibid.*

[41]The Shi Ju bronze: ". . . bestowed on Shi Ju one jade sceptre and four seals. . ." *Ibid.* The Marquis Zhong of Qi bronze: ". . . the Son of Heaven used a jade ring to prepare. ." *Ibid.*

[42] *Record of Rituals*, "Ritual Vessels." Yang Xiong's *Great Mystery* contains a similar statement.

[43] *Zuo Chronicle.*

[44]Fan Wenlan's *A Brief History of China*, (rev. ed.), vol. 1, p. 32 states: "According to tradition . . . Wang Hai, riding on an ox cart, used silk and oxen as money and did business among the tribes." Yuan Ke's *China's Ancient Myths* adds that Wang Hai drove a large herd of cattle and sheep to Youyi where he was going to carry on trade. On this matter of Wang Hai, I know only that the *Great Famine in the East Classic* in the *Mountains and Seas Classic* contains a passage which states: "Wang Hai brought servants and oxen entrusted [to him?] to the Earl of Youyi River. Youyi killed Wang Hai and took the servants and oxen." Not only do these sentences not lend themselves to the interpretation that he was using oxen as money, they do not even much support the notion that Wang Hai was driving a large herd of sheep and cattle to make a living.

[1]The cowry used by the American Indians was called "tusk shell," the scientific name for which is *Dentalium pretiosum*.

were used among the various tribes of northern Australia, and none were universally used among all the different groups. Some places in Asia used ring cowry (*Cypraea annulus*), but most frequently used for money was a type that the ancient Chinese called toothed or serrated cowry [*chibei*], and the learned name for which is *Cypraea moneta*, or monetary cowry, reflecting its use as money.

Various kinds of cowry, both large and small, have been excavated in China, including the serrated-edge Chinese cowry (*Anodonda chinensis*, belonging to the family *Lucinidae* rather than the *Cypraea*) [*bang*] and the *Eulota quaesita* [*luoshi*, belonging to the family *Bradybaenidae*], and fresh water as well as salt water varieties.

What sorts of cowries were used in ancient China? According to some who have participated in excavations, "for money, salt water cowries were mainly used; for adornment, fresh water cowries were preferred." There are, however, many varieties of salt water cowry,

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and the source does not make clear which type or types are meant. Another version holds that China employed the monetary cowry, and that it obtained them from the south via barter. It even maintains that the very word for cowry in Chinese was borrowed several thousand years ago from the south seas.[2]

Evidence for Chinese use of monetary cowry is provided by excavations in several places.[3] Was, however, use of cowry in ancient China limited to this type? There is still room for discussion on this matter because two points of doubt remain:

Point one: There are instances in oracle bone and bronze inscriptions[4] of the character for cowry being written as []^{m} or as [].^{n} These are said to resemble serrated cowry rather than the *Anodonta chinensis* of China's rivers and ponds. The latter is a double-shelled cowry, the veins on which differ from the lines on bronze cowries excavated in various places. The bronze cowries are modeled on serrated cowry, i.e. *Cypraea moneta*. The calligraphy used on the various cowry pictographs is not altogether like this. We cannot say that these other cowries were used exclusively as articles of adornment.

Point two: We know from the ancient sources that more than one kind of cowry was used in China. The old books mention large cowries,[5] purple striped cowry,[6] dark cowries,[7] and others.[8]

Sometimes as many as twenty-five were strung together to a length of about six English feet.

[2]Guo Moruo, *Ten Appraisals*, p. 16.

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[3]Monetary cowry has been found in Yangshao period graves. In Yangshao village, for example, genuine cowry has been found in association with human skeletons. Bone cowry has been found in Zhujiazhai, and genuine cowry in Xinzheng. Cf. J.G. Anderson, *Children of the Yellow Earth*, p. 323.

[4]In the oracle bone texts, cowry is written as []^{a} and [].^{b} Cf. Sun Haipo, *Compendium of Oracle Bone Writing*. The Beijiayi *jue* bronze writes it as [].^{c} Cf. Shang Chengzuo, *Illustrations of Twelve Masters' Bronze Inscriptions*. The Zhou Marquis Xian *ding* has it as [].^{d} Cf. Rong Geng, *Treasure Gathering Tower Bronze Vessel Illustrated Record*. The Shang Elder Brother Gui *yu* bronze writes it as [];^{e} the Shang Elder Brother Guiyi as [];^{f} the Shang Father Xin *yu* as [];^{g} the Shang Mother Yi *yu* as [];^{h} the Zhou Father Ji *ding* as []^{i} and [];^{j} the Zhou Father Yi *ding* as [];^{k} and the Zhou Jiyun *ding* as [].^{l} Cf. *Xuanhe Antiquities Illustrations*.

[5]*Book of Documents*, "Great Chronicle:" "King Wen was imprisoned in Yuli. He sent Yisheng to the banks of the Yangtse and Huai, where he obtained large cowries, each as big around as the outer rim of a chariot wheel, to give to King Zhou of Shang."

Ibid., "The Mandate of Gu:" "Large cowries reverberated in the west building." (Kong Anguo's note states that the large cowries were like chariot felloes, i.e. outer rims, and that Shang and Zhou were said to treasure them.)

The Martial Scabbard of Duke Tai: "The Shang king detained Chang, the Earl of the West, in Yuli. Duke Tai sent Yisheng with one thousand *yi* of metal to seek out the precious things of the world to present to the king. . . . On the banks of the Jiujiang were obtained one hundred *ping* of large cowries." Cf. *Writings of the Three Dynasties of High Antiquity*.

Gist of the Spring-Autumn: "Precious and glowing, large cowries were obtained from the mud of the river."

[6]*Songs of Chu*, "Meeting With Disorder:" "Palaces of purple striped cowry and halls of jade are noted."

Discourses on the Mao Odes: "Among the molluscs, there is the purple striped cowry. Its base color is white like jade, but it has purple marks forming lines like writing. The largest have diameters of one foot six inches. Now, wherever they are found, they are exchanged for use as cups and plates, and are treasured goods."

Liu Xun of Tang's *Record of Unusual Things in the Lingbiao*: "The purple striped cowry is a mollusc gathered by the Danzhen of Yili as food. The *Southern Yue Gazetteer* says that the local large cowry is the purple striped cowry."

[7]*Debates on Salt and Iron*: "Money has changed over the generations. The ruler of Xia employed dark cowry."

[8]*Erya Dictionary*: "Cowries living on land are called *bao*; in the water, *han*. Large ones are called *hang* and small ones *ji*. When dark cowries reproduce, some of their larvae are yellow with white lines; others are white with yellow lines. The *ba* are broad and hairless. The *kun* are large and dangerous. The *ji* are small and oval."

The *Mountains and Seas Classic*: "Fishermen north of the

According to the written records, of these at least the large and purple striped kinds were used as money. Though some equate the large cowry with the purple striped cowry,[9] the large variety was definitely not the monetary cowry. As for the size of the monetary cowry, or the fact that some even lacked ground-down backs, or sometimes were dyed or gilded, none of these things have anything to do with the biological classification of the cowry, but rather involved variations of local custom or usage or in value of particular specimens.

Hence we cannot say that aside from the monetary cowry, all other cowries were used exclusively as articles of adornment. Otherwise, the men who created the ancient pictographs would have had to have been completely divorced from actual life, and that would surely have made the manufacture of cowries impossible. Monetary cowry was, however, probably the kind most generally used. We can verify this from the shape of various imitation cowries.

Why did the ancients use more than one type of cowry? I have two explanations for this: First, during the period when it used cowry ancient China was still a clan-tribal society. The country was divided among innumerable tribes, the population of each of which was no more than a thousand or several thousand.[10] The cowries used by these tribes were not all the same, just as is now the case in northern Australia. Second, the use of cowry was related to migrations of the peoples of China. Some people believe that the present peoples of China came from the northwest,[11] and drove out the indigenous peoples. Though there is no need to debate the truth of this theory here, it is congruent with what we know occurred with peoples elsewhere in the world.

Cowry occurs mainly along the tropical

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seacoasts, and is mostly used by tropical peoples. Hence cowry might have been transmitted to China by such southern indigenous peoples as the Miao, who could have migrated from the southern coastal region. After the northwestern peoples invaded, they might gradually have learned the use of cowry from the Miao.

Later, because the indigenous Miao had been expelled, the supply of tropical seashore cowries was reduced, and the current residents began to use other kinds of saltwater or even freshwater cowry or oysters. It is also possible that even in remote antiquity the Chinese were already using oyster shells as articles of adornment, and that afterward it was monetary cowry which served as the good symbolizing the value of other goods. Three salt water oyster shells and a number of fresh water cowry fragments have been excavated from the Zhoukoudian hilltop

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mountains catch many striped cowry. In the cloudy waters of the Gui Mountains are many yellow cowry."

The *Kangxi Dictionary* under the entry "cowry" quotes the *Examinations of Cowry Classic*: ". . . cowry up to a foot in size, in appearance like red lightning in black clouds, and called purple striped cowry [*zibei*]. The type with red sections and crimson substance is called pearl cowry [*zhubei*]. The kind with green lines on a grey-blue ground is called sashed cowry [*shoubei*]. One with black lines and yellow markings is called rosy-cloud cowry [*xiabei*]. Below these are the floating cowry [*fubei*], bald cowry [*zhuobei*], pure white cowry [*juebei*], and bright cowry [*huibei*]."

The *Taiping Yulan* quotes the *Guangzhou Gazetteer*: "In all there are eight types of cowry, of which the purple striped cowry is the most beautiful. It comes from Jiaozhou [modern Hanoi area]. The large cowry comes from Ju and Yanzhou, and is used by travelling merchants to carry on trade."

Ibid., quoting Xu Ai's, *Notes on the South* [*Nanfang ji*]: "The largest of the varicolored cowries attain a circumference of six inches; the smaller reach up to five inches. They are found by the seashore, where they are sometimes obtained by fishermen. The large ones come from the Ju and Yanzhou region where they are gathered and sold in exchange for crimson and green."

[9] *Correspondence from Beyond the Southern Mountains*, 7, on large cowries: "There are large cowries on Hainan with round backs and purple stripes. The flat side is deeply fissured. The two shoulders of the crack have fine lines at right angles to the axis. The *Pharmacopeia* calls these purple striped cowry. There are also small ones as large as the end of a finger. Their backs are light green-blue. The kingdom of Dali [in Yunnan] uses them to decorate armored helmets. In antiquity cowry was used as a commodity for exchange, and as an article of value for display in temples and at court. Nowadays the south equates cowry with oysters and other molluscs. The kinds now esteemed are not those valued in antiquity."

[10] *Universal Record*, "Food and Money: Population by Period:" "When Yu pacified the waters and set up the Nine Provinces, the population was 13,553,923. There were in the world ten thousand states capable of maintaining jade and cloth. When Xia was in decline awaiting Tang the Successful to receive the Mandate, more than three thousand states were able to exist. When the virtue of Shang weakened and King Wu of Zhou was to receive the Mandate, the five degrees of enfeoffment were fixed, and there were 1,773 states." This work goes on to state that when the Duke of Zhou was chief minister to King Cheng, the population was 13,704,923. Reckoning on the basis of these figures, at the time of Yu of Xia, each state on the average had only 1,355 people. At the beginning of Zhou each had only something over 7,000 people.

[11] For example, Terrien La Couperie, among others, argued that the Chinese people came from Asia Minor.

cave.[12]

The Chinese sea coast is not entirely lacking in monetary cowry. Ancient documents state that cowry or cowry teeth grew in the East China Sea.[13] There are also some modern references to cowry existing along the coast of Shandong,[14] and the Yin people lived along the Gulf of Bohai coast. The present distribution of cowry types may not be entirely the same as in antiquity. In ancient times there were elephants in North China, but nowadays they are scarce even in the south. The cowry-producing areas have probably also shifted to the south.

I have spent summers in Japanese places like Nagasaki, Boshu [present Chiba prefecture], and Kamakura, and later on lived in Hong Kong and Kowloon for several years. I frequently went to the seashore to swim and hunt for cowry, but never encountered monetary cowry. Perhaps I did not look carefully enough. Monetary cowry is said to be present on Taiwan and Hainan islands, so it also ought to be found in Hong Kong and in Kowloon.

The ancient Chinese could hardly have avoided contact with the peoples of the southeast, and so not only could southeastern cowries have been imported directly into the Yellow River valley, they might also have arrived by indirect routes.

The rivers and seas of China produce many other types of cowry. In addition to written accounts, a number of shell mounds containing various kinds of cowry have in recent years been discovered near Longkou, Huangxian, Shandong[15] and Lujiatun, in the Northeast.[16] Ancient books mention places containing cowry in their names, like Cowry River [*Beishui*][17] and Cowry Mound [*Beiqiu*].[18] Such places likely produced cowry.

Imitation cowries were all modeled on monetary cowry, and were of very many kinds. Distinguishing according to material composition, there were mother-of-pearl, oystershell, bone, stone, pottery, bronze and gold cowries. A number of different cowries were imitated in each of these materials.

Mother-of-pearl cowries resemble oystershell, except that they are softer, are not glossy, and are translucent. The ones I have seen are nearly uniform in size, and are somewhat smaller than genuine cowries. One side is flat and the other side protrudes. At the center of the protruding side is a deep, straight channel

[26]

running from top to bottom. There are also several short horizontal lines on both sides of the deep channel in imitation of the serrations on genuine cowry. These horizontal lines vary in number from two to six. In some cases they are entirely absent. Generally, there is a hole at each end, but some are without holes. Mother-of-pearl cowries are found in rather large numbers in the Wastes of Yin, near Anyang, Henan.

There are at least three types of oystershell cowries. One type resembles genuine cowry, except that one face is ground flat. Another type is flat-shouldered, with a line of round holes in the middle forming a deep channel to imitate the serrated line of the real thing. These holes go from front to back. The material of which the cowry is made is very brittle and easily broken. Oystershell cowries vary in size. The small ones are about the same in size as mother-of-pearl cowries. The large ones are twice that diameter. They come from the neighborhood of Luoyang, Henan. I have heard that there are some gilded ones. Some natural cowries are also gilded. The third type was excavated in Rehe, is shaped like a water chestnut, and is very thick.

The shapes of bone cowries are basically similar to the mother-of-pearl versions, except that the horizontal lines along the cleft are very densely packed, sometimes numbering as many as twenty. They have been excavated over a very broad area, most commonly in Hebei, Henan, Shandong, Shanxi and Qinghai provinces. Those unearthed in Cizhou,

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[12]Pei Wenzhong, *The Zhoukoudian Hill Cave Culture*.

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[13]*Taiping Yulan*, 807, "Treasures," quotes the *Pharmacopeia*: "Cowry, also called cowry-teeth [*beichi*], grows in the Eastern Sea."

[14]Couling, in his article on cowries in *Encyclopaedia Sinica* mentions monetary cowry occurring along the coast of Shandong.

[15]Komai Kazuyoshi discovered over a dozen different kinds of cowry in a shell mound near Longkou, Huangxian, Shandong. He says: "The cowry shells in this shell mound included such types as *magaki*, *tsumetagai*, *akanishi*, *asari*, *kubogai*, *wanewrashima*, *abowaminina*, *futohenatari*, *hesoakikubohi*, *kubogahi*, *sarubou*, and *kaki*," [the latter a type of oyster]. "On the Shell Mound in the Longkou Neighborhood of Huangxian, Shandong," [in Japanese], *Tōyō gakkupo*, no. 1 (March 1931).

[16]Hamada Kosaku says that a number of shell mounds have been discovered in the vicinity of Lujiatun in the Northeast, within which were various clay utensils and figurines, utensils of bronze and Five-grainer coins. In one shell mound at Daocun were a great many tubes of jade (both white and colored), small jade (glass), and a dozen *zi'an* (i.e. monetary) cowry which seemed to form a necklace. "On the Shell Coins of Ancient China," [in Japanese], *Tōyō gakkupo*, no. 2, 2.

[17]*Dialogues of the States*, "Dialogues of Chu," latter part, 18: "Formerly, the Qi Escort, Ma Xu, entered Beishui for Duke Hu."

[18]*Zuo Chronicle*: "Duke Xiang of Qi had fields in Beiqiu."

Hebei closely resemble genuine cowry. Their backs are ground flat, and they are sometimes dyed green or brown. Some people believe the green ones were affected by bronze verdigris, but this is not certain. If they had changed color because of contact with bronze objects, they could not have been so evenly colored.

Bone cowries unearthed elsewhere did not strive as much for versimilitude. Their backs are coarse and they are not of uniform height. Nevertheless, no one would ever mistake them for anything else. In fact they do not differ among themselves all that much. Bone cowries come with one or two holes, always bored inside the channel. Some say that those from Zhujiazhai in Xining, Qinghai and those from Tengxian, Shandong have two holes; while those from Xin'anxian, Henan have only one. This is not necessarily the case. Of those excavated from Cizhou, Hebei and from Luoyang, Henan, some from each excavation have one and others two holes.

There are also various kinds of stone cowries. One type is manufactured from a rice-yellow-colored soft stone, and very much resembles genuine cowry. The back appears to have been polished. It is said to come from Hebei. There is also a water chestnut-shaped type with a hole at one end which sometimes has a vertical channel, but lacks horizontal lines. Sometimes even the vertical channel is absent. The stone employed varies. Some are white, others are greenish and are called jade cowries. This type is said to sometimes have two holes. Small numbers of stone cowries have been excavated near Luoyang, Henan.

Pottery cowries also resemble genuine cowry. They are hollow and almost spherical, with a hole in the back. They are somewhat rare.

There are several types of bronze cowry. The type most commonly encountered has a hollow back and an obverse very much resembling genuine cowry, with a

[27]

serrated channel running down the middle, sometimes straight, sometimes curved. Reportedly the straight channel type comes from Henan and the curved channel type from Anhui. Actually, both types are sometimes excavated together. There are gilded versions of the straight channel type and gold clad versions of the curved channel type. In gilding, an extremely thin layer of gold foil is attached by application of heat or by some other method. Gilded objects peel easily, probably because insufficient heat applied originally. In gold cladding, gold leaf is wrapped around an object, but can gradually lift off. Gold leaf is thicker than the gold foil used for gilding. Evidently the gold plating technique was not yet known.

Gold-clad cowries are most beautiful. The gold color shines out from amidst the green streaks of verdigris. It is said that a large quantity of gold-clad cowries were unearthed from a Zhou tomb in Huixian, Henan. If they prove to be of the curved channel type, then the aforementioned theory that such cowries come only from Anhui will have been disproved. In addition there is a type of solid bronze cowry which resembles bone cowry. It is said to come from Zhengzhou, Henan, and to have one or two holes.[19]

I have only seen one piece of pure gold cowry. Pressed from a thin strip of gold, it had an unserrated channel running down its middle, and a hole at each end. It weighed four tenths of a gram. It did not seem to be imitating a genuine cowry, but rather an unserrated channel mother-of-pearl cowry.

Not all of the abovementioned imitation cowries were necessarily money. Some could merely have been articles of adornment. Others could have been grave furniture. Some people say the two-holed ones served as jewelry because they could be easily sewn onto clothing. For use as money, one hole would have been sufficient.[20] Though plausible, this explanation is incorrect. An article of adornment would not have had to be sewn onto the clothing. There is no reason why such objects could not have been strung together into necklaces or belts. Moreover, one ought not to distinguish cowry money from decorative cowry on technical grounds.

Still others say that all imitation cowries were used as grave furniture, because if used as money, they would surely have been modeled on genuine cowry.[21] This explanation approaches the arbitrary. Genuine cowries also varied in size. They too served as grave furniture, and why would they have needed holes for that use?

Of all imitation cowries, bronze cowries are of the greatest significance since they were linked to the cast metal coins of later times. The casting of bronze cowries may not have begun after the making of other imitation cowries. They have, after all, been unearthed from Shang tombs.[22] We cannot,

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[19] Yu Yan, "Investigation of Cowry Money," *Coins*, no.26.

[20] Harry E. Gibson, "The Use of Cowries. . ." *op. cit.*, had only seen two-holed versions. He considered these to have been used as jewelry because they could be conveniently sewn to clothing. For use as money, one hole would have been sufficient. Though this is a logical explanation, its logic is based on modern sensibilities. I still feel that the number of holes varied on the basis of local customs.

[21] Seo Koryo, "Record of Studies in the Eastern Capital," [in Japanese], *Kahei*, no. 72.

[22] There were three bronze cowries in a Shang tomb in

however, be certain that the Shang dynasty's bronze cowries were made to serve as money. And yet by the early years of Western Zhou, raw copper had become an important instrument for making payments, with transfers being made according to weight.[23] Once casting of bronze cowries had begun, the *peng* unit might have been retained, but at times might also have been replaced by the *yuan*.[24]

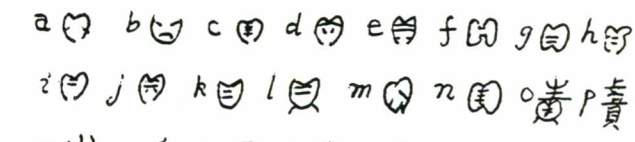
Western Zhou bronze inscriptions often
[28]
contain references to taking a certain number of *yuan* of [].[p] This character, which some transcribe as []^{q} or [],[r] is also sometimes written as [].[s] Some people read it as *huo*,[t] meaning money, and say it refers to bronze cowries. It could also, however, be the word *fu*,[u] meaning to tax or contribute. Some gifts of metal might not have been made in lumps of copper but in bronze cowries. The bronze cowry joined together the two most important means of payment then used: lumps of copper and individual cowry shells. To bring these together would have been extremely natural and convenient.

If such bronze cowries served as coins, they were the world's earliest manufactured money. We could not completely deny them status as money just because they were sometimes weighed before being used in payment. The later Greek *drachma* silver coin was also sometimes circulated by weight. The records refer to a certain weight in *talents*, the unit of weight, when payment was actually being made in *drachmas*.

By Spring-Autumn and Warring States times, cowry money, particularly genuine cowry, must no longer have been in circulation. All traces of it must have been eliminated from the market because by then various other kinds of manufactured money had appeared. Oddly enough, however, genuine cowry is still found in tombs of this period. This does not mean that cowry money was still circulating in such places, though this possibility cannot be entirely ruled out, since it was not until the time of the First Emperor of Qin that monetary use of cowry was formally abolished. It is much more likely, however, that men still considered cowry to be valuable, especially as an article of adornment for the dead, because of inherited traditional ideas.

Whether or not the idea of cowry money was carried south by the Miao people, and whether or not the ant-nose coins [*yibi qian*] of Chu evolved out of bronze cowries, are both questions worthy of study. If we accept the thesis that cowry money's circulation shifted toward the south, then this may be easily linked in our minds to the later use of cowry in Yunnan. Cowry shells have recently been found in a tomb in Jinning, Yunnan. They are rather large, and could have been used as money.[25] This was during the Han dynasty. By Tang times there is documentary evidence for use of cowry by the Nanzhao kingdom.[26] In Song times cowry was called *beizi*,[27] and during Yuan times, *bazi*. During Ming it was called *haiba*.

Ancient Yunnan may have formed a single monetary region with the Bay of Bengal coast of India and Burma, and so its use of cowry may have derived from South Asian rather than from ancient Chinese practice. Indeed, Yunnan's cowry might have come from someplace like the Maldive Islands in the Indian Ocean. Some say that during the Yuan Dynasty the *bazi* used in Yunnan came from the Con Son Islands in the South China Sea south of Vietnam.[28]



Dasikong Village, Anyang, excavated in 1953. Cf. Ma Dezhi, *et al*, "Report on 1953 Excavation in Dasikong Village, Anyang," [in Chinese], *Archeology Journal* [*Kaogu xuebao*] (9, 1955).

[23]The Shilü *ding* bronze (a vessel of King Cheng's time) contains the words "three hundred *yuan*." The Qin bronze (of the same period) speaks of "one hundred *yuan* of metal." The Yao *ding* (of King Xiao's time) has the words "used a hundred *yuan*," and "three *yuan*."

[24]The Duke Mao *ding* bronze: ". . .for guarding the king's person with our clan, we got four *yuan* of cowries (the character for cowry being written as []^{o}). . ." *Catalogue of Bronze Inscriptions Through History*. Guo Moruo says that it dates to King Xuan's reign.

The Yu bronze: "Yu came from Shihuai. Father Xu at the ancient mound of Mieli exchanged/bestowed four *yuan* of cowries. Yu made deep obeisance. . ." Cf. Guo Moruo, *Interpretation of Western Zhou Bronze Inscriptions*.

[25]Li Jiarui, "Probable Circumstances of the Use of Cowry Money in Ancient Yunnan," *Historical Studies*, 9 (1956); Fang Guoyu, "The Period of Cowry's Use as Money in Yunnan and Cowry's Origins," *Yunnan University Journal* [*Yunnan daxue xuebao*], Human Sciences, 2 (1957). Fang disagrees with the theory that cowry money was being used during the Han dynasty in Yunnan.

[26]*New Tang History*, "Chronicle of Nanzhao:" "Silk fabrics and cowry were used in the market for exchange. The cowry were each the size of a finger. Sixteen of them made one *mi*."

[27]*Zhenghe Era Attested Pharmacopaeia*, number 22, quoting the *Sea Medicines*: "Beizi are extremely numerous in Yunnan. They are used as coins in making exchanges."

[28]*The Travels of Marco Polo*.

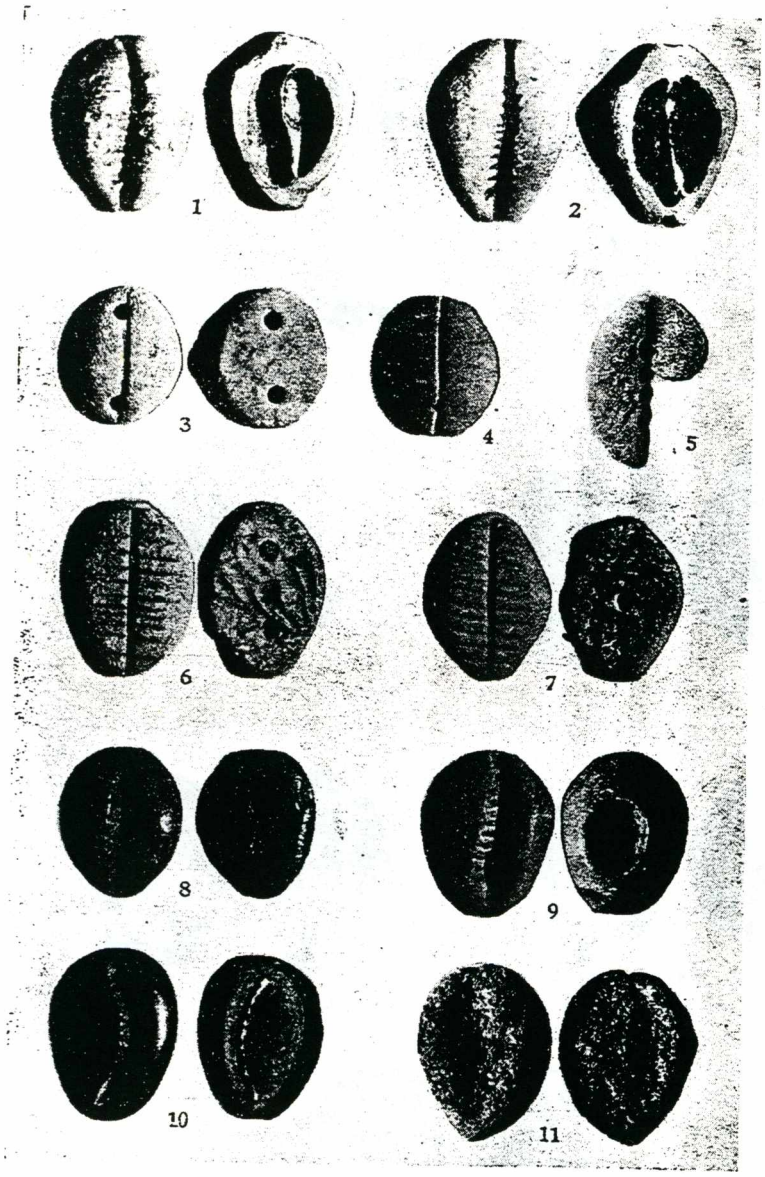


圖 版 一 殷周間的貝幣(一)

1—2.眞貝。 3.無齒紋的珧貝。 4.有齒紋的珧貝。 5.蚌製貝殘片。 6.兩穿孔的骨貝。 7.一穿孔的骨貝。 8.染(綠)色骨貝。 9.石貝。 10.曲齒紋的銅貝。 11.直齒紋的銅貝。

PLATE I, LATE YIN-EARLY ZHOU COWRY MONEY (1)

1-2. Genuine cowry. 3. Mother-of-pearl cowry without serrated crack. 4. Serrated crack mother-of-pearl cowry. 5. Cowry fragment made of oyster shell. 6. Bone cowry with two holes. 7. Single hole bone cowry. 8. Dyed (green) bone cowry. 9. Stone cowry. 10. Curved serrated crack bronze cowry. 11. Straight serrated crack bronze cowry.

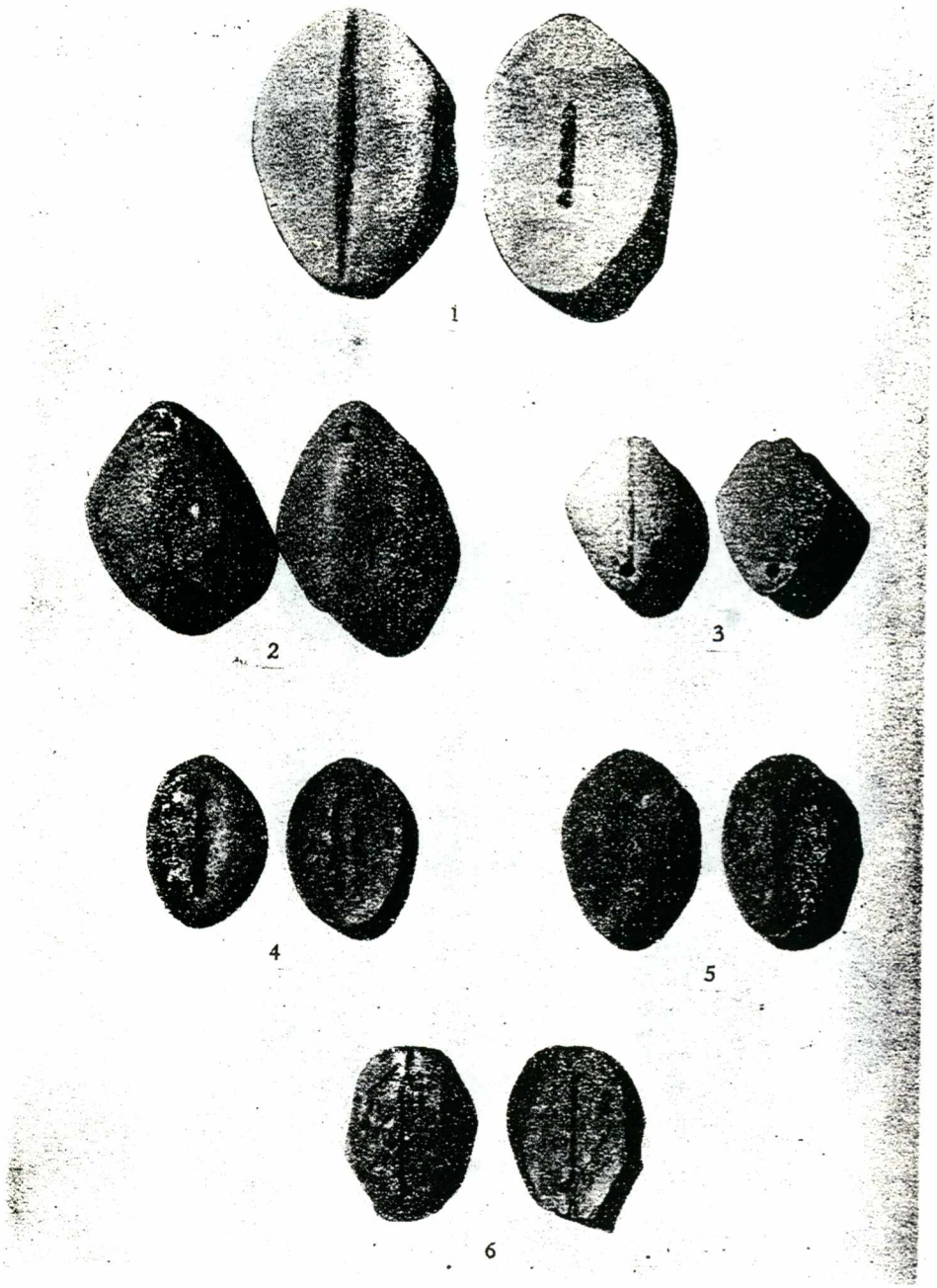


圖 版 二　殷周間的貝幣(二)

1.大紵貝。 2.玉貝。 3.菱角形的珧貝。 4.貼金貝。 5.包金貝。 6.金貝。

PLATE II, LATE YIN-EARLY ZHOU COWRY MONEY (2)

1. Large oyster-shell cowry. 2. Jade cowry. 3. Water-chestnut shaped mother-of-pearl cowry. 4. Gilded cowry. 5. Gold clad cowry. 6. Gold cowry.

[31]

1.2 The Establishment of a Monetary Economy

1. The Cast Bronze Money of the Spring-Autumn and Warring States Epoch

During Spring-Autumn and Warring States times, cast bronze coins of four main types were broadly circulated. These are: spade coins [*bubi*], knife coins [*daobi*], ring coins [*huanqian*], and the so-called ant-nose coins [*yibiqian*].

The spade coin evolved from an agricultural tool, the shovel. Pronunciation of the term *bu* may have originated as a phonetic loan from the character *bo*, in ancient times meaning either a hoe or a large bell suspended from a frame. One of the ancient odes contains the line "tools include the *qian* and *bo*." Some later writers have supposed that *bu*'s meaning derived from its use in the word meaning "to flow or spread," but that interpretation is somewhat forced.

The spade coin's evolution may be divided into two main stages. The coin of the first stage took the form of a shovel with a hollow socket into which a handle could be inserted, and which is therefore called the hollow-socket spade. During the second stage the socket or handle was no longer hollow, but rather had become flat, and so this is called the flat-handle spade. Past numismatists have conflated these two stages into coexisting variant types. That is not satisfactory. They should be seen as forming a chronological sequence rather than as two types of spade coin circulating simultaneously.

There are a number of kinds of hollow- socket spades. Some of them represent an evolutionary sequence. Earliest are some particularly wide and large spades, whose lengths (including socket) reach 16.5 centimeters,[1] and whose hollow sockets extend down into the middle of their blades. They have round shoulders and flat bottom edges. Inscriptions are lacking on either side. They are almost identical to the shovels used as agricultural tools. This sort of ancient spade does not seem to postdate Western Zhou. Some of them have flat shoulders and rounded bottom edges. These are somewhat smaller than the others. Very few such spades have been excavated, but it is possible that most of those unearthed were melted down for their copper by those who found them. This type was probably a transitional form in the evolution from agricultural implement into coin, and may be the earliest spade coin.

It is characteristic of ancient spades that they come in no standard size, thickness, or shape. One might expect the larger kind to have appeared first, but it is a difficult matter to determine just when the earliest hollow-socket spades appeared. Indeed the line between tool and specialized money is hard to draw. I would place the transition at around the time that King Ping moved the capital to the east. In modern times these spades have mainly been unearthed in the Anyang region, which in ancient times was the area where metallurgy was best developed.

[32]

There is another kind of large hollow-socket pointed-foot spade which has a particularly long socket, upward slanting shoulders, and two pointed feet. Most are without inscriptions, but a few have inscriptions consisting of numerals and characters like *ri*,[a] *gong*,[b] *lü*,[c] or *gan* [or *han*] *dan*.[d] [Cf. Plate iii, at the end of this subsection.] Recently one with many ideographs was discovered.[2] It likely dates a bit later. Large numbers of this type of spade have been unearthed and they are uniform and regular in style. They are presumably later than the aforementioned ancient spades, but it is also possible that they were used in some other place, since they are found from the Taihang Mountains north. [The numismatist Bruce W. Smith (in a letter of January 23, 1992) states "This type is now known to be the coinage of the state of Jin. A mint for making this type of coin has been found at Houma, Shanxi, the former capital of Jin."]

Ordinary hollow-socket spades are rather small. The largest weigh 30-40 grams. Most are under 30 grams. Small ones weigh less than 20 grams. All have inscriptions. They probably circulated during Spring-Autumn times in the middle Yellow River valley between the river's great bend to the west and Luoyang. Most people deem them to have been of Zhou manufacture. Money, however, appeared spontaneously, and was not made to the order of the Zhou dynasty's government. We can see this from the non-uniformity of the coins and the contents of their inscriptions.

Common hollow-socket spades have either flat shoulders or slanted shoulders. Their lower edges are neither flat nor pointed, but rather form a bow shape. [Plate iv] Their inscriptions are either single or multi-character. The inscriptions consist of numerals, stem and branch character couplets, and other characters whose meaning is unclear. All the numbers from one to ten are encountered. These numbers do not refer to the weight or value of the coin. They are probably serial numbers. The stem and branch couplets probably serve the same func-

[1] For illustration cf. *Ancient Money and Exchange*.

[2] For illustration cf. *Cultural Relics*, no. 8-9 (1960), 14.

tion, and are not necessarily dates.

There are several dozen other individual characters used whose significance is not known, such as: above *shang*,[e] below *xia*,[f] earth *tu*,[g] cowry *bei*,[h] metal *jin*,[i] wall/city *cheng*,[j] pine *song*,[k] martial *wu*,[l] halberd *ge*,[m] peace *ping*,[n] go *xing*,[o] Zhou,[p] rain *yu*,[q] *yi*,[r] sheep *yang*,[s] big *da*,[t] duke *gong*,[u] sun *ri*,[v] lord *jun*,[w] crow *wu*,[x] is *shi*,[y] valley *gu*,[z] west *xi*,[aa] moon *yue*[ab] (or knife *dao*[ac]), prefecture *zhou*,[ad] field *tian*[ae], ancient *gu*[af], hill *shan*[ag], white *bai*,[ah] halt *zhi*,[ai] hill's south side *yang*,[aj] tall *gao*,[ak] second stem *yi*,[al] tree *mu*,[am] village *tun*,[an] detain *liu*,[ao] craftsman *gong*,[a] eye *mu*,[ap] become *cheng*,[aq] *yu*,[ar] clan *shi*,[as] joint *gong*,[at] revolve *xuan*,[au] transform *hua*,[av] seven *qi*,[aw] hill *qiu*,[ax] black *lu*,[ay] vermilion *zhu*,[az] merchant *shang*,[ba] show *shi*,[bb] marquis *hou*,[bc] [],[bd] money/goods *huo*,[be] trade *mao*,[bf] ought *dang*,[bg] wealth *fu*,[bh] auspicious *ji*,[bi] tripod-cauldron *li*,[bj] *wu*,[bk] mouth *kou*,[bl] ear *er*,[bm] joint *tong*,[bn] solid-legged cauldron *ding*,[bo] clan-ancestor *zong*,[bp] [feudal state of] Song,[bq] and flock *qun*.[br] Some of these may be place names, as for example, *dun*,[an] *liu*,[ao] and *wu*.[x] A good many of the rest cannot be understood. Despite diligent application, generations of numismatists have been unable to fathom their meanings.

Among the hollow-socket spades are some small ones with two-character inscriptions like *jijin*,[bs] *feijin*,[bt] *fu (wu) jin*,[bu] *wuyuan*,[bv] *anzang*,[bw] Eastern Zhou *dongzhou*,[bx] *tongshi*,[by] *wu'an*,[bz] officially examined *guankao*,[ca] *lushi*[cb] and *maoqiu*.[cc] Most of these are probably place names and the coins which bear them probably came later in time.

There is another one with a multi-character inscription formerly glossed into modern characters as *jifu xiao hua*,[cd] [perhaps meaning *jifu* small money. EHK]. Actually, however, there are many variations, some of them reversals of others.

[33]

The strokes of the characters are so broken that we are not even sure how many characters there are. Sometimes the inscription is written as []^{ce} which would seem to be backwards. If the last two characters are indeed to be taken as meaning small or few *hua*,[cf] then the denomination of the coin as well as a place name is present. The character *hua* was originally a name for money or a monetary unit in the knife-coin region. If this term was now being applied to spade-coins, that would be worthy of note. This type of spade includes some especially large examples.

Many of the inscriptions on hollow-socket spades are unreadable, and of those we can read, we often cannot altogether fathom their purposes. Even for those which we can determine to be place names, we cannot always pin the names to specific locations. This is because a number of place names from Spring-Autumn and Warring States times have not come down to us, and also because there are instances of two places having the same name. These can only by verified through archeological excavations.

According to the records of numismatists since Qing times, the bulk of hollow-socket spades have come from the Guan-Luo region, embracing the present Shaanxi and Henan provinces. According to the place names on the coins, however, they would seem also to have been made in Shanxi, Shandong and Hebei provinces. The spades bearing the inscriptions *yi*[r] and *feijin*[bt] [Plate v] would seem to have been made in the state of Qi (in present Shandong), but there is no record of hollow-socket spades having been excavated in Shandong. There may have been an error in glossing the inscriptions here, or some may have been excavated but not recorded.

In the past numismatists did not concern themselves with the locations where coins had been unearthed. The minority who were interested in such things merely questioned the coin merchants about them, and tended to believe and pass on whatever they were told. I had not ever heard of any claims of hollow-socket spades being unearthed in northern Hebei, but recently a large batch of them was dug up during the repair of a road in the western suburbs of Beijing.[3]

During Spring-Autumn times hollow-socket spades were likely still an item used by commoners, and contemporary written sources, which come from the rulers, as before, do not mention them. The

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[3]Su Tianjun, "Brief Discussion of the Pre-Liao Cultural Relics Excavated in Beijing," *Cultural Relics*, 9 (1959) states that in the Summer of 1956 there was unearthed outside Beijing's Chaoyang Gate a large quantity of knives and spades. The spades were of both the pointed-foot and square-foot types, and bore such inscriptions as *pingyang*,[cq] *anyang*,[ch] *zhaiyang*,[ci]

[63]

yangyi,[cj] *dayin*,[ck] *rangyin*,[cl] *liang*,[cm] *qi*,[cn] []^{co} *wu*,[cp] *lang*,[cq] Wang clan *wangshi*,[cr] Zi clan *zishi*,[cs] Pi clan *pishi*,[ct] Man clan *manshi*,[cu] *pingzhou*,[cv] Central Capital *zhongdu*,[cw] High Capital *gaodu*,[cx] *puzi*,[cy] [?]zi,[cz] *beiqu*,[da] *tongshi*,[db] *tunliu*,[dc] *mafuyi*,[dd] *qiubei*,[de] *rangyuan*,[df] *feng*,[dg] *lu*,[dh] *nie*,[di] *lin*,[dj] *jiuru*,[dk] Zi clan half *zishiban*,[dl] *wuping*,[dm] *wu'an*,[dn] *jinyang*,[do] *jinyi*,[dp] *shenyang*,[dq] *yangren*,[dr] *pingzhou*,[du] North Zi [metal money?] *beizijinhua*,[dt] [*yuan*?],[du] *xeshan*,[dy] *shangqiu*,[dw] Western Capital *xidu*,[dx] *linban*,[dy] *yuban*,[dz] *lishi*,[ea] *zhuweiban*,[eb] and *yida*.[ec] I have here followed Su's transcriptions into modern ideographic forms. The knives include *ming* and Handan types. In October 1961 the Beijing coin dealer Lu Zemin informed me that sometime around 1953 in the course of

ancient odes allude to strings of cowry, but never to knives and spades. The reference in the "Airs of Wei" to holding *bu* to trade for silk, refers to *bu* in its meaning as "rolls of cloth," so that the reference is to barter rather than to exchange of goods for spade coins. The *bu* in the *Rituals of Zhou*, if not a later interpolation, also means cloth rather than spade coin. The practice of calling shovel-shaped coins *bu* probably only began during Warring States times. By then spade coins were in wide circulation, and so were finally taken seriously by the ruling class, which applied the name *bu* to these coins. Only by the time we get to the *Guan Zi* does a reference to "fines in bundles of *bu*" mean spade coins.

By Warring States times there occurred an important transformation in the shape of the spade coin from hollow-socket to flat-handle, and in size from large to small. This accords with the normal rules for evolution of man-made objects. There are some large flat-handle spades, but there are very few of them, and none are as large as the hollow-socket spades.

Among the flat-handle spades there is one type of square spade which, aside from the handle, forms an almost perfect square. Very nearly identical to the hollow-socket spade,

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it must be the earliest of the flat-handle spades. One type bears only the single character "white" [*bai*[ah]]. Another type carrries an eight character inscription, which has been transcribed to read as "Deng 25 left-side town half metal money" [*deng nian wu zuo yi ban jin hua*[ed]], but the several surviving coins of this type vary in the forms of their sealscript calligraphy. On these only the first two characters can be made out as "white adz" [*baijin*[ee]]; all the rest being undecipherable.

Some people have attempted to read this inscription from left to right. I do not know why. For classification purposes we can label this the "*baijin* square spade." The character *bai* here could be an abbreviated homonym for the character meaning "cypress, cedar."[ef] There was a place called Bairen[eg] back then in Warring States Zhao. Very few such spades have survived, and we cannot treat it as having been very common. There is another flat-handle spade, the bottom of which forms a bow-shaped curve, and which also resembles some hollow-socket spades. It too would seem to belong to the early stage of the flat-handle type. The single character on its face resembles the character "capital" [*jing*[eh]].

The great majority of Warring States spade coins are of the so-called "footed" category. They may be divided into four types by shape. The first is the pointed-foot spade [*jianzubu*]. Second is the square-foot spade [*fangzubu*]. Third is the round-foot spade [*yuanzubu*]. Fourth is the adz-spade [*jinbu*]. There are also the worth-*yuan*-spades [*dangyuanbu*] and some miscellaneous shapes. These spade coins differ not only in shape but in region of circulation, and perhaps also in the periods when they were in circulation. Their chronological sequence was not, however, one of simple succession. Some may have circulated simultaneously.

The pointed-foot spade seems to be the earliest of the footed spades. [Plate vii] It evolved out of the hollow-socket pointed-foot spade and circulated in the north, mainly in Zhao. The hollow-socket pointed-foot large spade weighs 37 grams, including the loess soil in its socket. The large flat-handle pointed-foot spade weighs 13 grams. The small version weighs only 6 or 7 grams and the metal of which it is made is very brittle.

All of the pointed foot spades bear inscriptions, most of two characters, and practically all of them place names. From the state of Zhao we can verify Handan,[ei] Jinyang,[ej] Wu'an,[ek] Zi,[el] also transcribed as [],[em] []^en and [],[eo] Zishi,[ep] Zi City [*zicheng*[eq]], Zi Adz [*zijin*[er]], Lin,[es] i.e. [],[et] and Lishi.[eu] From Wei we have Pingzhou,[ev] Pishi,[ew] Zhongyang,[ex] and Puzi.[ey] In addition to these there are Dayin,[ez] Dayin Half [*ban*], Pingzhou,[ev] Xidu,[fa] Zhongdu,[fb] Yang,[fc] Dayang Half [*dayangban*[fd]], Wuping,[fe] Yuanyi[ff] and Shang City [*shangcheng*[fg]]. Of these the Handan, Lin, Zishi, Dayin, Jinyang as well as the Ye[fh] are all large spades, and all of these large pointed-foot spades belong to the state of Zhao.

In evolutionary terms, the large pointed-foot spades seem to have come first, with the small pointed-foot specimens only coming later. This is because some of the small ones were clearly inscribed in half unit denominations. The large pointed-foot spades made in Lin and Zishi merely bear these place names, but the small ones add the word "half" [*ban*] to their inscriptions. Evidently the earliest small spades were put out to serve as half the value of the original large ones. Eventually, the

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greater convenience of the small spades in circulation allowed them to become the standard monetary unit and the character "half" was no longer added to their inscriptions. Hence the Zishi Half must have come before the small Zishi. We can also see that the pointed-foot spade was first made in Zhao and

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building a road outside Beijing's Guang'an Gate a large hoard of hollow-socket spades was dug up. He also said that a large quantity of square-foot spades had been unearthed in Yixian.

then taken up by some localities in Wei. The backs of these coins frequently bear numerals.

Square-foot spades [Plate viii-ix] must have developed from common hollow-socket spades, but a minority of them seem to have developed out of the pointed-foot type, as for example the *zhuwei*, Zishi, Dayin and Pingzhou. The most notable feature of the pointed-foot spade, aside from the shape of its feet, are the two parallel lines running down its handle. Square-foot spades only have one such line, except for the several abovementioned types, which have two lines. In addition, though their feet are square, they bear vestiges of the pointed-foot shape. Their being narrower than the common square-foot spade also makes them more nearly resemble the pointed-foot.

Most likely some places using the pointed-foot spade felt they were not very convenient in circulation, and so changed over to the square-foot design. Of course this is not to say that the square-foot's appearance forced the elimination of the pointed-foot. Some places retained the pointed-foot shape, and so the two types do not necessarily form a chronological sequence. Depending on local circumstances, in a minority of places, the influence of either square-foot or round-foot spades was felt.

Square-foot spades are the most commonly encountered type of spade. They are smaller than the pointed-foot type, averaging only 5 or 6 grams in weight. They are made of harder bronze than is the pointed-foot. Places minting this spade included Anyang, Pingyang, Zhongdu, Zhongyang, Lin, Lishi, Changzi, Tunliu, Gaoyi, Rangyuan, Pingzhou, Pishi, Gaodu, Puzi, Beiqu, Liangyi, Zhaiyang, Wu, Wu (or Wuyi), Lu, Dayin, Qibei[fj] or Wenbei[fk] or Qiubei[fl] (variant transcriptions of [],[fi] [?]bei,[fm]) Qishi, Cheng (or Chengyi), Wangshi, Suanji, Pingyi, Pingbei, Yinshi, Yinyang, Yangcheng, Rangyin, Yangqi (or Qiyang), Bei (north), Beiqi, Mayong (or Mafuyi), Yangyi, [Chang?]an,[fn] Muyi, Beiyi, Fenghua, Tuyi, Shiyi, Wangyi, [?]yi,[fo] Zhong (Zhongyi), Zhongqi, Ping[?][fp] (Pingyuan), Fushi, Ying, Wuyi, (or Yueyi), [?]yi,[fq] [?]shi,[fr] Zicheng, Tongshi (Tongti), Ziyi, Pingyin, Shiyi,[fs] Cengyi, Zhuyi, Nie, Xinyi, Luyang, Fengyi, and Zhuo. There are a number of other place names which cannot be read.

For the most part the above-mentioned places were within one or another of the states of Zhao, Wei, and Han. A minority bearing Yan place names were probably minted at the time of the third century B.C. Zhao military attack on Yan.

Of the small square-foot spades, those minted in Anyang, Pingyang and Zhaiyang are most numerous. These places were probably commercial centers. Anyang and Liangyi have large spades of twice the weight of small specimens. It is possible, however, that these differed in character from the large pointed-foot spades, and instead served as multiple denominations of their small counterparts.

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Except for the Rangyuan, the backs of the small versions lack inscriptions.

The Ge (or Geyi), Yichang, Rangping, Pingyin(?), and Taoyang spades, though ascribable to the square-foot category, are a little unusual in shape. The Ge is large and bears the two characters for "one half" [*yiban*] on its reverse. The Yichang and Rangping are smaller and the Taoyang is thicker. The Yichang and Puzi spades are made of lead. [The numismatist Bruce W. Smith has never seen or heard of a pure lead spade and suggests Peng must here mean a copper-lead alloy.] The Zhuo, Yichang, Rangping, Pingyin, and Taoyang are generally believed to have been made in Yan. These are, in fact, smaller than other small spades. Not long ago there turned up a small spade bearing a four character inscription which has been transcribed as "right *ming* new []" [*you ming xin* []^{ft}]. The fourth character is read by some as "to smelt" [*ye*^{fu}].[4] The first two characters are found on *ming* knives, suggesting that this spade is also from Yan. It resembles the Yichang and Rangping spades. The *yi*^{fz} in Yichang differs, however, from the *yi*^{ga} on the hollow-socket spade. In the past some have transcribed it as *gong*.^{gb} If it is *yi* after all, that would just show that Yan had an idiosyncratic form of writing.

There is archeological confirmation that Yan used spade coins. In addition to the hollow-socket spades dug up near Beijing, large square-foot spades have been unearthed in Yixian. [Bruce W. Smith adds that in a 1965 excavation in Yixian molds for small square-foot and large pointed foot spades were found along with a mint for ming knife coins.] A fair number of knives and spades have been unearthed in Chaoyangxian, Liaoning, most being of the Yichang type, but including Anyang, Liangyi and Wu'an specimens. Of course there are also knife coins, both pointed-handle and *ming* knives. In addition to the Chaoyang find, such coins have also been found in Lüda, Anshan, Shenyang, Fushun and Jinzhou. They must, therefore, have been widely distributed. Chaoyang was a part of the Liaoxi Commandery of Yan.[5]

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[4]Li Xueqin, *Outline of Warring States Inscriptions*, latter part: "Chu Inscriptions" says he had seen the character []^{fv} on the *ding* of King You of Chu in two phrases, and adds that the most complex form of the character for "to smelt" *ye* []^{fu} combines the elements "man" *ren*,^{fw} "fire" *huo*^{fx} and "mouth" *kou*,^{fy} but frequently omits some one part of these.

There exist only a few varieties and small number of round-foot spades. [Plate x] This type is characterized by rounded-off shoulders, feet and crotch. They were minted in Jinyang, Zishi, Lin, Lishi, and Dayin. Generally their handles lack vertical lines, but the Jinyang, Zishi and Dayin handles bear two such lines, and the rounding of their shoulders and feet differs from the other localities' spades. This has led some to suspect that round-foot spades evolved from pointed-foot spades, just as had the several types of square-foot spades mentioned above, or alternatively that the pointed-foot spade localities had been influenced by the round-foot spade. Even types like the Lishi round-foot sometimes had a pair of lines cast onto their handles.

There are both large and small round-foot spades. The small Lishi spades, for example, weigh around 9 grams; the large ones 18 grams. Lin spades come in a large variety of sizes. They seem to fit no definite classification. Individual coins vary from 7 to 18 grams. Perhaps repeated weight reduction produced this situation. The Lin are the most numerous of the round-foot spades and they display great variations in shape. Some have narrow crotches and long tubular legs.

Some round-foot spades have holes, one in the handle and one in each of the feet. These are called three-hole spades. Among the places minting them were Anyang, Luyang, Shangzhuan, Xiazhuan, Shangyuan, Shangbiyang, Xiabiyang, Beijiumen,

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E,[gc] []^{gd} and []^{ge} [perhaps *wenyingxiang*^{gf}]. In addition to their three holes, the reverses of these coins are also distinctive. Most ordinary round-foot coins bear numbers on their reverses, but the three-hole spades record weights or values there. Large ones have the two characters meaning "one ounce" [*yiliang*]; small ones the three characters for "twelve grains" [*shi'erzhu*]. This gives the three-hole spade unusual importance in Chinese monetary history. It is the earliest coin to employ the grain (*zhu*) and ounce (*liang*) as its units of value. The grain and ounce were the monetary units of the state of Qin, and so these could be Qin coins. [Bruce W. Smith reports that Chinese numismatists now believe that three-hole spades were issued by the state of Zhongshan.]

The above three basic types of spade coin have hitherto been considered the only legitimate ones by numismatists. All others have been called odd-shaped spades.

The adz-spade [*jinbu*] constitutes, however, a distinct type. [Plate xi] Though it lacks uniformity of shape, it was cast bearing the character for "adz" [*jin*^{gg}] which was clearly its monetary unit, and it constituted an important set of coins, but with one difference from the above three sets: It is not distinguished by its shape, but rather on the basis of its monetary appellation or unit.

Adz-spade was probably the name of the money or unit of value of the state of Jin or some of Jin's localities, and was later adopted by Warring States period Wei and its neighbors. Places having minted this coin include Anyi, Fufan (Puban), Wen'an, Yinjin, Jinyang, Liang [?],^{gh} Jing(?), Yu, Gong, Yuan, and [?] *shi*.^{gi} Adz-spade shapes vary, but fall into two main categories. The first has square shoulders and a round crotch. The Fufan (Puban), Wen'an, Yinjin, and []^{gh} are of this type. The second has both shoulders and crotch rounded, as, for example, the Anyi, Yu, and Gong. The Jinyang and Jing come in both shapes. The Yuan differs from both forms, having square shoulders and a shallow crotch. The [?] *shi*^{gi} resembles the Yuan, except that it has slanted shoulders. The white adz [*baijin*] spade's shape is still more unusual. It does not belong in this category.

Adz-spades come in three denominations --half-adz, one-adz, and two-adz. I have only, however, seen half-adz versions of the Gong and [?]shi,^{gi} and only the one-adz version of the Yuan. The other denominations may await discovery.

The character for "adz" [*jin*^{gg}] has been analyzed by some past numismatists into the two characters meaning "metal money" [*jinhua/huo*^{gj}], and by others as "catty metal" [*jinjin*^{gk}]. Neither view is correct. This character may be found on the Lord Ping'an *ding* of Zhou times, and hollow-socket spades bear inscriptions like *feijin*, *ji*(?)*jin*, and *fujin*. It is only because in the *Explanations of Words* Xu Shen defines it as meaning "to cut" that it appears to have no connection with money. This is why for a long time no one realized it was a monetary unit. The Lord Ping'an *ding* inscription reads "five *yi*, six *jin* and of *jin* four *fen* of *jin*." This is rather obscure, but *jin* seems to be employed here as a unit of weight.

The weights of various adz-spades are not, however, uniform. Ignoring the hollow-socket versions, even the flat-handle adz-spades are of unequal weights. Of the one-adz spades, the Anyi specimens weigh more than 17 grams. These are the heaviest. The Yu range

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from 11 to more than 16 grams. The []^{gh} runs from 10 to 16 grams. The Yinjin is around 14 grams; the Jinyang 13 grams; the Fufan (Puban) 12 grams; and

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[5] "Antiquities Museum Report: Warring States Era Money Discovered at Qidaoling, Chaoyangxian, Liaoning Province," *Cultural Relics*, 3 (1962).

the Jing 11 grams. These figures are only weights of particular coins, not averages or standard weights. The weights of half-adz spades are not half the weights of one-adz coins. Nor do two-adz spades weigh twice as much. The Wen'an half-adz, for example, weighs 19 grams, just about the same as the Wen'an one-adz. The Anyi two-adz is only 29 grams. The Zi adz, a pointed-foot type, weighs still less. I am afraid, therefore, that it would be fruitless to attempt to fix the standard weight of the adz from the numismatic evidence.

The question remains: Was the adz really a unit of weight? The *Collected Rhymes* defines the character for adz as homonymous with the character for "hatchet" and the weight unit "catty" [*jin*], which is the former's phonetic component. This in turn is defined by the *Formal Meaning of Words* [*Zhengzitong*] as a kind of tool "made of iron, with a curved wooden handle, the common term for a wood graver." The *Mencius* mentions "the ax [*fujin*[gl]] entering the the mountain forests in its season." The *Zhuangzi* says "thereupon they called for the adz [*jin*] and saw."

Evidently this character, whether written with or without the metal classifier, was the name of a tool. The *Rituals of Zhou*'s section on "Winter Officials Investigation of Workmen" [*dong guan kao gong ji*] mentions the "adz of Song." The Lord of Heaven [*tianjun*] *ding* contains the two characters for adz (without the metal classifier) and cowry. Some say this refers to the two kinds of money --i.e. spades and cowries-- and amounts to the same thing as the reference to "cowries and spades" on the Qiong *you* bronze.

A spade coin does not, however, resemble an ax. This has led some to argue that another tool, the *ben*, was used to chop wood, and the *jin* used as an agricultural tool was a small hoe.[6] This, however, does not square with the implications of the Lord Ping'an *ding* inscription. Still, the *feijin*, *jijin*, and *fujin*, along with the other hollow-socket spades, are shovel-shaped. Perhaps the *jin* was originally a tool which developed into a coin, and some places borrowed the name for use as a unit of weight.

The Anyi are the most numerous of the adz-spades, but the half-adz denomination is rare and has a different shape, so it must not have been minted at the same time as the others. There is an Anyin spade which is shaped like the Yu spade, both having raised outer edges. The Anyin does not, however, bear the character for adz. There seem to have been two denominations. The smaller bears only the two characters Anyin. Sometimes the numeral one appears below the *yin*. It is about the same size as a half-adz. There is a numeral two below the *yin* on the large version. These would seem to be adz-coins, with the small one being a one-adz, and the large version a two-adz. They were probably minted later, after a weight reduction, with the character for adz left off. The Anyin Two weighs only 14 grams, about the same as the common one-adz spade.

The flat-handle adz-spades were probably made during the fourth century B.C. This is because the places which minted adz-spades --Yinjin, Jinyang, and Puban-- were all taken over by Qin during the last half of the fourth century. Unless the adz-spades were minted by Qin, they must date prior to this time.

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The Worth-*yuan* spade [*dangyuanbu*] was probably minted by Wei after it had moved its capital to Daliang. This spade's inscriptions are second in length only to those on the Baijin square spade. [Plate xii] There are two versions of the Worth-*yuan*. One is inscribed "Liang [?] Adz Five [?] *Yuan*" [*Liang* [?] *jin wu* [?] *yuan*],[gm] and "Liang [?] Adz Metal [?] *Yuan* [*Liang* [?] *jin jin* [?] *yuan*].[gn] The second character in the first inscription is sometimes written as []^{go} or [],[gp] and is generally transcribed as *chong*,[gg] "to fill, act as," but is also rendered by some into "new" *xin*,[gr] or "unusual" *qi*.[gs] The penultimate character sometimes takes the form, []^{gt} and the reverse has a raised outer edge, but this is a variant form. This penultimate character is usually read as "worth" *dang*.[gu]

Coins of the first version weigh around 30 grams. Below the character for five are set out one next to the other the small characters two and ten (i.e. twenty). These must be a serial number. A forced reading would be "ten worth two *yuan*," but if read in the normal direction, the two would have to come first. The latter version weighs around 18 grams. None of them have raised outer edges. Reverses sometimes bear an incised character [].[gv]

The other version's inscriptions read "Liang Formal [?] Metal Worth- *Yuan*" [*Liang zheng* [?] *jin dangyuan*[gw]] and "Liang Half [?] Two Metal Worth-*Yuan*" [*Liang ban* [?] *erjin dangyuan*[gx]].

The first comes in rimmed and rimless variants. Individual coins weigh 13-14 grams. All of the second have outer rims. There are some variations in shape between the two. The first has a deeper crotch. The second's crotch is closer to the feet. The first is thick, with inscription in high relief. The second is thin, with low inscription.

Judging by their construction, we can determine

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[6]Tang Lan, "A First Step Toward Studying the Question of the Use of Bronze Agricultural Tools By Ancient Chinese Society," *Palace Museum Bulletin* [*Gugong Bowuyuan yuankan*], No. 2.

that the first version was minted before the second, since the first is identical to the Anyi Adz-spade. Hence the reading of []^{gv} as *xin*,^{gr} "new," is not unreasonable. This "new adz" would contrast with the Anyi (old) Adz produced before the move of the capital. In any event, if []^{gv} is not meant to be part of a place name compounded with Liang, then it can only be an adjective. The character *zheng*^{gy} must be a simplified version of *zheng*^{gz} meaning "whole" in this context, and is contrasted with the character for "half." The character []^{ha} is either [],^{hb} *bi*, "money" or some other character of similar purport. Fortunately, none of these characters is of crucial importance.

Why were Worth-*yuan* spades minted after the move of the capital to Daliang? The *yuan* was originally a unit of weight. On these spades it had obviously become a unit of value. Minting of the Worth-*yuan* spade probably monetized what had originally been a unit of account. References in ancient documents [*Book of Documents*, "Punishments of Lü." Cf. Legge, p. 605.] to "his fine of one-hundred *yuan*" or "his fine of five-hundred *zhuan*" must, if they date to Western Zhou times, mean set quantities of uncoined bronze. Such a system of fines in uncoined metal was preserved down into Spring-Autumn and Warring States times. Some places monetized such fines, as for example with the *wuyuan* hollow-socket spades and these Worth-*yuan* spades. In this context, the references by past numismatists to these spade coins as "atonement metal" would make sense.

There seems, however, to have been a tendency to reduce the weight of the Worth-*yuan*. The Liang Formal, for example, was lighter than the Liang New. It is of the greatest significance that the two coins of the first version embody signs of that money's depreciation.

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Their construction also indicates that one came after the other in time. The Five Worth-*Yuan* is more finished looking and so must be earlier than the Metal Worth-*Yuan*, and is also heavier, which reflects the practice of reducing the weight of the coinage. The ruling class's exactions from the people must have become ever heavier rather than lighter over time. Atonement metal coins would, of course, have been minted by the government. How could private persons have minted a coin having the power to indemnify crimes? This lightening can only imply the lightening of punishments. [Bruce W. Smith suggests that such fines may still have been set in weight of metal, as in precoinage days, and so the weight of a private Atonement coin would have been irrelevant.]

Worth-*Yuan* spades might have been minted because this unit was employed by neighboring states with which Wei wished to trade or enter into conflict. Did any of Wei's neighbors employ the *yuan* as their monetary unit? Yes, the state of Chu did. Wei's move of its capital to Daliang placed it closer to Chu, and its relations with Chu grew more intimate, especially during the period when Chen served as Chu's capital, and the two capitals were quite close together. Even after Shouchun became Chu's capital, Chen remained an important place. The gold coins of Chu used the *yuan* (written in its abbreviated form) as their unit. Of course this unit was not just adopted at the time the Ying-*Yuan* gold coins were minted. It must have been present before this, and only later turned into a monetary unit.

At first, according to this hypothesis, Wei equated five of the Five Worth-*Yuan* coins to one Chu *yuan*. Later it equated one Metal Worth-*Yuan* with one Chu *yuan*, and still later made the equation with one Liang Formal or two Liang Half coins. Each Chu gold *yuan* weighed more than 10 grams, and the thick and heavy Wei Five Worth-*Yuan* were only 30 grams each, so that five of them weighed just 150 grams. If five of them were worth one Chu gold *yuan*, then the gold-copper price ratio was only a bit over 1:10.

Though the price of copper was particularly high during Warring States times, it could not have had so high a price relative to gold as this. To make things worse for the hypothesis, calculation in terms of other kinds of Worth-*Yuan* yields a still closer price ratio. If this was really their exchange price with Chu gold *yuan* coins, it could only have been a reflection of some sort of monetary war. It may be that the *yuan* of the Worth-*Yuan* spade was 11 13/25 Chinese grains [*zhu*] of gold, but right through the Warring States, Qin, and Han periods, the price of gold rose and did not fall.

There is a Shanyang spade shaped like a Worth-*Yuan* spade, particularly the first version. It comes in three sizes. A straight line runs down the center of the obverse from the handle to the crotch. The character *shan* is on the left; *yang* is on the right. On one variant's reverse, the characters for Shanyang are inscribed in reverse order. Not many Shanyang spades survive.

One kind of Worth-*Jin* spade which may be linked to the Adz-spade has been unearthed in the vicinity of Xuzhou, including Suxian and Fuliji in Anhui, and Xiaoxian, Dangshan, and Danyang in Jiangsu. Some say it was Song money. Others say it was minted by the Chu people at the end of the Qin dynasty. There are even some who ascribe it to Xiang Liang or his nephew Xiang Yu, who rose to power in Chu territory at the end of Qin.

[41]

During Xiang Liang's time, however, the Half-ouncer coin was the currency, and so what use would it have been to mint this other coin? Wouldn't this have amounted to a confession of his intention to rebel? Unless pre-Qin coins remained in popular use, this coin could not have been minted by Xiang Liang or Xiang Yu. One might as well ascribe them to the Xiangs' rival, Liu Bang.

There are two kinds of Worth-*Jin* spades: one large, and one small. All their inscriptions are archaic and hard to decipher. The large version bears the four characters []hc on one side. [Plate xiii] This has been transcribed as "special spade worth ten *hua/huo*" [*shubu dangshihua/huo*hd]. Of course there are other interpretations. In recent years some have rendered it as "pennon (or enriching) coin worth-*jin*" [*peiqian dangjin*he]. On the other side are two characters generally read as "ten *huo*" [*shi-huo*hf]. It weighs around 37 grams. One variant of the small version bears the two characters []hg on one side and []hi on the other side. These might be read together as "four *qian*" or "four spades worth-*jin*" [*siqian/sibu dangjin*hj]. These small spades are often found in pairs with their feet joined, and are commonly called linked spades. Evidently four small equalled one large coin. Some say the character four is an abbreviation of Si,hk the name of a place.

Their construction suggests a late Warring States date for these objects, but not one later than the First Emperor of Qin's unification. It is also worth investigating whether the last character, *jin*, is a single character or the two characters "ten catties" [*shijin*].hl Of course we cannot entirely rule out the possibility that the coin was a joint Song-Chu product. It also may be related to Wei's Adz-spade. Especially worthy of note is that the character for "worth" on the Five Worth-*Yuan* sometimes bears an extraordinarily likeness to the "worth" on this coin, as though Chu had influenced Wei. Some say this *jin* is an abbreviated form of adz, but then why was *huo* on the reverse also not abbreviated from []hm to []?hn Indeed, if adz was being abbreviated why was it not made into []?ho It might be read as "ten catties" with one equal to ten Wei Adz-spades. Because, however, this spade is much heavier than the Adz-spade, they could not have been so related in value. These are all matters which require further study.

There are also Worth-*Jin* spades made of iron. I have only seen one of them. Its rusty surface seems to indicate its antiquity, but one dares not describe it as a pre-Qin object.

The several basic types of flat-handle spades circulated simultaneously rather than consecutively. There are rather large differences in shape among the four main types of flat-handle spade coins. On this basis, the Adz-spades and pointed-foot spades seem to be somewhat earlier, the round-foot somewhat later. Judging by the contents of their inscriptions, the pointed-foot, square-foot, and round-foot spades would seem to have come before the Adz-spades and Three-hole spades. In fact, however, this may not have been the case, since particular states developed unevenly, and so Qin might have adopted an advanced form while the other states retained backward ones. Even the Three-hole spade could have come before the holeless round-foot.

Qin may have been the first to mint Three-hole spades, imitating

[42]

the round shape of the spades of nearby Lin and Lishi, which resembled the Three-hole except that they lacked three holes and did not use the grain and ounce units. Places like Jinyang, Zishi and Dayin might have originally used pointed-foot spades, but seeing the greater convenience of round-foot spades, they went over to reminting their spades into the round shape.

These are merely specific examples. We cannot say that all round-foot spades evolved from pointed-foot versions.

There are some other unclassifiable spades [Plate xiii], like the *fen*, the *niejin*, Lushi *niejin*, Tao *niejin*, Chui, and Gong, each of which has its own peculiarities of shape. Their dates are very hard to fix. The *niejin*, Chui, and Gong could be earlier than the square-foot spades.

Quite clearly, the system of knife-coins evolved from actual knives, the original shape of which was not changed. In modern times a number of large and small knives have been unearthed from such sites as Xiaotun, the last Shang capital. There are rings at the ends of their handles, and the handles themselves have channels cast into them. Whether or not these ancient knives were, like the ancient spades, circulated as money, all later knife coins retained these two characteristics. The range of circulation of knife coins was not as broad as spade coins, being skewed toward the north and east. Most likely the people of the Central Plain took agriculture as their main occupation, and so employed agricultural tools as their money, while the people of the northeast and east mainly followed the occupations of fishing and hunting, and hence used knives as their money.

Knife-coins are divisible into two categories: large and small. The large knives were Qi's money. The small knives were mainly Yan's money. There are, however, a good many types of small knives, including needle-tip knives [*zhenshoudao*], pointed-tip knives [*jianshoudao*], *ming* knives, and round-tip knives [*yuanshoudao*].

The term needle-tip knife is a new one. [Plate xiv] This type of knife was first excavated in 1932 in Chengde, Rehe. More were unearthed in 1937 and 1941. Because this was Xiongnu territory in ancient times, some call this the Xiongnu knife. It is distinguished by an especially pointed tip, resembling a needle. Hence, the name needle-tip knife corresponds to the actual shape of the object. The knife is relatively short and thin. Individual coins range from 5 to more than 9 grams. All the coins from all three excavations are streaked with green verdigris. Most bear one of thirty to forty different inscriptions, including *hua*,[hn] *da*,[hp] *gong*,[hq] *gong*,[hr] *yang*,[hs] *li*,[ht] *ge*,[hu] *cha*,[hv] yü,[hw] *dao*,[hx] *cheng*,[hy] and *niao*.[hz] Some inscriptions are serial numbers, some are stem and branch cycle couplets, and some are the names of birds, animals or utensils, like "bird" [*niao*], "fish" [*yu*], and "halberd' [*ge*]. The characters are simplified, their calligraphy is archaic and crude, and most of the characters are pictographs. Some observers even say they resemble oracle bone script.

On the basis of shape and construction, the needle-tip knife would be judged the earliest of the knife coins. Its light and thin construction is not the consequence of a crude manufacturing technique or reduction in weight. Otherwise the pointed tip could not have been so exaggerated. This feature makes the coin inconvenient to circulate as money. It possibly dates to around the time of the hollow-socket spade, which would make it an artifact of Spring-Autumn times. Some characters found on hollow-
[43]
socket spades are not found on this type of knife, probably because so few of these have as yet been discovered. The fact that pictographs like "bird" and "fish," which are found on these knives, are never encountered on hollow-socket spades, is worthy of investigation.

Such knives might have been produced for the trade between the Chinese and the Xiongnu or Eastern Hu. Even the shape of the knife could have been influenced by these peoples. The character for knife does not seem to be present among the terms for weapons in oracle bone writings. In recent years many bronze knives with different shaped handle ends have been found in the vicinity of Chengde and Zhangjiakou [Kalgan].[7] These knives were probably used by the Xiongnu. Perhaps this should cause us to undertake a new examination of the origins of knife coins, to see if they grew out of Chinese use of small knives to exchange for such animal products as the hides and furs produced by the nomadic peoples of the northeast. Later on these small knives would have become money within China proper as well.

It is said that the ancient Greeks also exchanged weapons of the types favored by the Hunnish peoples of the Black Sea region for furs surplus to these peoples. It would have been quite natural for the Chinese to have behaved the same way.

Examination of objects from Xiongnu tombs in Liaoning province shows, however, that as late as the beginning of Western Han, the Xiongnu still did not use money. They took Chinese coins of the Qin and early Han to wear as articles of adornment.[8] At that time, however, Chengde was closer to areas of Chinese culture, and perhaps the Xiongnu there were more deeply sinified, and so employed money. We cannot, however, be sure this was the case.

Most pointed-tip knives have been excavated in the Hejian-Baoding region, which belonged to Yan during Spring-Autumn and Warring States times. [Plate xv] Longer and bigger than the needle-tip, they come in both large and small sizes, all of which are very finely made. Individual coins weigh around 16 grams.

Most bear inscriptions, either on the obverse or reverse, such as *xing*,[ia] *tu*,[ib] *hua*,[ic] *ji*,[id] *gong*,[ie] *da*,[if] *ding*,[ig] *shang*,[ih] *zhong*,[ii] *xia*,[ij] *li*,[ik] *yu*,[il] *wang*,[im] *jing*,[in] *shi*,[io] *yi*,[ip] *cheng*,[iq] *mu*,[ir] *shui*,[is] *sheng*,[it] *gong*,[iu] *ri*,[iv] *lin*,[iw] *gonghua*,[ix] *taohua*,[iy] *feiyi*,[iz] *wenyi*,[ja] six-one *liuyi*,[jb] eight-one *bayi*,[jc] *bamu*,[jd] and *bingqi*.[je] There are a number of other undecipherable inscriptions or hallmarks. Some of these inscriptions must be place names. Others are probably just hallmarks.

The pointed-tip knives were probably contemporaneous with the needle-tip knives. In addition to their similarities in shape, their inscriptions are basically the same, aside from some small differences in the component strokes. The character meaning "sheep" *yang*, for example, is written []^{jf} or []^{jg} on the needle-tip knife, and []^{jh} or []^{ji} on the pointed-tip knife. "Fish" yü, however, is written []^{jj} on both. The fact that the needle-tip knives bear more archaic characters, like [],^{jk} [],^{jl} [],^{jm} [],^{jn} and [],^{jo} which are lacking on the pointed-tip knives, while the latter include place names like Lin and Taohua, which may indicate that the latter came somewhat later. As the needle-tip knives have so far only been excavated from one location, and only in small quantities, it is also possible that this particular set was influenced by the pointed-tip knives.

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[7]Hebei Province Cultural Bureau Cultural Relics Labor Brigade, "Cultural Relics Found in Waste Copper of Hebei Province in Recent Years," *Cultural Relics*, 2 (1960).

[8]Sun Shoudao, "Discovery of a Group of Ancient Tombs of

Since China was the first to employ knife coins, the peoples of the Northeast [i.e. Manchuria], or Chinese resident in the Northeast,

[44]

would have copied the Chinese pattern so as to engage in trade with China. These copies would also have been influenced in shape and inscription by indigenous tools and customs. In the more out of the way places, the shapes surely would have been more archaic. More material will be needed before the issue of the chronological sequence of these two knives can be be resolved.

There is another kind of extremely small needle-tip knife, which weighs something more than 1 gram, and is made of a very good grade of spring-like copper. We do not know if it is a genuine coin.

The *ming* knife is the most numerous of the knife coins. [Plate xvi] They have been excavated from many places over a wide area reaching as far as Lüshun, Jinzhou, Puluodian, Piziwo, Xiongyuecheng, Lujiatun, Liaoyang, and Yizhou. They have even been unearthed in Korea and Japan. They are shaped like the pointed-tip knife, but are not as well made because of the large quantity minted. Hence the *ming* knife may well have evolved out of the pointed-tip knife. The inscriptions found on *ming* knife reverses bear many similarities to those on the pointed-tip version.

Ming knives are characterized by the presence of a single character on their obverses. This character appears in countless variant forms, but it is certain that all are variations on a single character. What character this is, or if it is even a true Chinese character at all, has been a subject for unending debate within the numismatic world down through the ages. In the old days most numismatists said these were Ju knives, from the ancient state of that name in southeastern Shandong, but this is far-fetched. Some have read this character as *zhao*[jp] because it seems to be composed of []^{jq} and [].^{jr} Some even say that this *zhao* is an abbreviation of the name of the state of Zhao, making these Zhao coins, just as Handan was abbreviated on coin inscriptions.[9]

Most identify this as the character *ming*,[js] and say it was minted by the city of Xinming in Zhao, but most of the places where this coin has been excavated are in the Hejian and Yizhou region, which lay within the sphere of ancient Yan rather than Zhao. *Ming* knives have also turned up in Liaoyang and Liaodong, which was the territory of the Eastern Hu barbarians, and whose contacts were mostly with Yan. Hence we can definitely say this was Yan money. Consequently some have said the character *ming* stands for the *ming* in the name of the Yan city of Pingming. [Bruce W. Smith notes that the main ancient texts do not mention Pingming and that the ancient and modern place name dictionary says it was not established until Han.] Others say it is the character *yi*,[jt] referring to Yizhou, the character *yi* being made up of []^{ju} and [],^{jv} which corresponds with what seems to be written on the knives. Nevertheless, most people still employ the name *ming* knife for this coin.

The reverse inscriptions on *ming* knives are most complex. Some have one character, others many characters. Some of the monocharacter inscriptions are *qi*,[jw] *xing*,[jx] *gong*,[jy] *gan*,[jz] *ji*,[ka] *wang*,[kb] *wen*,[kc] *da*,[kd] *li*,[ke] *gu*,[kf] *fang*,[kg] *tong*,[kh] *jun*,[ki] *chang*,[kj] *yi*,[kk] *shang*,[kl] *xia*,[km] *zhong*,[kn] *zuo*,[ko] and *you*,[kp] as well as numerals. The multiple character inscriptions are divisible into four categories, based on their initial characters: "left" *zuo*,[ko] "right" *you*,[kp] "inner" *nei*,[kq] and "outer" *wai*.[kr] "Left" and "right" are the most common. Combinations like "left three" *zuosan*, "right seven" *youqi*, "outside ninth-stem" *wairen* and "metal second-stem" *jinyi*[kt] occur, not all of which can be deciphered.

Probably the ones bearing single characters came first. They resemble the pointed-tip knives and are almost the same in size and weight. The ones bearing multiple character inscriptions were minted later,

[45]

since they are the most numerous and their inscriptions are carelessly done. They come in two shapes. The first has the body of the knife bent into a curved shape much like the pointed tip knife, and bears a single character on its reverse. The other is bent at a sharp angle, and resembles an ancient Chinese chimingstone. Hence its common name of Chimingstone or Humpbacked knife.

Ming knives probably circulated during the late fourth and third centuries B.C., a time when the state of Yan was often at war. Chimingstone knives were probably minted during the last half of the third century B.C., when Yan and Zhao were often at war with each other. Since Yan was normally the loser in these conflicts, its military expenditures must have exhausted its resources. Its subsequent invasion by Qin obliged it to produce still larger numbers of coins to support its military efforts.

Yet another kind of Ming knife has been unearthed at Boshan, Shandong. Its body is also curved, but the calligraphy of its character *ming* differs from that found on the mass of Ming knives. Normally, this character is rounded and small. The

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the Xiongnu Xichagou Culture," *Cultural Relics*, 8-9 (1960).

[9]Zhou Shu, "Words on Money of the Nourishing Wind House," *Money*, no. 42, p. 11.

Boshan knife's *ming* is larger, angular and elongated. The Boshan knife is a Ming knife of Qi. Ordinary Ming knives are from Yan. The Qi version also differs in its reverse inscriptions, which include statements like "Qi Money" [*Qi huo*[ku]] and "Qi Money Common Metal" [*Qi huo gong jin*[kv]], as well as place names like Dian and Anyang, all of which constitute evidence these coins were made in Qi.

Those bearing the place names Dian and Anyang all have three or four character inscriptions, but the two or three characters aside from the place names are undecipherable, and the characters are irregularly formed. Some are written as [];[kw] others as [],[kx] and still others as [].[ky] The latter is transcribed by some as *lizhenwu*,[kz] the meaning of which is not evident. The first character of all three variants seems to be Dian, that is, the state of Dian extinguished by Duke Huan of Qi, which had by this time become Dian City.

The minting of Ming knives in Qi territory would seem to have been a reflection of the Warring States trend toward wider unity. During the latter part of the fourth century B.C. both Yan and Qi circulated knife coins, and relations between the two states also seem to have been more intimate in both economic and political matters. This relationship seems, however, to have been a contentious one, as in 314 B.C., when Qi invaded Yan. It was only thanks to the aid of Zhao that Yan was able to revive, but for several decades Yan took almost no part in the chaotic warfare among the states.

History tells us that King Zhao of Yan placed direction of affairs in the hands of Guo Wei, and the state as a consequence greatly prospered. In 284 B.C. the Yan general Yao Yi took advantage of a combined attack on Qi by the six great powers to inflict a great defeat on the Qi army, and occupy more than seventy Qi cities, including Linzi and Dian, until a counterattack by Qi's Tian Dan recovered the lost territory five years later. During these five years Ming knives were minted in the occupied territory to meet the needs of the Yan army, and these coins bore Qi place names. As a consequence, the calligraphy of the inscriptions on these knives differs from that of Yan *ming* knives. There is one pointed-tip knife with a broken off corner, also excavated in Shandong, which could have been in use before the Qi *ming* knives were minted.

The terms round-tip knife [*yuanshoudao*] or flat-tip knife [*pingshoudao*] refers to a type of thin and springy small knife. [Plate xvii] These bear two types of inscriptions: Bairen and Handan. The two are very similar in shape and construction,

[46]

but come in different sizes. The handle ends are either oval or round, and are not at all uniform. The Handan knife's blade is broader. Inscriptions are only slightly raised, and at times are difficult to make out. Individual coins weigh from 10 to 11 grams.

There are several other kinds of small knives. One is the Chengbai knife. It has three peculiarities. First, it is thicker and heavier than other small knives, weighing some 16 grams. Second, the reverse is flat and, unlike most other knives, is without an inscription. Third, its handle bears only one ridge, rather than the normal two ridges. This knife is said to have been excavated at the same time as *ming* knives.

Another type excavated recently is a small knife bearing the character Lin. It is shaped like the Chengbai knife, but is thinner, weighing only from 7 to 10 grams. It is extremely rare.

Finally, there is the straight knife [*zhidao*]. This is the smallest of the knife coins, and has only recently been excavated. There are only four of them, bearing the inscriptions Jinyang Money [*hua* or *huo*], Jin Money, Jin Half, and Jinyang New Money. This knife is distinguished by the absence of a ridge on its handle.

Most of the above small knives are from Zhao. They were probably minted and used by Zhao towns near Yan territory, and so were influenced by Yan.

Large knives were from Qi. They were invariably well made, and weighed upwards of 40 grams. Six types are now known based on their inscriptions.

The first is the Six-character knife [*liuzidao*] or Construct-the-nation knife [*zaobangdao*]. The inscription on it is [],[la] but details of the strokes vary on each specimen. This inscription has been interpreted variously, but there has been agreement only about the first and sixth characters, as being Qi and *hua/huo* respectively. Nowadays the most common renderings are "Qi Established National Legal Money" [*Qi jianbang jiu fa hwa*[lb]] or "Qi Construct the Nation Long Legal Money" [*Qi zaobang chang fa huo*[lc]], abbreviated to Construct-the-nation knife. [Plate xviii] Some have blank reverses, but most bear inscriptions, usually of one character, like *hua/huo*,[ld] *ri*,[le] *shang*,[lf] *gong*,[lg] *ji*,[lh] [],[li] *ren*,[lj] and *bu*.[lk] It is among the thinner and flimsier of the Qi knives, and is the least common of them. Still fewer have their inscriptions raised very high. The most finely made specimens weigh 46-7 grams. They appear to be early, not because of coarseness of construction, but because of limitations of technique.

The second type is the Four-character knife. [Plate xix] Its obverse inscription is *Qi zhi [?] hua*.[ll] The characters *hua/huo*,[ld] *ren*,[li] *shang*,[lf] *ri*,[le] *er*,[lm] []^{ln} and []^{lo} are found on the reverse. It somewhat

resembles the Six-character knife in construction, except that its calligraphy is more graceful. Individual coins weigh 44-5 grams, about the same as the Six-character knife. Nor are they much more common. It can, however, be distinguished from the Construct-the-nation knife. The latter's obverse outer edge goes completely around the coin, whereas the obverse outer edge of the Four-character knife
[47]
breaks off at the base of the handle. This characteristic divides Qi knives into two categories.

The third type is the Three-character knife. [Plate xix] Its obverse inscription is *Qi [?] hua*.[lp] On its reverse are found such characters as *hua/huo*,[ld] *ri*,[le] *shang*,[lf] *ji*,[lh] *xing*,[lq] *zhi*,[lr] [],[li] *gong*,[lg] *tu*,[ls] [],[lt] [],[ln] *zheng*,[lu] *li*,[lv] *yang*,[lw] *an*,[lx] *sheng*,[ly] *wan*,[lz] *mu*,[ma] *jin*,[mb] *yi*,[mc] *ren*,[md] and *da*.[me] It is rather coarsely made, but is the most numerous of the Qi knives, which clearly places it late in time, even though it is rather large. It seems not to have been minted to relieve fiscal difficulties, but rather at a time of robust national power and increasing expenditures. This is suggested by its weight of 47-8 grams. Its outer rim is continuous, like that of the Construct-the-nation knife.

The word Qi on these knives is said by some to refer to the Qi capital city, that is to Linzi, and not to the state of Qi, because Jimo and Anyang knives similarly bear the names of cities rather than states, and examples of states being named on coins are very rare. But if the Qi capital was intended, why was it not named as such, or the name Linzi not used? In any event, the Three-character knife eventually flourished, and the word Qi could have taken on a double meaning, particularly in the minds of foreigners, for whom it would signify the state of Qi. Perhaps other cities eventually also minted this coin. Those with the characters *yi* and *an* on their reverses might have been minted in Anyang.

The fourth type is the Jimo knife, of which there are large and small varieties. [Plate xx] The inscription on the face of the large one reads "Jimo City's [?] Money" [].[mf] Reverse inscriptions include [],[li] *gong*,[lg] *ri*,[le] *ji*,[lh] *shang*,[lf] *ren*[lj] *hua*,[ld] [],[lt] [],[ln] *daxing*,[mg] [],[lo] *anbang*,[mh] and *pifeng*.[mi] The obverse of the small variety has the same inscription, except that the character *zhi*[mj] is omitted. Its reverse inscriptions include *hua*,[ld] *da*,[me] *ri*,[le] [],[li] *shang*,[lf] *ren*,[lj] ten [*shi*[mk]], nine [*jiu*[md]], eight [*ba*[mm]], and [].[lo] Fewer of the small ones have been excavated.

The Jimo knife is heavy and particularly coarsely made, with a wide blade. Large ones weigh upwards of 56 grams. Some characterize the inscriptions of those found in Shandong as robust, and the Henan ones as delicate. I fear this distinction is specious, since all Jimo knives were minted in Shandong. They are often covered with red and green verdigris, which is rarely the case with other such coins. Evidently they must not have been buried very far apart, and so coins with both calligraphic styles would have been intermixed. Most Anyang knives have washes of either mercury or black pitch. [Bruce W. Smith has never heard of such a phenomenon.] The Three-character knives, Four-character knives and Construct-the-nation knives mainly bear green verdigris.

Because of their thickness and the presence of such inscriptions as Pifeng and Anbang on their reverses, some believe the Jimo knives to be the earliest of the Qi knives. This is possible, but is not necessarily the case. Coins from different places might well be made differently. Different places need not develop in technique at equal rates. The name Jimo on these coins does not refer to Jimo
[48]
state, but to Jimo (or Jiemo) city. In other words, they were minted after Qi had conquered Jimo. Qi must have been minting knife coins before they would have been produced in distant Jimo. The meanings of *pifeng* and *anbang* are not very clear.

There are two theories on the small Jimo knives: The first holds that they were two denominations circulated simultaneously. The second makes them successive coins, the result of depreciation. Because no other Qi knives come in large and small denominations, not many hold to the first theory. Particularly since the recent discovery of a hoard of small, shoddily made and inscribed Jimo knives, people have concluded the depreciation theory is correct. Actually, though, some small knives are as well made as some big ones, and not all big ones are well made.

In principle, lightening ought to increase the quantity of coins, but there are not many small Jimo knives. Of course if the large ones had circulated for a long time and the small ones for a short time, the quantity of large ones could well have been greater than that of the lightened small ones. In terms of their weights, these would not seem to have been two denominations, since some small knives weigh 38 grams. There are, however, differences in shape and inscription between the two. Neither size of coin exists in large numbers.

If lightening had been intended, the Three-character knives should have been the candidates for such treatment, since they are the most numerous, but there is no sign of that having happened. Of course if Jimo had preserved its administrative autonomy, it could have carried out such a weight reduction autonomously, and then the Three-character knife's vicissitudes could provide us with no clues. In any event, we cannot use the absence of

multiple denominations among other knife coins to refute the possibility for Jimo knives without being arbitrary.

The fifth category is that of the Anyang knives [Plate xx], whose obverse inscription is "Anyi's [?] Money"[mn], and whose reverse inscriptions include two *er*,[lm] eight *ba*,[mm] *hua*,[ld] *ren*,[lj] *shang*,[lf] [],[mo] *gong*,[lg] and [].[li] The coin's construction is especially workmanlike, its inscription is in high relief, and displays a high level of technique. The coin weighs 48 grams. The knife rim is not continous. Anyang was not taken over by Qi until 412 B.C. These coins probably were minted in the early part of Qi's Tian dynasty, i.e. during the fourth century B.C.

The sixth category comprises the so-called Dianbang knife. Numismatists call it the broken tip knife because only a single broken specimen has been discovered. It is said to have been found in the southwestern part of Pingling xian. The first character is [],[mp] which seems to be Dian.[mq] Only half of the second character remains, but it seems to resemble the third character on the Construct-the-nation knife, and so could be *bang*, or nation. Dian is generally believed to have been a small country swallowed by Duke Huan of Qi and turned into the city of Dian (written either as []^{mr} or []^{ms} --i.e. abbreviated as was the name of Jimo-- given as []^{mt} by the *Spring-Autumn Annals*). When it appears on Qi *ming* knives, this character only rarely has the signific for city appended to it.

All Qi knife inscriptions contain the character *hua* or *huo*,[ld] which seems to be an abbreviation for the noun meaning "money." Later, there

[49]

also occur terms like four-*hua* and six-*hua*, which would seem to also make it a monetary unit. What basically did this term mean? Some have said it was an abbreviation for *huo*,[mu] and was the unit for knife coins. Recently some have suggested that it was originally written [],[mv] resembling the Chinese numeral seven, and was a pictograph of a sickle.[10]

Dating of the Qi knives is a still unresolved question. Actually, it comprises several questions. The first of these involves the sequence of the Qi knives. The second is when Qi knives were first minted. The third is where Qi knives fit in the chronology of the several types of small knives.

The problem of the sequence of the Qi knives is related to their categorization. Some make a distinction between broken and unbroken raised outer rims, attributing the broken form to Qi's Lü Dynasty, and the unbroken rim coins to the Tian Dynasty.[11] Of course differences in shape must not be ignored. All Zhao knives, for example, have continuous rims, but all Yen knife rims are discontinuous. If we accept that the pointed-tip knife belongs to the early period and use it as our standard, then the Jimo, Anyang and Four-character knives would come ahead of the Construct-the-nation and Three-character knives.

However, the late period *ming* knife also has a broken rim, and how could that be explained? This question really requires further elucidation.

The Four-character knife could have been a little earlier than the Construct-the-nation knife. Some reverse inscriptions on the latter bear the mark [],[mo] and their rims sometimes show signs of a break, as though a knife mold with a broken rim had been repaired. In any event, such discrepancies in shape could not represent a gap of several centuries.

The three kinds of Qi knives are not far apart in weight. The Jimo is the heaviest, individual coins being as light as 41-2 grams.

The Construct-the-nation and Four-character knives are similarly made. Both are thin. Three-character knives are generally coarsely made. This would indicate that the Construct-the-nation and Four-character knives came before the Three-character knives. The sealscript calligraphy on the Construct-the-nation is amorphous, and reminds some of that on the hollow-socket spade *jifu xiaohua* coin. The latter had an inscription of many characters, and may have been of late date, but the Construct-the-nation might be somewhat earlier, given the amorphousness of its calligraphy. This may appear to be self-contradictory, but rests on recognition of the specific circumstances of different localities.

Dian Ming knives' inscriptions are quite variable. These were coins of an occupied area, carelessly made, and not to be compared with the Construct-the-nation, which were official issue of the state.

Others divide the Qi knives into four categories: The Construct-the-nation, Four-character and Three-character knives constitute one category. These are said to be true Qi coins. The Jimo, Anyang and Dianbang knives are not supposed to be true Qi knives. Each was minted by a

[50]

separate state and constitutes a separate category.[12]

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[10]Tang Lan, "A First Step Toward Studying the Question of the Use of Bronze Agricultural Tools By Ancient Chinese Society," *Palace Museum Bulletin*, no. 2.

[11]Zheng Jiaxiang, *History of the Development of Ancient Chinese Money*, p.74.

[12]Wang Liuquan, *Origins and Development of Our Country's Ancient Money*, p. 59. Many of the coin illustrations

This theory pushes the Jimo knives further back in time, mainly it would seem, on the basis of the Dianbang knives, since their use of the character *bang* (country) implies that they were minted by an independent nation. Of course this approach is worth considering, but only a single fragment of this so-called Dianbang coin ever existed, and only half a character of its inscription survives. To make things still more odd, the coin itself has disappeared, and very few people had ever seen it. It might well have been a recut version of a Jimo knife, and so not constitute suitable evidence. If the Anyang knife was minted before Qi took the place over, of course it could not be considered a Qi product. But how could it have been a pre-Qi conquest product when its construction reveals it to have been later than the Jimo coin?

The Jimo coin itself is obviously a product of the city, not the state. In other words, it was minted after the Qi takeover. Its coarse construction shows that it was made early, but only earlier than the Anyang, not the Construct-the-Nation.

Actually, some of the Jimo coins are not coarse. For example, there is one with the two-character inscription *anbang* on its reverse which has rather delicate calligraphy, and the blade of which has variations in width. Hence the Construct-the-nation could still have been the earliest large knife. If one assumes that the Construct-the-nation, Jimo and Anyang knives were three independent states' coins being made at the same time, then the level of metal smelting technique and productive and commercial development of their makers must have been far below that of Qi.

Not only are most of the Construct-the-nation knives poorly made, they are the scarcest of all. Does this fit what we know of that period? As for the division of the Jimo into large and small denominations, that differs from the situation with other large knives, but cannot prove the early date of this coin. It can only demonstrate the relatively independent nature of Jimo City. Under the rule of the Tian Dynasty of Qi, the gentry of Jimo did in fact possess such independence. Perhaps Jimo knives were minted at that time. [Bruce W. Smith points out that Jimo was one of only two Qi cities not to surrender during the Yan invasion and occupation, and he suggests that the right to retain an independent coinage may have been a reward for its loyalty.]

Whether or not the Construct-the-nation knife was the earliest to be minted, it was uniquely important: First, it bears many characters, allowing us to grasp some of the peculiarities of the Qi script. Its importance rests still more, however, in the contents of its inscription, the two characters meaning construct the nation. These provide a basis for setting an upper limit to the date when they began to be minted. What was the time when these Six-character knives began to be minted? There are three possibilities:

The first is that thay were minted by Lü Shang. King Wu of Zhou's enfeoffment of Lü Shang with Qi can be characterized as the construction or building of the nation. Ban Gu has written: "Duke Tai [i.e.Lü Shang] set up the Nine Offices Round System . . . and when he left, put it into effect in Qi." Given the Western Zhou level of handicraft technique, this was unquestionably possible, because the technical level of commodity production was already extraordinarily high. But did the social economy of Western Zhou require the minting of money? At that time a natural economy

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was absolutely dominant. At the highest levels cowry shell and imitation cowries were still being used. The people might have been employing tools as instruments for exchange, but the government apparently still had no need to mint such coins. Hence this theory may be rejected.

The second possibility is that they were minted by Duke Huan. During the first half of the seventh century B.C. Duke Huan was called the Hegemon of the ruling aristocrats, and the Son of Heaven became his puppet. In a sense this too could be labeled the construction of the state, or at least he might have minted a coin bearing this name to commemorate the establishment of the state by his ancestor, Lü Shang. Ban Gu writes: "Duke Tai set up the Nine Offices Round System for Zhou. . . When Guan Zhong became minister to Duke Huan, he put through the sovereign control over the light and the heavy." The *Guan Zi* several times mentions knife and spade coins, and other books mention that Duke Huan minted knife coins. Practically all past numismatists have believed in this theory. If it is accepted, the explanation of the Dianbang knife becomes more plausible, and the Jimo knife becomes easier to explain. Nevertheless, this explanation of the two characters meaning construct the nation is a bit forced.

The third possibility is that after Tian He received the title of Duke of Qi from the Zhou royal

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appended to this book are forgeries or of coins that never existed. For example, two of his Construct-the-nation knives have been recut. The Pifeng and Jimo knives have been cast in earthen molds. The *Qizhihhua* has had its inscription recut.

There is no such knife coin.

house in 386 B.C., he minted these coins. One may say that the Tian clan in some sense constructed the nation, that is, they constructed the nation of Qi under the Tian dynasty. From the time of the Tian family's takeover of Qi to Qi's destruction by the First Emperor of Qin was a period of more than 160 years. During this century and more there occurred the first high tide in the development of China's monetary economy. The *Guan Zi* was not written by Guan Zhong in the seventh century, but by some writer of the Warring States period. Its discussion of monetary questions could have been based on the situation in Tian dynasty Qi. Living several hundred years later, Ban Gu would have been still less able to to have known anything about the monetary system of Guan Zhong's time.

Of these three possibilities, the last has the greatest explanatory power. In recent times, most numismatists have judged the hollow-socket spade to have been China's first coin. The great majority of hollow-socket spades were minted during Spring-Autumn times, before the time of the Qi knives. The Anyang Qi knife could not have been minted by Duke Huan because Anyang was not taken until twenty-five years after his death. It would require strong reasons to overthrow belief in this explanation. A portion of the Jimo knives could have been minted while the Yan army was occupying a large part of Qi's territory. At that time only Qu and Jimo had not been taken by the Yan army. Later, Tian Dan used Jimo as his base for expelling the Yan army from Qi territory. The inscriptions *pifeng* --develop the fief-- and *anbang* --pacify the nation-- may allude to these events, which were of first class importance in the history of the state of Qi.[13]

The reverses of Qi knives all bear three horizontal strokes, running from the the blade edge to its back. Below there is a very small cross-shaped mark, resembling the Chinese numeral ten. Some say these should be read together, with the three horizontal strokes taken as the Chinese numeral three, the two together forming the number thirty, signifying that one knife coin was equal to thirty cash.

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We can only study the chronological sequence of the Qi and small knives in terms of their construction. According to the general rules of evolution, things develop from the clumsy and heavy to the light and convenient. Using this standard, Qi knives would have come first, because they are closer in size to the ancient knives. And yet the Qi knives are extraordinarily well made, their inscriptions are complex, and so they would hardly seem capable of being earlier than the small knives. Size and weight ought not to be used to determine sequence for coins belonging to different systems.

Of these small knives, the needle-tip, pointed-tip and *ming* knives may have appeared late, probably at the same time as the big knives, particularly the Three-character knife. The pointed-tip knife would seem to have been minted before Qi's conquest of Yan, and the *ming* knife after King Zhao's recovery of the state or Yao Yi's great defeat of Qi. The round or flat tip knives were money of some other locality, and are also of late date.

The *jinyang* small straight knives were short-lived, local objects of still later date. The pointed-tip knives would be earlier than the Qi knives, given their shape and inscriptions. They come in large and small, curved and straight shapes. Some have inscriptions both on their obverses and reverses; some bear only a single character; some have no inscription at all. Qi knives do not come in such a variety of forms. Only the number of characters in the inscriptions vary, but their placement is fixed. Of course such considerations are not absolutely determinative of the sequence of large and small knives.

Several other points may be made. First, given its relative uniformity, Qi coin minting could have been officially managed. Early Yan coins could have been minted by private individuals and organizations, which would have made uniformity difficult to achieve. Second, because Yan was isolated in the north, far from the center of culture, the cultural level of its people might have been somewhat lower than that of Qi, and so the inscriptions on these coins somewhat simpler. Both the pointed-tip and *ming* knives, however, share the broken rim characteristic. On the reverse inscription pointed-tip knife, both sides have broken rims, and the late period small knives lack such broken rims. This suggests that the pointed-tip knife came first, and the Qi knife after.

The ring coin [*huanqian*] constituted a small but important part of the Warring States system of coinage. It was a transitional monetary phenomenon. A ring coin was round with a round hole in its middle. This hole varied in size. In general, early ring

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[13]If the terms *pifeng* and *anbang* have no political significance, they could have been the names of smelters where coins were cast. I have two *anbang* knives, one wide, one narrow, one with large characters and one with small ones, but on both the character indicating the possessive, [],[mj] is written as []^{mw}) with its verticals curved at the top. This is rare. I have seen two Construct-the-nation knives with signs of a broken rim which bear the mark []^{mo} on their reverses. Such a mark evidently has something to do with the mint. Coins from the same mint might be of different sizes, but would still bear the same mark.

coins had small holes; later ones had large holes.

Most numismatists call ring coins "round metal" or "round cash," which is somewhat misleading. The latter term might suggest Ban Gu's statement that "the cash is round and contains a square." Actually these numismatists mistakenly supposed that the so-called "round system" put in by Duke Tai involved these ring coins. This is to add error to error.

First of all, Ban Gu was mistaken. We do not know on what he based his statement that "Duke Tai establishing the Nine Offices Round System for Zhou." According to my understanding,

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the government at that time minted no money, and it certainly did not mint a square-holed round coin as implied by Ban's statement that "the cash was round and contained a square." If he had been alluding to the monetary system of the First Emperor of Qin, that would have corresponded to the facts.

Second, the numismatists are mistaken. Ban Gu's reference to a "round system" obviously meant a monetary system. He clearly says that this round system encompassed three elements: gold, bronze cash and bolts of cloth, but the numismatists explain these two characters as simply meaning ring coins. The word "round" is easily misinterpreted, unlike "ring coin," which specifies an object round inside as well as outside. Actually both terms evolved from a common phonetic element.

Very few ring coins have been unearthed, and numismatists have not devoted as much attention to them as to spades and knives. There is no good explanation for their origin. All ancient peoples made stone rings, and some even used stone rings of various sizes as money.[14] Pierced stone spheres appeared dduring China's Paleolithic Age, and both stone spheres and rings are found during the Neolithic. It is, however, quite possible that China's ring coins evolved from spinning whorls. The spinning whorl, like the knife and the shovel, was a tool of production among the ancients. Spinning whorls have been unearthed everywhere in China. Some were made of pottery, some of stone.

Spinning whorls unearthed at Yangshao have diameters of from 38 mm to more than 60 mm. The diameters of the holes in their middles range from 3 mm to 9 mm, averaging from 8% to 20% of the width of the object, just about the same as the proportions between hole and body of the earliest ring coins.

The earliest ring coins are those bearing the characters *yuan* and *gong*. [Plate xxi] The former have diameters ranging from 40 to 42 mm, with holes of from 6 to 9 mm in diameter. The latter have outer diameters of 43-45 mm and hole diameters of 5-7 mm. In both inner and outer diameters these correspond to the proportions of the spinning whorls. Later ring coins, like the *changyuan* one-adz, half-*qiong*, Western Zhou and Eastern Zhou [Plate xxii], have somewhat larger holes, with diameters about equal to the width of the metal part. Oyster shell rings have also been unearthed, and these may date to before the minting of ring coins. Perhaps these were used first, as was the case with the line of development of cowry money.

Some Japanese numismatists say that ring coins evolved from jade *bi* rings. They base this on the following: First, ancient Chinese documents state that pearls and jade constituted the original primary money, and these numismatists believe that by "pearls and jade" jade rings were meant, particularly since jade rings are similar in shape to ring coins. Second, in ancient times the words "meat" and "good" were used to describe the body and hole respectively of jade rings. It was said that "if the 'good' is twice the 'meat,' you call it a round; if the 'meat' is twice the 'good,' you call it a jade ring; if they are equal, you call it a ring."[15] These two words are also used for coins. The reasoning behind this theory is, however,

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incomplete.

First, the pearls and jade of ancient times were not genuine money. The so-called upper money was merely made up of valuable commodities [That is, at most, these were somewhat liquid assets. EHK], and not money. Jade rings could not have been in circulation, as I have previously explained. As for the use of the terms meat and good in describing them, this was because of the coin's resemblance to jade rings. In fact, however, the proportions between body and hole were not the same in ring coins as in jade rings. The *yuan* and *gong* ring coins had very small holes, with a ratio of 3:1 between body and hole. This differed from either type of jade ring, and resembled only the spinning whorl. Also, most jade rings were larger, while the ring coins and spinning whorls were much closer in size. If one asks what relationship there was between ring coin and jade ring, it is possible that the two had an identical origin, evolving from the spinning whorl. Perhaps we can also say that the later ring coins were

[14]Stone money circulated in places like Yap Island in the South Pacific. This money was shaped like stone millwheels, and came in various sizes, some weighing as much as a ton.

[15]The *Explanations of Words*, quotes the *Erya* under the entry for the character *huan*.[mx]

influenced by the jade ring.

According to our present knowledge, ring coin inscriptions include *yuan*,[my] *gong*,[mz] *gongtun chijin*,[na] *changyuan yijin*,[nb] *wuping*,[nc] *jiyin*,[nd] x *jin*,[ne] *anzang*,[nf] *lin*,[ng] *lishi*,[nh] *taoyang*,[ni] *xizhou*,[nj] *dongzhou*,[nk] [which are place names], *banqiong*,[nl] Weight One-ounce Fourteen-grains *zhong yiliang shisizhu*,[nm] and Weight One-ounce Twelve-grains, *zhong yiliang shierzhu*.[nn] Counting the last two, the larger of these coins averaged around 10 grams, but the weights of individual coins varied considerably from this figure. Of those *changyuan yijin* I have seen, for example, the heaviest ran to 13.5 grams, and the lightest to only 8.4 grams. Other coins might be still heavier or lighter. If the Weight One-ounce Fourteen-grains coin was to live up to its name, it should be heavier, but runs only something over 14 grams, with some as light as 12 grams. Nor are the Weight One-ounce Twelve-grains coins necessarily any lighter.

Some other small ring coins must, of course, be considered exceptions. For example, the *wuping* is light and small. There are small *jiyin* coins. I have seen a small character version of the latter weighing 5.7 grams. It is generally believed that these were made in two denominations, one large, one small. Actually they come in various sizes, and this is the result of the coin being successively reduced in weight. There is one small one with large characters which could have been shaved down after it was minted. The Half-*qiong* weighs 8.9 grams. The Western and Eastern Zhou are the smallest and lightest. The former weighs around 5.5 grams and the latter only a little over 4 grams. The rule for the ring coin's development seems to be to go from large to small, and for the hole in its middle to go from small to large.

In addition to size and weight, ring coins can also be classified according to the presence or absence of a raised outer rim. The *lin* and *lishi* have such a rim. The Western and Eastern Zhou have both inner and outer rims. A link to the round foot spade can be discerned in the *lin* and *lishi*. Generally, the Western and Eastern Zhou are not well made, particularly the Eastern Zhou. Of the three I am acquainted with, two are irregular. The history books have the phrase "the government was in Western Zhou." Perhaps the discrepancies in construction and

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fineness between the Western and Eastern Zhou coins reflect this point. The construction of the *taoyuan* does not differ much from the Western and Eastern Zhou. It has a narrow rim and a thick body.

The Half-*qiong* inscription meant, according to past numismatists, a half coin of round metal. They mistakenly supposed that *qiong* was an abbreviation for *huan*, meaning round or ring, which they took for the name of the money and of its unit, a conclusion that requires discussion. This theory rests on the same assumptions as the traditional reading of the term Round System, which uses that same character. I have already pointed out the error of this reading, and so this explanation cannot stand up either. It would be better to take Qiong for a place name and read this inscription as Qiong Half. If it is not a place name, *qiong* must be a unit of weight or value. In ancient times this character was also used with the radical for metal or for jade on its left side,[16] and of course *qiong* was used interchangeably with *yuan*,[no] which it resembles.

Perhaps this Half-*qiong* is related to the *yuan* of Wei's Worth-*yuan* spade. It may even be the same monetary unit. The two terms, including the abbreviated form of *yuan*, were used interchangeably. Qin might well have used two Half-*qiong* to equal one Wei Worth-*yuan* spade. In fact, two of the former weighed the same as one of the latter. The claim that a Half-*qiong* was half of an ordinary ring coin does not square with the weights involved. Though the Half-*qiong* was small in diameter, it was thick and heavy, about the same weight as ring coins in general. If *qiong* is explained as a unit of weight, a Half-*qiong* was 3 ounces, equal to two of the Weight One-ounce Twelve-grains coins.

There is a still unresolved question concerning the period of the ring coins. Some see them as very early, and say the *gong* coin was minted during the period when Earl He of Gong was running the government for King Li of Zhou.[17] This was in the ninth century B.C. However, early Chinese coins rarely used the names of men or of states. The inscriptions on old coins were at first serial numbers and sexagenary cycle couplets. Next appeared place names. Weights and values appeared last. Hence the ring coins could not be earlier than spade coins.

Other people view them as very late, saying they branched off from spade coins because the place names *lin* and *lishi* are often encountered on spade coins, and the Weight One-ounce Twelve-grains inscription corresponds to the reverse inscription on

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[16]Zheng notes in the *Record of Investigations of Artisans*, notes on smelter families, that "now in Eastern Lai a large half ounce is called a *jun*; ten *jun* make a *huan*,[np] and a *huan* weighs 6 ounces and a large half ounce." When this passage is quoted in the *Narrative on the Metal Functionaries*, []^{no} is substituted for [].^{np} On the identity of []^{no} and [],^{nq} cf. the section below on *yuanjin*.

[17]Yu Yan, "Investigation of the Character *gong* Coin," *Money*, no. 22.

the three-hole spade.[18] These do not, however, seem to be the earliest ring coins.

When we investigate the history of ring coins, we ought to take the early specimens for our standard. The earliest ring coins are those with the inscriptions *yuan* and *gong*. Both of these characters must be place names, and so the upper limit for their date cannot be earlier than that of the hollow-socket spades which bear place names, or later than the end of the Warring States epoch. They were probably minted from the fourth to the third century B.C.

The label Western Zhou on ring coins refers to Henan (i.e. Shanxun). King Kao of Zhou enfeoffed his younger brother in Henan, and the brother's territory was called Western Zhou. Eastern Zhou refers to Luoyang. Duke Hui of Western Zhou enfeoffed his younger son Ban in Gong,[nr] which was called Eastern Zhou. Both events occurred during the fifth century B.C. This, however, only sets the upper limits for the dates of the Western and Eastern Zhou coins.

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It does not prove that they were minted in the fifth century B.C. Judging from their construction, these two coins must date from the middle or later period of development of ring coins. Perhaps they were minted at or after the time of King She of Zhou [314-255 B.C.].

The *yuan* coins are the most numerous of the ring coins. Yuan was a place in Wei. Therefore, ring coins probably originated in Wei, and were adopted later by other states.

The *changyuan* one-adz and the adz-spade must have some connection. They use the same monetary unit and their weights are nearly the same.

The Weight One-ounce Fourteen-grains and Weight One-ounce Twelve-grains coins look like steelyard weights, but individual coins are not uniform in construction, and their weights are not uniform. Hence they are best considered to be coins. Given their use of the grain-ounce weight units, they must have been coins of the state of Qin, and predecessors of the Qin Half-ouncer. They might even be the first coins Qin put into circulation, issued during the second year of King Huiwen of Qin. There may still be, however, some room for debate as to how to read their inscriptions. Can they be read as "one-ounce, weighing fourteen-grains" and "one-ounce, weighing twelve-grains?" This would imply a lightening of the coinage. Actually, though, they weigh about the same as the later Half-ouncers. As for those objects labeled "weight four-ounces" and bearing identification numbers, or having identification numbers but lacking the inscription "weight four-ounces," they are suspect.

Aside from the spade, knife and ring coins discussed above, the southern state of Chu employed a small, oval-shaped bronze coin, the obverse of which protruded, and the reverse of which was flat. These coins weighed from 2 to 4-5 grams. They could very well have evolved from bronze cowries to become the highest form of cowry coin. They have been unearthed in Henan, Hubei and Hunan. These small bronze coins resemble the coins of ancient Asia Minor, except that the latter were made of gold and silver, whereas Chu employed bronze. The Asia Minor coins bore a variety of images, while the Chu coins bore various inscriptions.

Chinese numismatists call these small bronze coins "demon-face coins" or "ant nose coins." [Plate xxiii] The Demon-face coin has the character []^{ns} sunk into its oval-shaped, face-like obverse. This makes it look like a man's face. Actually it is a character placed above a hole, which in this context looks like a mouth. The graph []^{ns} is a variant of the ancient character for cowry, [].[nt19]

The character []^{nu} is set into the surface of the Ant-nose coin, which is what makes it resemble the nose of an ant. The character also resembles the three characters meaning "*ge* six grains" [*ge liu zhu*^{nv}] joined together. In fact it also resembles the sealscript character *yuan*.[nq] If it is read as *ge* six-grains, the first character must be a place name. Some say it is an abbreviated version of *luo*.[nw] It could also be some other character as well. Six-grains is a quarter of an ounce. Two coins of such weight would equal one Qin Half-ouncer. Some say this Ant-nose coin should be identified with the Demon-face coin because of the latter's raised nose, and both be called Ant-nose coins.[20]

Others say the so-called Ant-nose coins must have been used in tombs to ward

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off ants. In fact this name might have arisen because the coin was as small as an ant.

In addition to the above two types, which are the most common ones, there are also ones bearing the inscriptions *xing*,[nx] *jun*,[ny] *tao*,[nz] *xin*,[oa] and *quan*[ob] (jin[oc]). Customarily these are included under the rubric Ant-nose coins as well. I have only seen written accounts of the *xin* and *tao* coins, not the coins themselves. The first two seem to be the earliest and

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[18]Zheng Jiaxiang, "Origins of and Changes in the Nomenclature of Knife, Spade and Spring Coins," *Money*, no. 22.

[19]Wu Dacheng, *Experiments in Weight Measurements*.

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[20]Ma Ang, *Investigation of the Inscriptions on Monetary Spades*.

to have been used the longest time, perhaps over the broadest area. The others are all either late or localized in circulation, because the *xing*, *jun*, and *quan* characters are also found on northern knife coins, and the character *xin* is the same as that on the Worth-*xin*[or *jin*] spade.

The two might be connected, but there are fewer of the Worth-*xin* spade than of the ant-nose coin, and since they differ considerably in weight, they could not have been of commensurate value. The spade may have been a Song coin whose unit was taken up by Chu. Perhaps the inscription ten-*huo* on the reverse of the Worth-*xin* spade refers to ten Ant-nose coins being equal to one such spade coin. The weights of the two coins are rendered congruent by such an explanation.

China and Greece began to mint coins at about the same time, and there are similarities between the stages of development of their moneys. European numismatists divide the history of ancient Greek coinage into three stages: (1) the archaic or primitive style stage, (2) the free style stage, and (3) the stage of the Hellenistic style.

The archaic stage runs from the beginnings of manufactured money up to around 480 B.C., terminating with the Persian Wars. Its coins are characterized by the simplicity of the images they bear. Frequently only one side bears an image, with only a square seal-mark on the reverse.

The second stage runs from around 480 B.C. to 336 B.C. This was the period of Greek culture's highest development, and the monetary culture was no exception. The techniques for carving the punches for stamping out coins advanced. There were many different things depicted on coins, and no fixed rules for selecting them. Both sides of coins bore images, most of them depictions of personages from mythology.

The third stage ran from 336 B.C. to 100 B.C. This was the age of Alexander. Its coins characteristically bore depictions of the heads of rulers.

Pre-Han Chinese coinage's history can also be divided into similar three stages: (1) the archaic or primitive, (2) the free style, and (3) the Qin stage.

The archaic stage is represented in China by the hollow-socket spades, which were unvarying in shape, and usually only bore a single character, with even two character inscriptions being very rare. The characters were small, and their calligraphy unsophisticated and cramped. This stage belonged to the Spring-Autumn Era, and ended around 481 B.C. (the 39th year of King Jing of Zhou). This corresponds almost exactly in time to the Greek archaic stage.

The second stage comprises the various knife and spade coins of the Warring States Era, with spade coins being especially important. It runs from around 480 B.C. to 221 B.C. (If it is considered to have ended with putting of coins into circulation in the 2nd year of King Huiwen of Qin,

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then it ended in 336, which matches the chronology of the second stage of Greek coinage.) It is characterized by unrestained freedom in both shape of and inscriptions on coins, and it was then that the high point of the epoch's monetary culture was achieved.

The third stage begins either with the adoption of coinage by King Huiwen of Qin or with the extension to all of China by the First Emperor of Qin of the square-holed round coin. From then on the shape of Chinese coins became fixed.

These three stages may be said to correspond to the laws of material development. The first stage is the raising of the question, or thesis. The second stage proposes a variety of ways to resolve the thesis, and the last stage selects one method, believed then to be the most satisfactory one, to be put into effect.

Hellenistic coins bore illustrations as well as inscriptions. Both sides of coins depicted men, birds and beasts, flowers and trees, all carved realistically. There was exact knowledge then of human anatomy in particular. Statues of men were detailed and lifelike. The physical peculiarities of various ancient peoples, changes in clothing and hair styles, the contents of ancient myths, the development of religion, the likenesses of historical emperors and kings, and even some important historical events, have all been preserved on coins. Moreover, illustrations on coins are often the only surviving evidence for such phenomena. Because Greek coins were in themselves works of art, and because their quantity was great and distribution broad, they fully reflect the stages of development of Greek art. Those who study the history of Greek art gain more complete and reliable knowledge from coins than from any other objects.

The ancient Chinese did not place as much importance on the artistry of their manufactures as did the Greeks. Chinese coins only bear inscriptions. Aside from some New Year's tokens, none bear pictures, and even these tokens' illustrations are not realistic. Nor do Chinese coins fully reflect the level of artistic development of their period. Sometimes they do, but sometimes they do not. The ancient Greeks treated coins as art objects, but China only did so at certain times.

Nevertheless, Chinese coins have other points of beauty which are not so fully present in Greek coins. Hellenistic coins, and later European coins right down to the end of the Middle Ages, always had awkwardly written and irregularly spaced ins-

criptions, and their calligraphy lacked beauty as well as symmetry. Inscriptions did not take on regular form until the coming of modern mechanized minting processes, and even now the calligraphy on coins cannot be said to be beautiful. As early as Warring States times, however, the inscriptions on some Chinese coins were very elegant. By Han, Northern and Southern Dynasties and Tang-Song times, the development of a number of calligraphic styles yielded still greater esthetic rewards.

Before the adoption of machine minting in modern times, Hellenistic style coins were always highly irregular in shape,

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with hardly any coins meeting a fixed standard. Chinese coins, whether of the knife and spade coin type or the later round coins, were all standardized, except for privately minted coins. Some were made even more uniformly than machine-made coins. Hence there are some Chinese coins which are genuine works of art.

Therefore, in terms of their shapes, Chinese and Greek coins followed the same rule of development: from non-round to round; but in terms of the images they bear, the two have remained different over the long run, and this symbolizes the differences between the two cultures. Chinese culture emphasizes abstract concepts, like good and evil, and so its coins employ many auspicious characters. European culture emphasizes concrete phenomena, like beauty and ugliness, and so its coins emphasize images.

China and Greece also differ in the material used for coins. China mainly employs copper, and Greece silver. This difference does not reflect a difference in wealth between the two. It could be due to differences in the breadth and depth of the circulation of money. Greek coins were mainly used in foreign trade. Hence they employed high value monetary units. Chinese Warring States Era coins were mainly employed for small-scale trade among the common people. Hence they employed small value monetary units, with gold used to make large payments.

If this inference is not mistaken, we may draw the conclusion that during this period the Chinese monetary economy was more developed than that of Greece. That is, more Chinese used coins that did Greeks. Coins had entered more deeply into the daily lives of the Chinese.

It was precisely because Chinese coins bore only inscriptions that they could reflect developments in writing. This is one great source of Chinese coins' historical value. The reason why we can call the second stage of development of China's ancient coinage the free style stage is partly because of the numerous shapes taken on by coins, but also because of the variations in inscriptions. At that time coins were cast in clay molds. Each mold could only be used once. Hence even among coins from a single place, there are no two coins with identical inscriptions.

This multiplicity of calligraphic styles is amply displayed on the Pingyang small square-foot spade [Plate xxiv] and on the Jinyang small pointed foot spade. The former is the more numerous, and has been fairly well investigated. There are multitudinous variations in the calligraphy of the *ping* and *yang* characters. Some are written in a cramped style, others in a looser style. You can almost imagine the personality of the calligrapher of each coin as these personalities are expressed without inhibition on the coin inscriptions.

According to our present knowledge, Chinese writing first appeared on oracle bones, and then on ceremonial bronzes. This is the so-called large seal or ancient writing. Nevertheless, by late Spring-Autumn and early Warring States times,

[60]

differences had appeared between the spoken and written languages of various localities. In particular, the inscriptions on knife and spade coins differ from those on bells and solid-legged tripods. The inscriptions on the latter were written by upper class intellectuals who strove to preserve the ancient writing's calligraphy. The new characters were different, and these must have become much more numerous as a consequence of the great socio-economic changes of the late Spring-Autumn-early Warring States years. Changes in calligraphy, however, were still few.

The inscriptions on knife and spade coins were mostly written by people from the newly risen artisan and commercial classes, and even by some barely literate men. Not only are new characters numerous, but the ways of writing them had diverged far from the methods used for ancient writing, and may not even have been standardized. Later, after the First Emperor of Qin unified the script, and styles from the other six great powers not the same as the Qin seal script were no longer used, the ability to read these old scripts eventually disappeared. It is no wonder that two thousand years later numismatists would "grasp at the wind and snatch at shadows" to label these unrecognizable characters as pertaining to objects of the age of the Three Rulers and the Five Emperors, or to claim that they were coins of Fuxi, spades of Shennong, or metal of Emperor Gaoyang.

The inscriptions on knife and spade coins reflect localized and transient conditions, and hence are of many kinds. Some are in ancient writing, some in small seal script. There are even some pictographs. For example, the character for "crow" *[wu]* on the *wuyi* small square-foot spade, is sometimes nothing but a pictograph --[].[od] This is also true of the character for "fish" [*yu*] on the pointed-tip knife

coins, which is written [].[oe] It would be more appropriate to call these pictures than writing.

The inscriptions on knife and spade coins are generally to be read from right to left, which is the way Chinese writing is normally set out. Some numismatists read inscriptions in any direction they please to prove a point. This is improper. Not all of the craftsmen manufacturing coins then, however, followed the rules either. Inscriptions are often set out incorrectly from left to right. Individual specimens of the same type of spade coin might have their inscriptions run in either direction. Hence it is very hard to say which is the correct way to read such an inscription.

During the Warring States Era new cities often appeared, and hence so too did new place names. Place names on small spades often incorporate the characters *yin* and *yang*. *Yang* meant to face the sun. *Yin* meant to have one's back to the sun. Gradually the meaning of these two terms changed to "south" and "north." For example, the place north of Anyi [An City], was called Anyin; the region to its south was called Anyi or Anyang. Why were the words north and south not used? This may have had something to do with the *yinyang* proto-scientific theories of that time. In addition to standing for directions, these terms also connoted good and bad luck.

The numerals on knife and spade coins are also worthy of note. Even if the numerals or signs used by Chinese merchants did not take full form at this time, their earliest versions did appear then.[21] Numerals appear on hollow-socket spades, flat-handle spades, needle-tip knives, pointed-tip knives and *ming* knives. It is, however, no easy task to collate the numerals on each type of coin. Aside from those on the hollow-socket spades, nearly all the rest appear on the coins'

[61]

reverses, and serve as serial numbers. Of the square-foot spades, however, only the Rangyuan, Zhongdu, Dayin, Pingzhou and Mayong happen to bear numerals. Pointed-foot spades with numerals are more common. Most round-foot spades have numerals, but they themselves are relatively scarce. Not all small knives bear numerals.

Numerals on knife and spade coins are nearly identical. Those from "one" to "five" are the same as later commercial numerals, being written as [],[of] []^{og} (or []^{oh}), []^{oi} (or []^{oj}), []^{ok} (or []^{ol}), []^{om} (or []^{on} or []^{oo}). The numbers from six to nine are almost the same as the commercial numerals: [],[op] [],[oq] [],[or] [].[os] On the pointed-foot spade the characters written as [],[ot] [],[ou] [],[ov] []^{ow} are taken by some as the numbers six through nine.[22] If that is so, then all the commercial numerals had already taken form.

I feel, however, that this conclusion is worthy of suspicion. The graph []^{ot} might not be six, but eleven (ten and one written together). Similarly, []^{ou}, [],[ov] and []^{ow} might not be seven, eight and nine, but twelve, thirteen and fourteen written as single graphs. This is because there were other ways to write the numerals six through nine. Moreover, in addition to these four, we also find [],[ox] [],[oy] [],[oz] and [].[pa]

Another interesting point is that the way of writing numbers on round-foot spades differs from that employed on the other kinds of spades. For example, 23 is not written as [],[pb] but as [];[pc] 59 is not written as [],[pd] but as [].[pe] The character for ten in the middle is never omitted. This must represent a difference in local customs, and perhaps reflects the backwardness in arithmetic of the localities using the round-foot spades. This would be congruent with an assumption of their general economic backwardness.

Though there was no concept of primary money and secondary money during Warring States times, people then obviously already knew how to divide the monetary unit into denominations. Spade, knife and ring coins all come in denominations. Pointed-foot, square-foot and round-foot spades all come in

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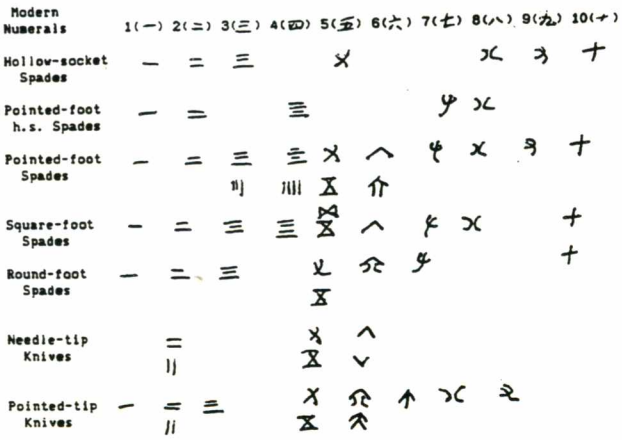
[21] Fu Yiling, in his *Ming and Qing Era Merchants and Mercantile Capital* (People's Publishing Society, 1956), p. 2, says that China's commercial numerals took full form during Song and Yuan. This is a bit late. Li Yan's *Materials on the History of Ancient Chinese Mathematics* (Science and Technology Publishing Society, 1956), pp. 6-7, traces their origins to Han bamboo slips. Neither of these two sources mentions the numerals on knife and spade coins. The numerals I have seen on early coins or in catalogs of early coins may be listed as follows:



[22] Zheng Jiaxiang, *History of the Development of China's Ancient Money*.

large and small varieties. Of the pointed-foot spades, the Dayin, Jinyang. Zishi and Lin; within the square-foot category, the Nie; within the round-foot category, the Lin and Lishi all come in large and small denominations. The small pointed-foot spades often add the character for "half" (*ban*) to their inscriptions, as on the Jinyang Half, Zishi Half and Lin Half. This probably means that two small spades were equivalent to one large spade. The presence of denominations on three-hole spades and adz spades is even more obvious. Of the knife coins, the Jimo comes in large and small versions, as does the Jiyin ring coin. The presence of the character for "half" on the Half Qiong coin also is evidence of the presence of denominations.

There is another point of resemblence between early Chinese coins and ancient Greek money. This is the localized nature of money's manufacture and circulation. We may even say that coin manufacture was dispersed among various cities rather than centralized in the hands of the governments of the states. In Greece, however, a city was an independent unit of government. That is why they were called city-states. This is somewhat different from the situation in China. All Chinese money then, whether knife, spade, ring, ant-nose coins or stamped gold, was produced by

[62]

dispersed monetary systems. Most coins bore place names.

Spade coins were the most severely localized. Knife coins were somewhat more centralized, but Zhao knives were almost as localized as were its spade coins. Qi knives were also minted in several different cities. The later Three-character knives may have become a national currency, but there is still no proof that the coins of the state of Qi were centrally minted by the government. The Literati Faction in the *Debates on Salt and Iron* mentions that "abroad, the kings did not impede the seas and marshes; within, they did not ban knives and spades." This may refer to the situation in Qi. Though the Confucians earlier would not have treated the ruler of Qi as a true king, perhaps the Han scholars were not so strict.

Only Yan's *ming* knife was clearly of centralized nature. The numerals and characters for left, right, inside and outside on their reverses prove that they were minted under a unified system. So large a scale of production would seem to require the strength of a state to undertake. The Qin coins are the only ones which do not bear place names, but this is true only of ring coins. Three-hole spades retained place names, but given their uniformity, it is possible that they were minted under some centralized arrangement.

There were two or three kinds of money simultaneously in circulation, or at least one after the other, two or three moneys circulated. There are no small number of allusions in ancient documents to knives and spades appearing together. The *Guan Zi*, for example, contains the phrase "knives and spades were the lower money." The *Xun Zi*'s chapter on "Enriching the State" contains the words "collection of thick knives and spades to carry off their wealth," and the chapter on "Glory and Shame" contains the sentence "a surplus of knives and spades is in the granaries and cellars."

There are also some place names which appear on both knives and spades, and even on ring coins as well. For example, the character for Qi appears not only on Three-character, Four-character and Six-character knives, but also on *ming* knives. The place name Anyang is seen on Anyang knives and square-foot spades. These could be different places with the same name, but places like Eastern Zhou, Anzang, and Gong are found on hollow-socket spades and ring coins; Lishi is found on pointed-foot spades, round-foot spades and ring coins. The character Lin is on both large and small pointed-foot spades, small square-foot spades, on small, medium and large round-foot spades, and on small knives and ring coins. All these different coins must have been minted in the same place. [Bruce W. Smith notes that there were five places called Anyang during Eastern Zhou times, and suggests that the best evidence is that the one in Inner Mongolia, near modern Baotou, made the square-foot spades, the one in the extreme north of Hebei made the three-hole spade, and the one in Shandong made the knife coin with this inscription.]

Probably because during Warring States times some places frequently changed hands, different moneys must have been issued by them at different times. It is also possible that because especially highly commercialized cities wanted to carry on trade with cities using various moneys, they also minted different coins themselves. [Bruce W. Smith suggests that this was especially true of the cities of Zhao, whose coins were mored widely dispersed than those of other states, implicitly confirming the judgment of the *Historical Records* that because its land was too infertile for farming, Zhao specialized in trade.]

a 日 b 工 c 呂 d 甘丹 e 上 f 下 g 土 h 貝
i 全 j 城 k 松 l 武 m 戈 n 平 o 行
p 周 q 雨 r 益 s 羊 t 大 u 工 v 日

w君 x烏 y是 z谷 aa西 ab月
ac刀 ad州 ae田 af古 ag山 ah白
ai止 aj陽 ak高 al乙 am木 an屯
ao留 ap目 aq成 ar于 as氏 at共
au豆 av化 aw七 ax丘 ay盧 az朱
ba商 bb示 bc侯 bd冏 be貨 bf貿
bg當 bh富 bi吉 bj高 bk吳 bl口
bm耳 bn同 bo鼎 bp宗 bq宋
br羣 bs濟 bt鄉 bu武
(武)釿 bv武乎 bw安臧
bx東周 by同是 bz武安
ca宜考 cb盧氏 cc貿丘 cd棘南
小化 ce第五兆 cf小 or少化
cg平陽 ch安陽 ci宅陽 cj陽邑
ck大陰 cl土襄陰 cm鄴 cn祁
co塚郊 cp鄗 cq良郊 cr王氏 cs茲氏
ct皮氏 cu鄾氏 cv平周 cw中都
cx高都 cy蒲子 cz郅子 da北屈
db同是 dc屯留 dd馬服邑 de丘貝
df襄垣 dg豐 dh露 di涅 dj藺
dk咎如 dl茲氏半 dm武平
dn武安 do晉陽 dp晉易
dq申陽 dr陽人 ds平周 dt北茲
金化 du鄂 dv邪山 dw高丘
dx西都 dy藺半 dz榆半 ea高石
eb亦羣半 ec易大 ed登廿五左邑
半金化 ee白釿 ef柏 eg柏人
eh京 ei甘丹(邯鄲) ej晉陽
ek武安 el絲 em茲 en畿 eo塑
ep絲(塑)氏 eq絲城 er絲釿
es閔 et藺 eu离(離)石 ev平周
ew皮氏 ex中陽 ey第子 ez大陰
fa西都 fb中都 fc陽 fd大陽半
fe武平 ff乎邑 fg商城 fh邪
fi夕 fj齊貝 fk文貝 fl丘貝 fm瓦貝
fn張安 fo交易 fp平舍 fq疑邑
fr鄭氏 fs示邑 ft右明新 fu
fu冶 fv但 fw人 fx火 fy口 fz苦
ga拜 gb恭 gc阿 gd第 ge父 gf
gf文雁 gg鄉 gh釿 gi 鄭氏
gj金化 gk斤金 gl斧斤 gm梁今金五
尚乎 gn梁今釿金尚乎 go今 gp合
gq充 gr新 gs奇 gt尚 gu當 gv今
gw梁正尚金當乎 gx梁半尚二金當乎
gy正 gz整 ha尚 hb幣 hc 弗 弩 尚 坏
hd殊布當十化 he 帥(沛)金袁當折
hf十 hg 卑 hi 尚折 hj四
錢 or布當折 hk四 hl十斤 hm 貨 hn化
ho斤 hp大 hq工 hr公 hs羊 ht高 hu戈
hv 夏 hw魚 hx刀 hy成 hz烏 ia行
ib土 ic化 id吉 ie工 if大 ig丁 ih上
ii中 ij下 ik立 il于 im王 in井 io氏
ip易 iq城 ir木 is水 it生 iu公 iv日
iw閔 ix工化 iy 邶化 iz非一 ja文一

jb六一 jc八一 jd八木 je丙七 jf午
jg午 jh羊 ji午 jj臭 jk魚 jl与 jm〜
jn〜 jo開 jp召 jq刃 jr口 js明 jt易
ju日 jv月 jw七 jx行 jy工 jz干 ka吉
kb王 kc文 kd大 ke立 kf古 kg方
kh同 ki君 kj長 kk邑 kl上 km下
kn中 ko左 kp右 kq内(8) kr外
ks外壬 kt金乙 ku齊化 kv齊化共金
kw蕎 kx蕎 ky 品 kz貌辰物 la 型 lb 杏水
lb齊建邦就法化 lc齊造邦長法化
ld化 le日 lf上 lg工 lh吉 li 午 lj 午
lk卜 ll齊之杏化 lm二 ln杏 lo杏甘
lp齊杏化 lq行 lr止 ls土 lt甘 lu正
lv立 lw央 lx安 ly生 lz万 ma木
mb金 mc易 md 午 me大 mf節 黒邑之
杏化 mg大行 mh安邦 mi閼封
mj之 mk十 ml九 mm八 mn安易之
杏化 mo ⊙ mp 酋 mq 簟 mr 簟
ms 鄲 mt 譚 mu 貨 mv 七 mw 丑
mx 瑗 my 垣 mz 共 na 共屯赤金
nb長垣一鈑 nc 武坪 nd 濟陰
ne X 晉 nf 安藏 ng 閼 nh 離石
ni 洮陽 nj 西周 nk 東周 nl 半畏
nm 重一兩十四金銖 nn 重一兩十二銖
no 羌 np 環 nq 乎 nr 鞏 ns 冠 nt 兜
nu 桑 nv 各六朱 nw 洛 nx 行 ny 君
nz 匈 oa 折 ob 金 oc 金 od 8 oe 臭
of — og 二 oh ‖ oi 三 oj ‖‖ ok 三 ol ‖‖‖
om X on X oo ‖‖‖ op 介 oq ψ or)(os 乂
ot ⊥ ou ⊥ ov ⊥ ow ⊥ ox ‖‖ oy ‖‖ oz ‖
pa 火 pb ‖ 三 pc 廿三 pd X 乂 pe X 十九

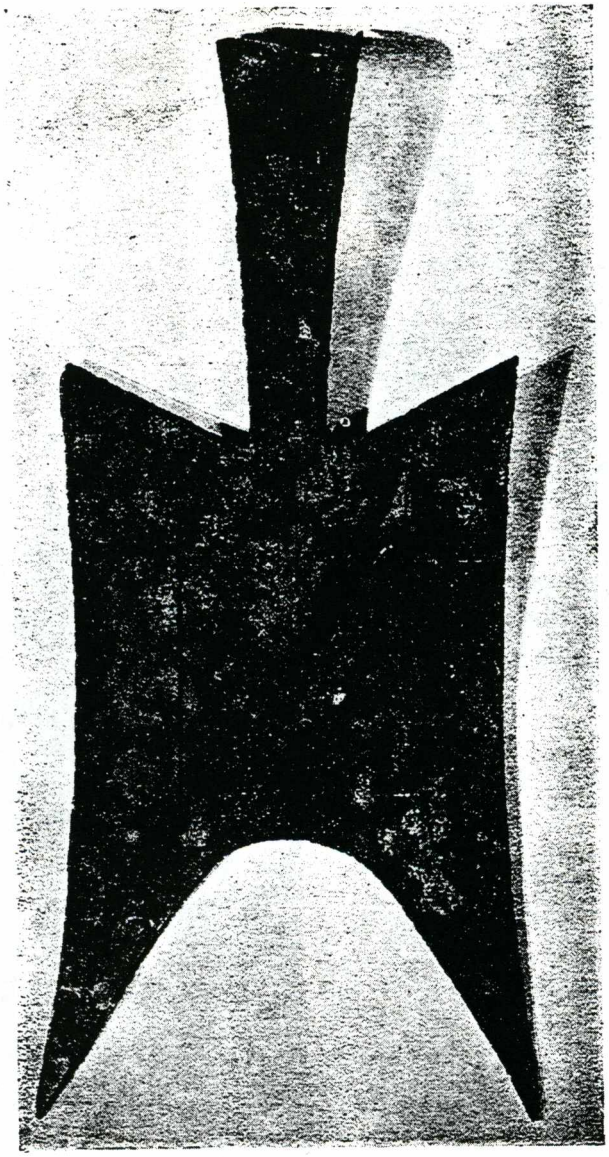


圖 版 三　空首尖足大布

這種布多沒有文字，但也有甘丹等地名的，近代發現有四五個字的，大概要晚些。

PLATE III. HOLLOW-SOCKET, POINTED-FOOT LARGE SPADE

Most such spades lack inscriptions, but some bear such place names as Handan. Some with four or five character inscriptions discovered in modern times probably date somewhat later than the others.

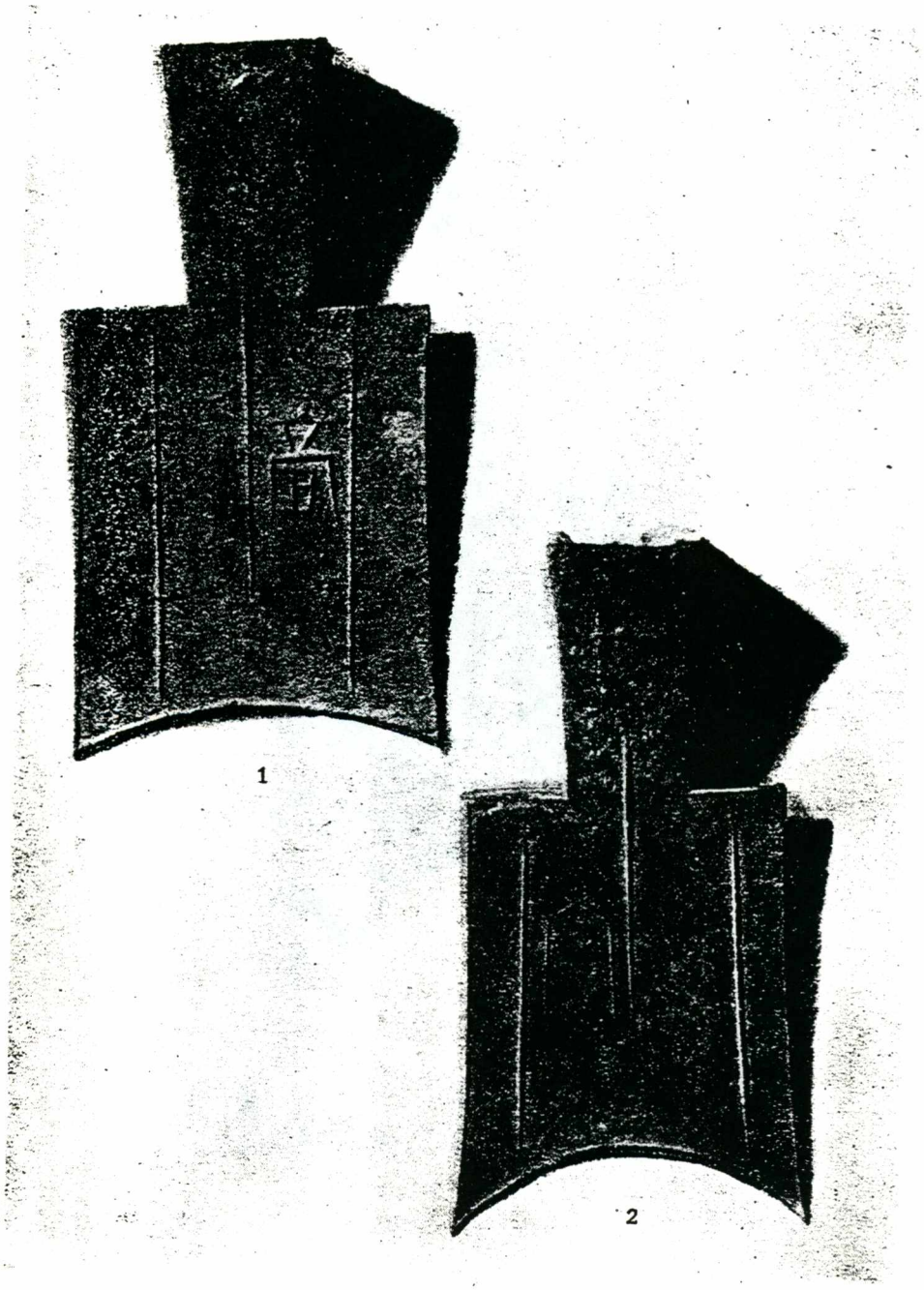


圖 版 四 平肩空首布(一)

1.高。 2.富。

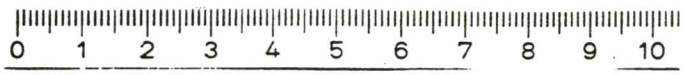


PLATE IV. HOLLOW-SOCKET, FLAT-SHOULDER SPADE (1)

1. Inscription *gao*. 2. Inscription *fu*.

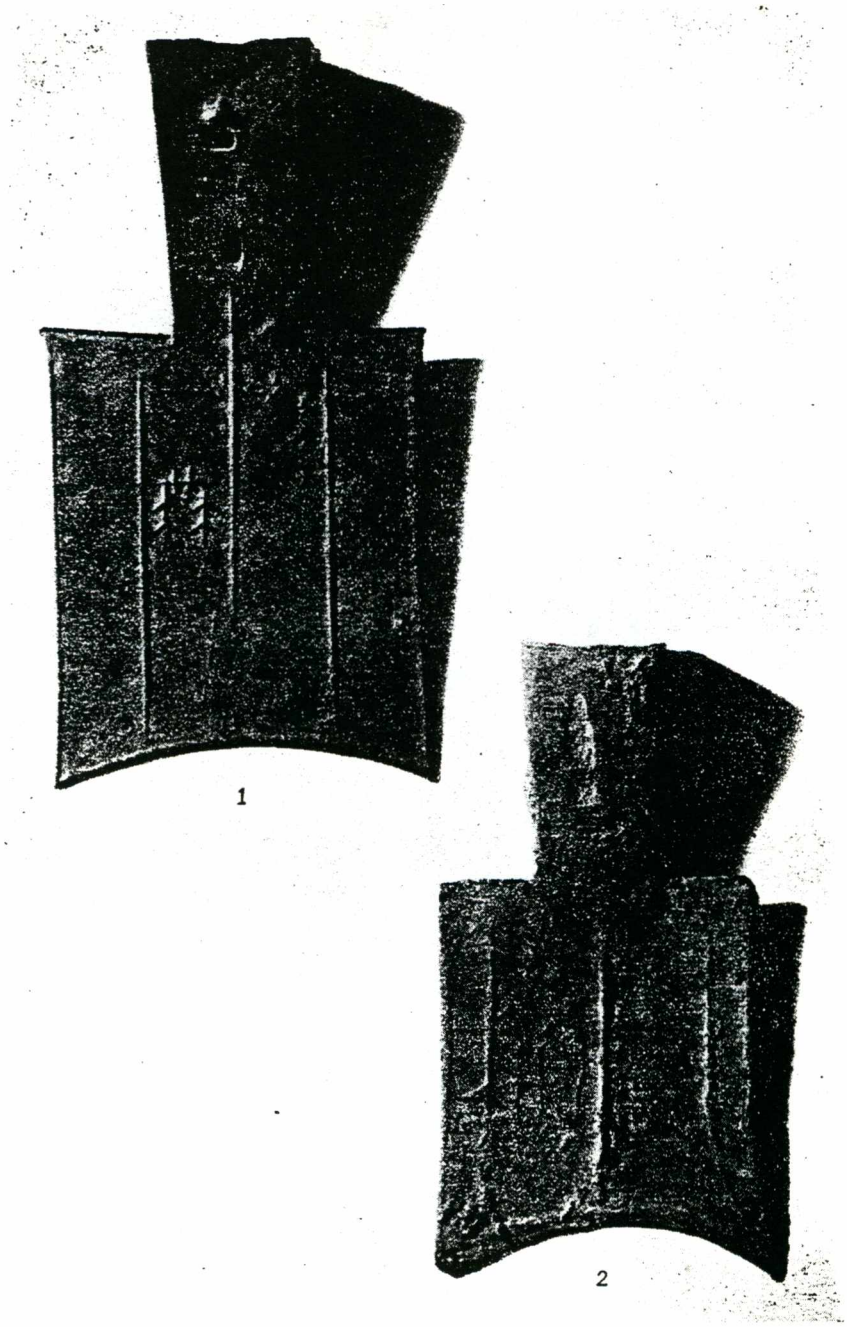
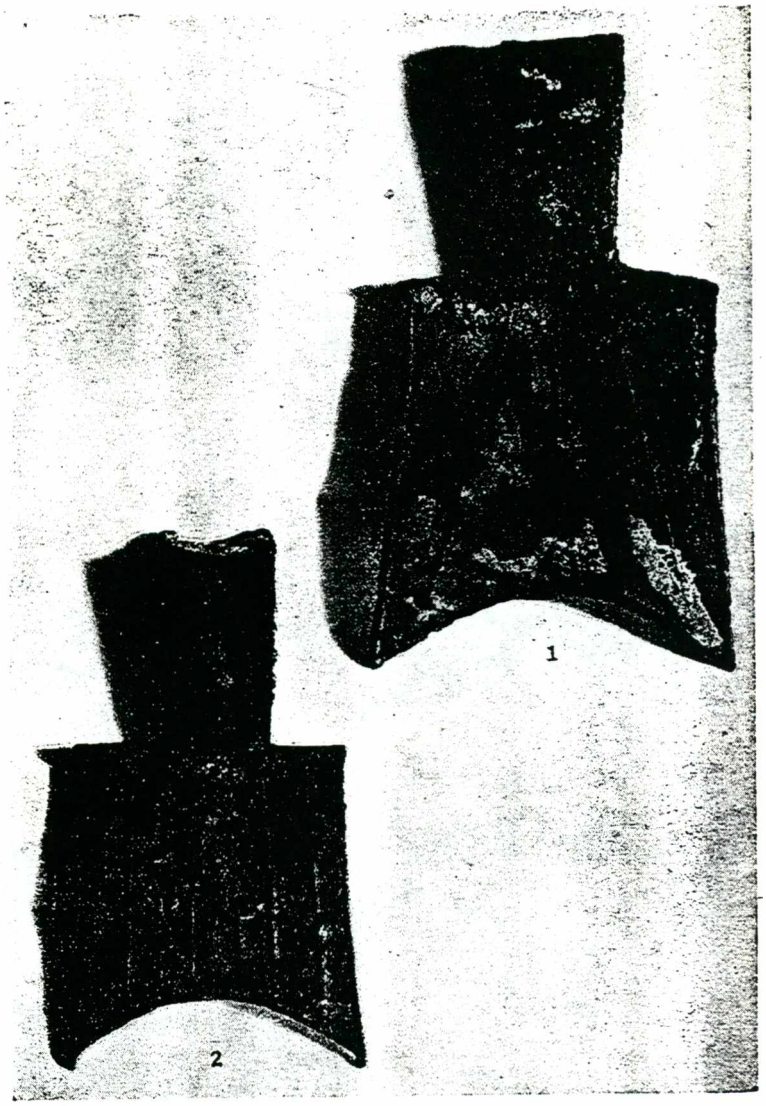


圖 版 五　平肩空首布(二)

1.益(舊釋寶或朋)。　2.鄴釿。

PLATE V. HOLLOW-SOCKET, FLAT-SHOULDER SPADE (2)

1. Inscription *yi* (formerly interpreted as *bao* or *peng*). 2. Inscription *feijin*.

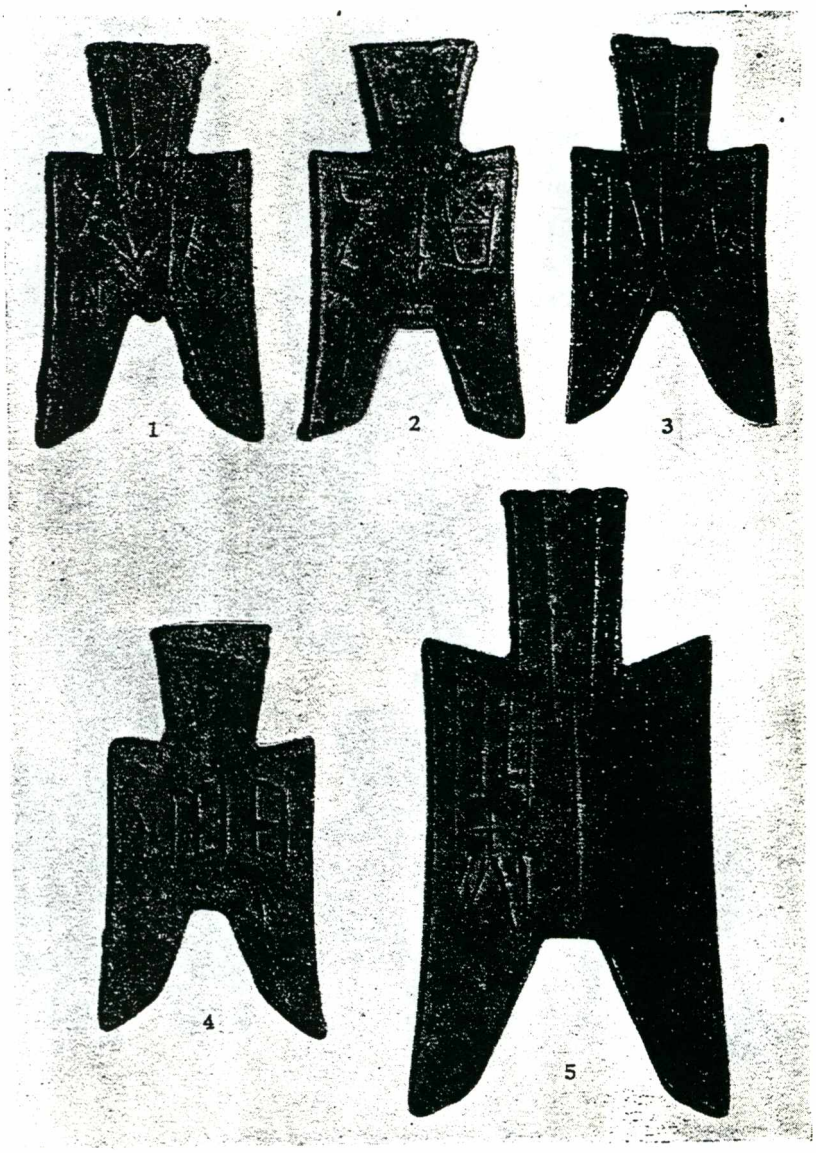


圖版六 斜肩空首布和小形空首布

1.武。 2.安臧。

PLATE VI. SLANTED-SHOULDER HOLLOW-SOCKET SPADE AND SMALL HOLLOW-SOCKET SPADE

1. Inscription *wu*. 2. Inscription *anzang*.



圖版七 尖足布

1.西都。 2.晉陽。 3.平周。 4.閼半。 5.閼。

PLATE VII. POINTED-FOOT SPADES

1. Western Capital [*xidu*]. 2. Jinyang. 3. Pingzhou. 4. Lin Half [*linban*] 5. Lin.

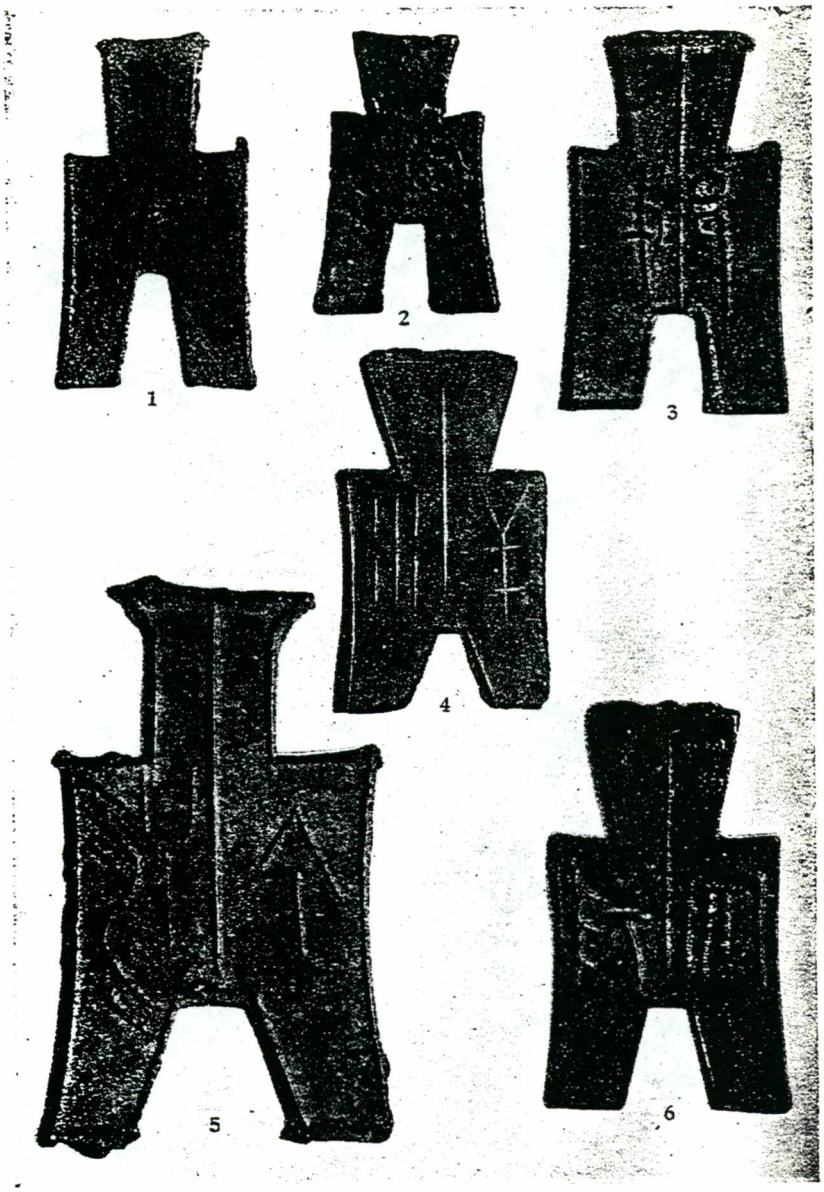


圖 版 八 方足布(一)

1.豕章。 2.襄平。 3.戈邑(郟)。 4.涅。 5.涅金。 6.安陽。

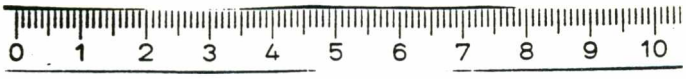


PLATE VIII. SQUARE-FOOT SPADES (1)

1. Inscription *zhuwei*. 2. *rangping*. 3. Ge Town [*geyi*]. 4. *nie*. 5. Nie Metal [*niejin*]. 6. Anyang.

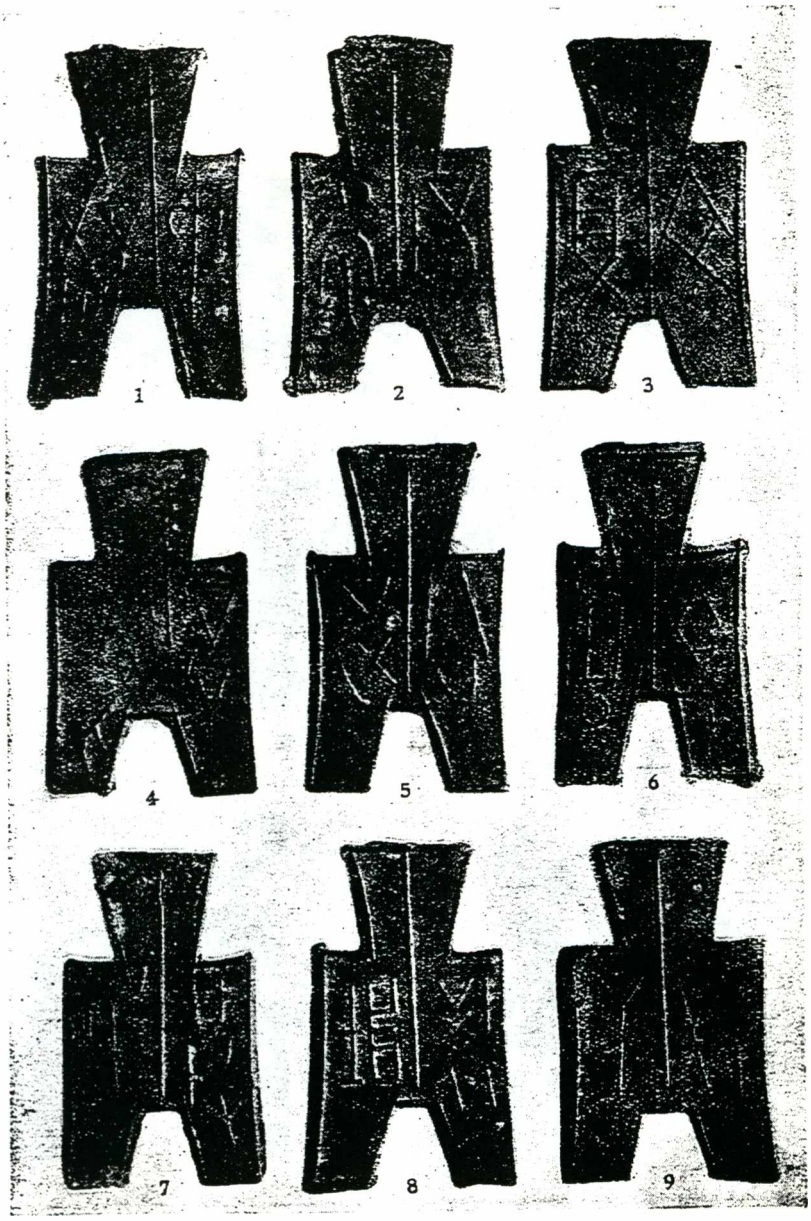


圖 版 九 方足布(二)

1.中都。 2.晉陽。 3.貝丘(或釋齊貝、文貝)。 4.烏邑(鄔)。 5.同是(銅鞮)。
6.馬雝(或釋馬服邑)。 7.皮氏。 8.數垣。 9.郢子。

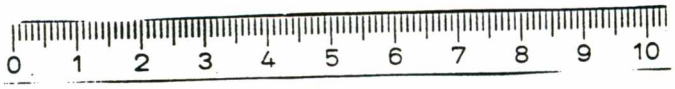
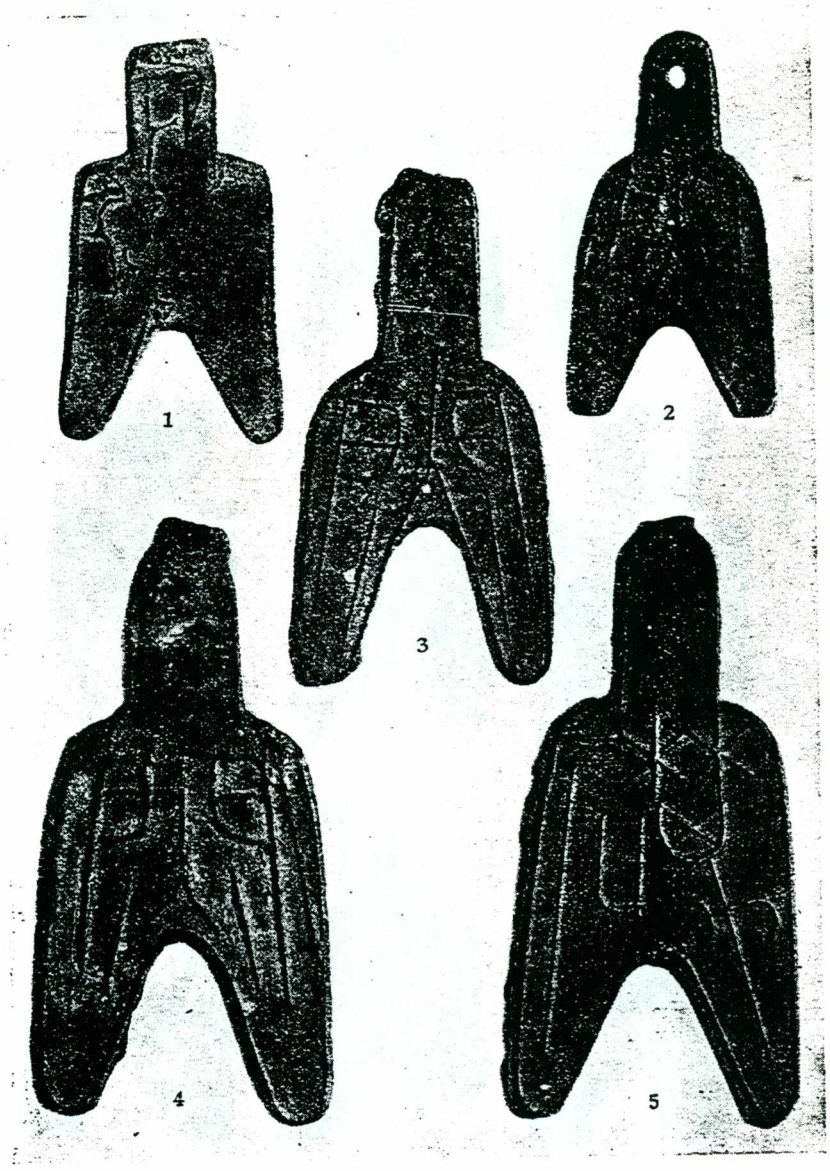


PLATE IX. SQUARE-FOOT SPADES (2)

1. Central Capital [*zhongdu*]. 2. Luyang. 3. *beiqiu* (or Qibei, *wenbei*). 4. Wu Town [*wuyi*]. 5. Tongshi (Tongti). 6. Mayong (or Mafuyi) 7. Pishi. 8. Rangyuan. 9. ?-zi.

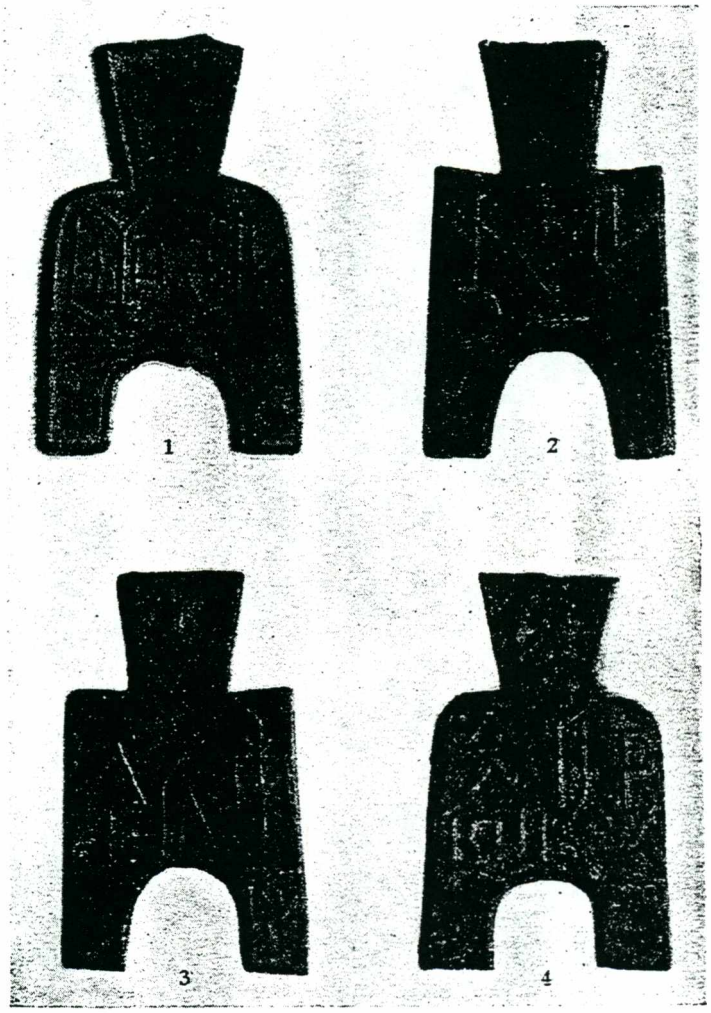


圖版十 圓足布

1.𢆶氏(茲氏)。 2—4.閔。 5.篱(蘿)石。

PLATE X. ROUND-FOOT SPADES

1. Zishi. 2-4. Lin. 5. Lishi.



圖版十一　鈄　布

1.虞一鈄。　2.采一鈄。　3.甫反(蒲板)一鈄。　4.安邑一鈄。

PLATE XI. ADZ-SPADES

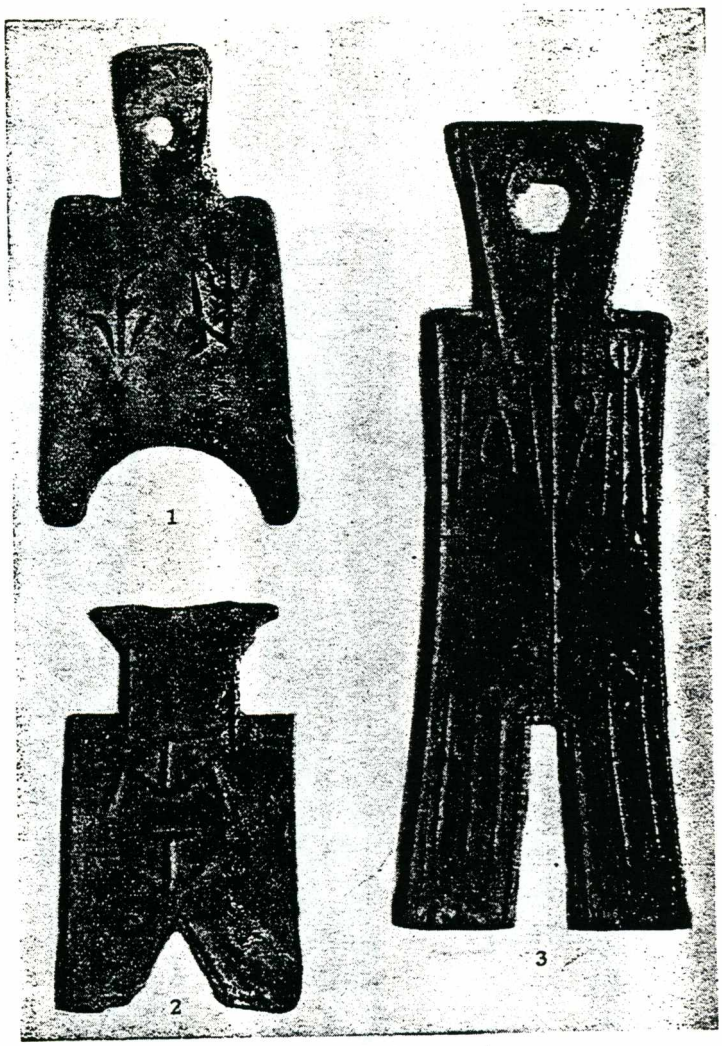
1. Yu one adz. 2. [?] one adz. 3. Fufan (Puban) one adz. 4. Anyi one adz.

圖版十二　梁的布幣

1—2.梁邑。　3.梁正尚金當寺。　4.梁今新金當寺。　5.梁今新五(二十)當寺。

PLATE XII. LIANG SPADE COINS

1-2. Liangyi. 3. Liang Formal Metal Worth *Yuan* [*Liang zheng shang jin dang yuan*]. 4. Liang [?] Adz Metal Worth *Yuan* [*Liang [?] jin jin dang yuan*]. 5. Liang [?] Adz Five (Twenty) Worth *Yuan* [*Liang [?] jin wu (ershi) dang yuan*].

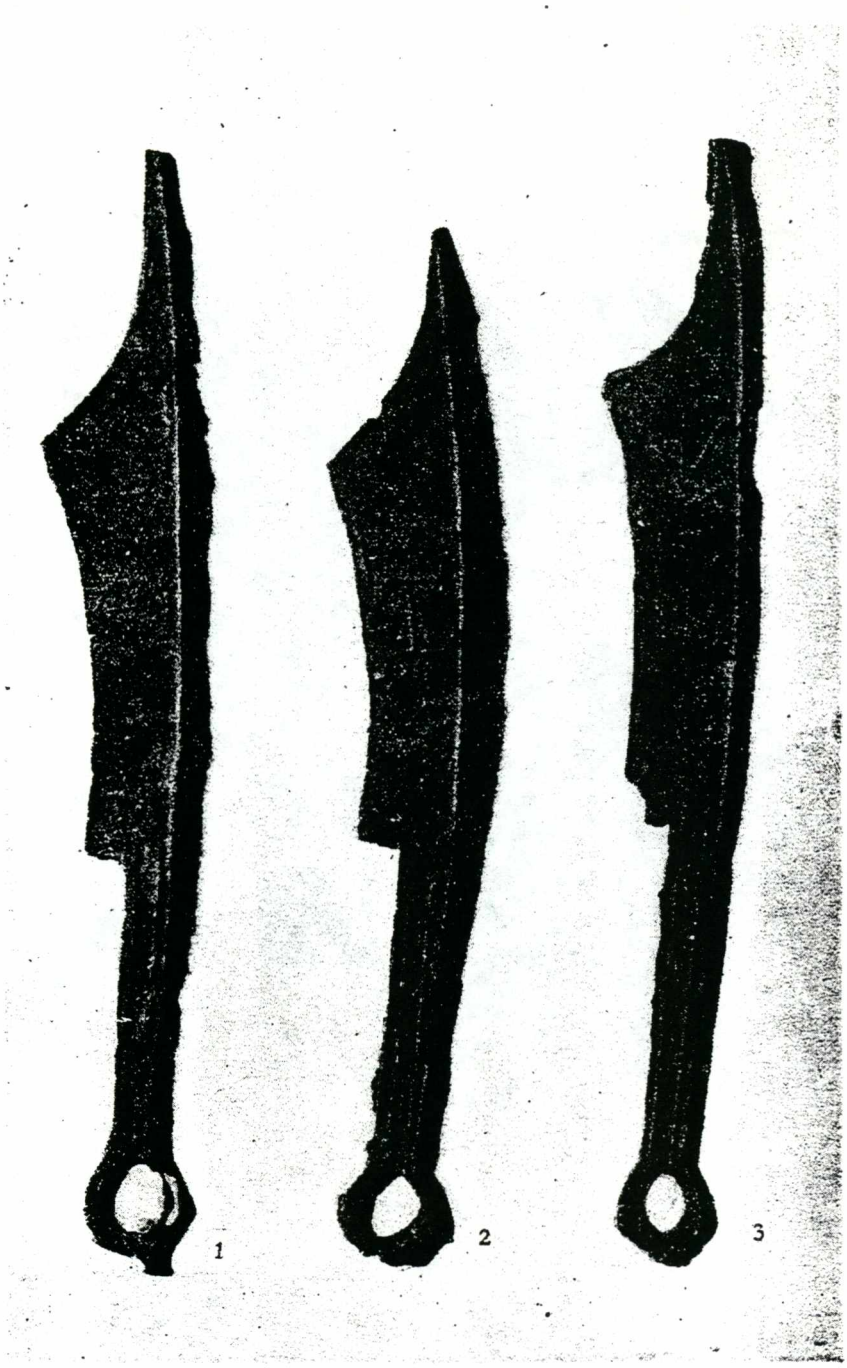


圖版十三 異形布

1.分布。 2.垂。 3.施錢當折(舊釋殊布當折)。

PLATE XIII. UNUSUAL SHAPED SPADES

1. *Fen* spade. 2. *Chui*. 3. Pennon Cash Worth *Jin* [*peiqian dangjin*]. (Formerly transcribed as Special Spade Worth *Jin* [*shubu dangjin*].



圖版十四　針首刀

1.五。 2.⊟。 3.↓。

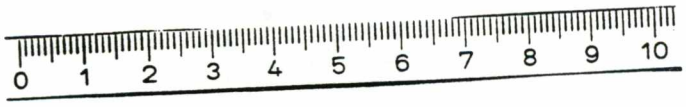
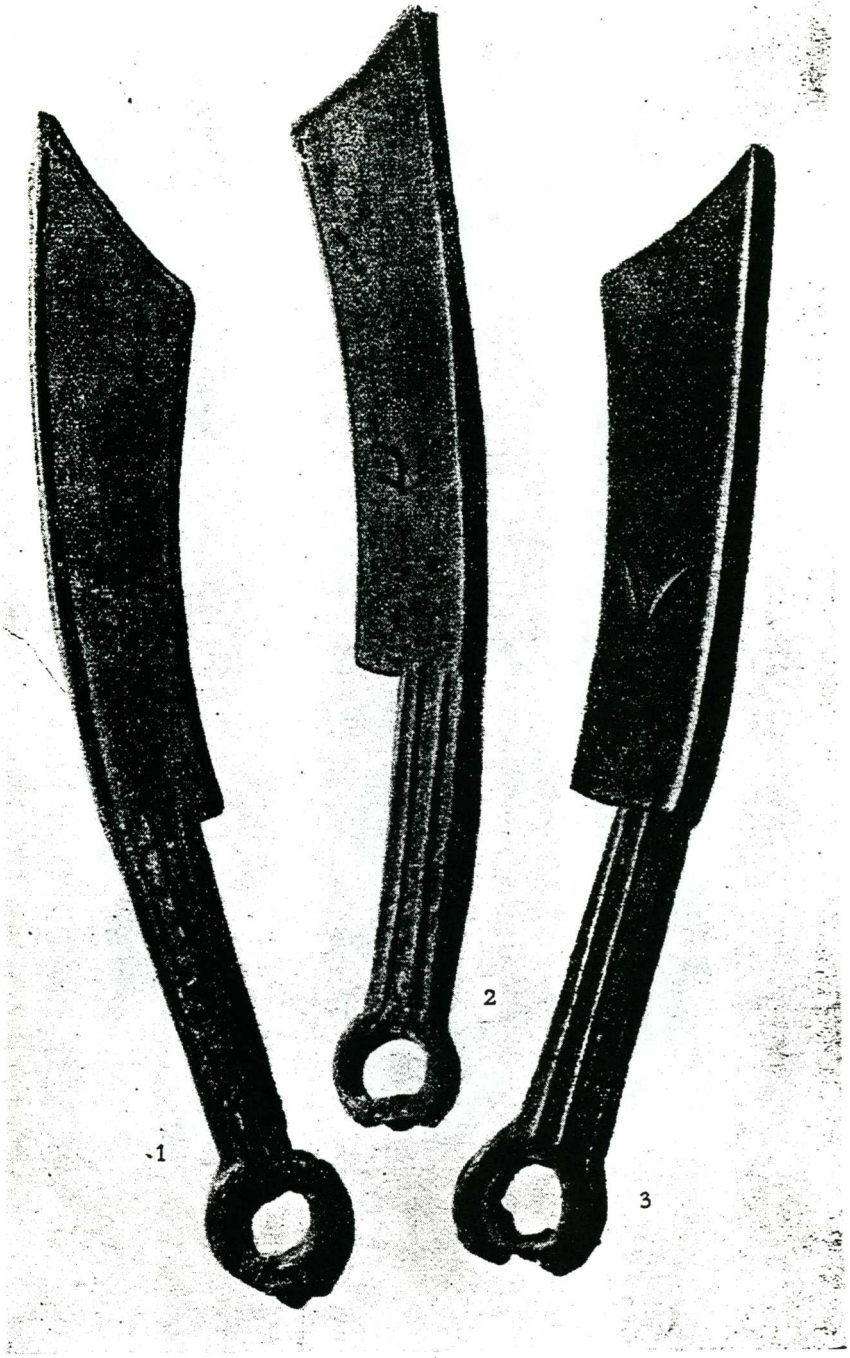


PLATE XIV. NEEDLE-TIP KNIVES

1. Five [*wu*. 2. [?]. 3. [?].

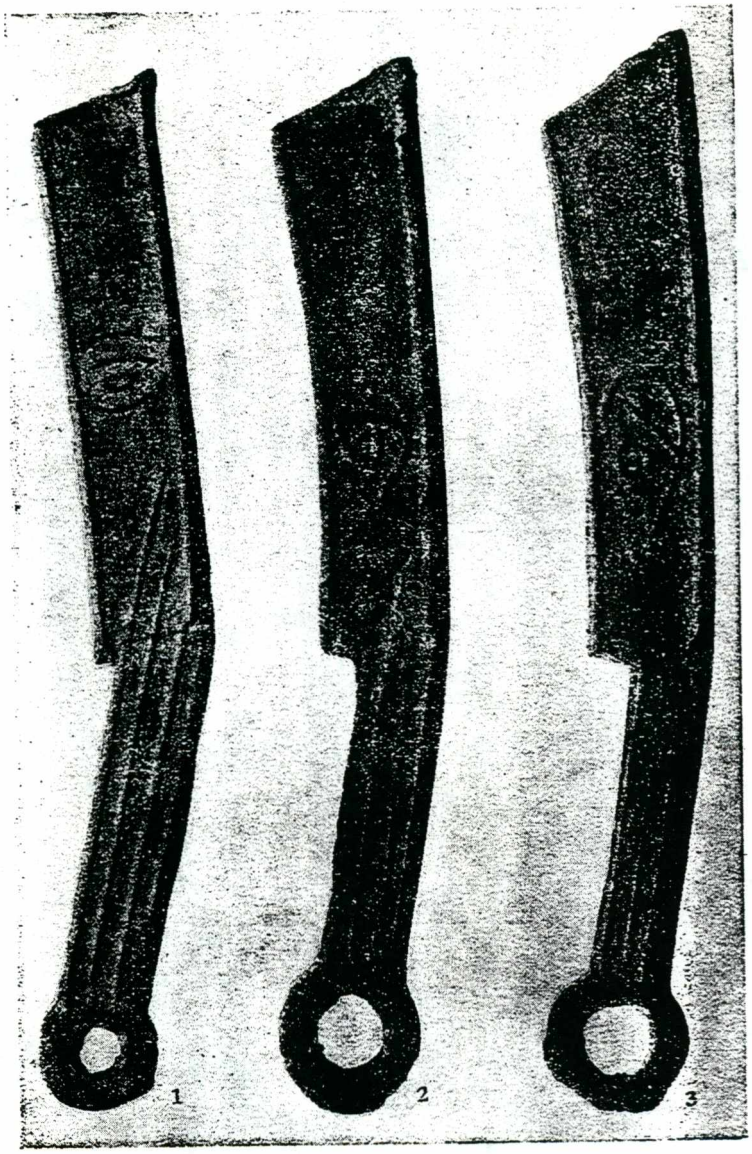


圖版十五　燕的尖首刀

1.行。　2.六。　3.八。

PLATE XV. YAN'S POINTED-TIP KNIVES

1. *xing*. 2. Six [*liu*] 3. Eight [*ba*]

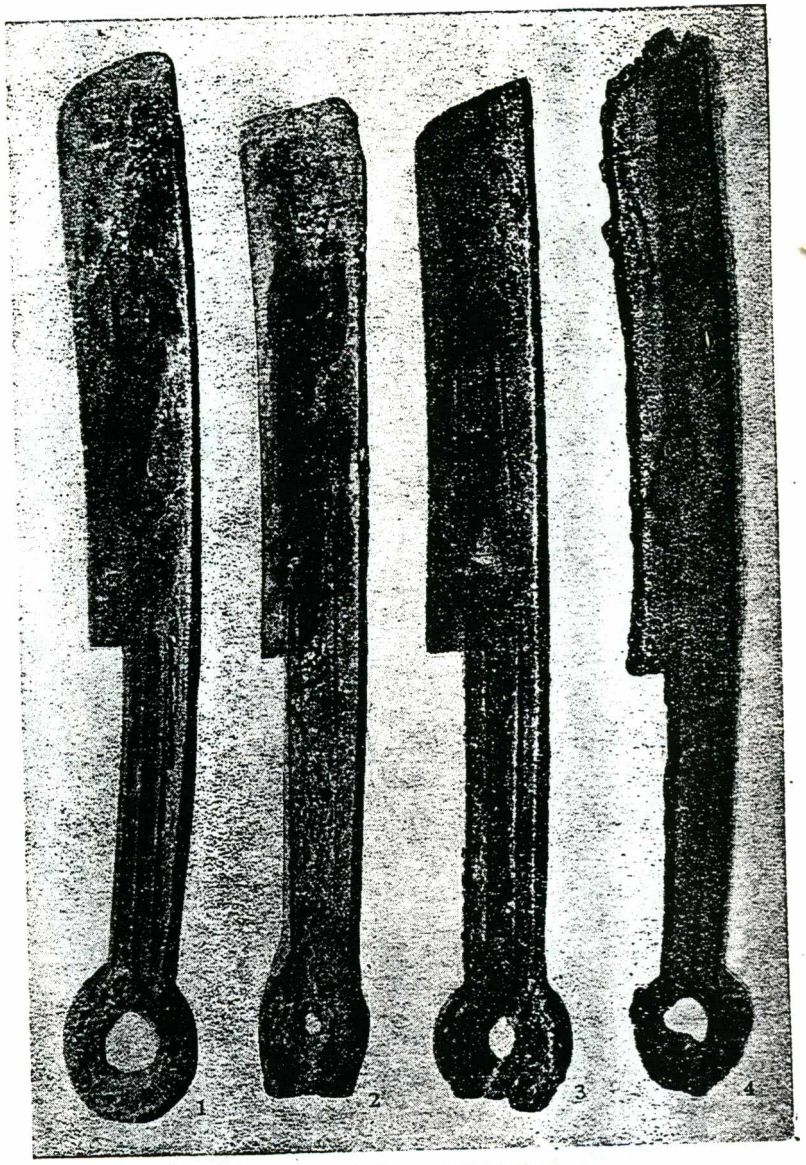


圖版十六 燕明刀

1.磬折刀。 2—3.圓折刀。

PLATE XVI. YAN *MING* KNIVES

1. Chimingstone [*qing*] or Humpbacked [*zhe*] knife. 2-3. Curved back knives [*yuanzhedao*].

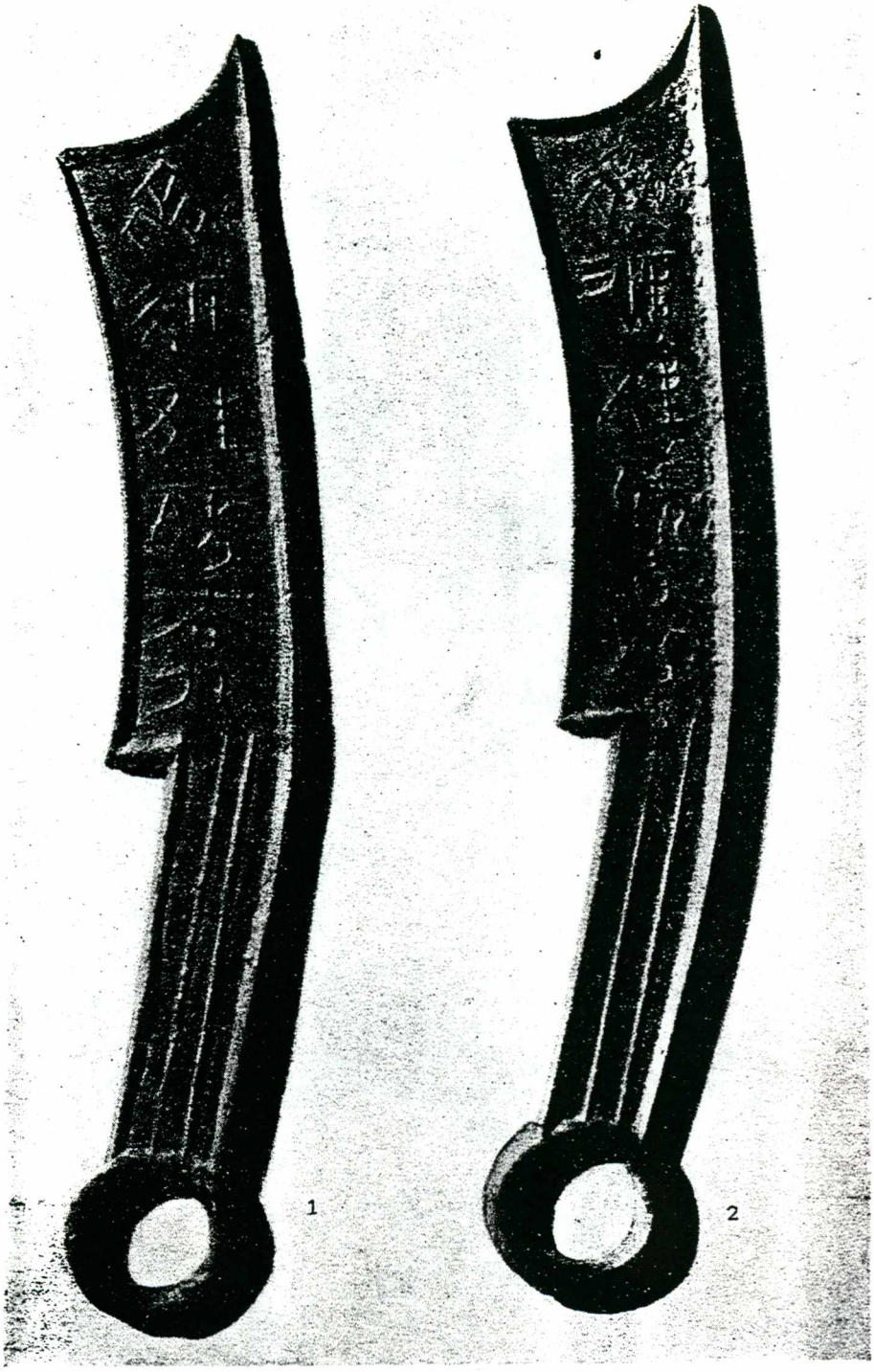


圖版十七 趙的圓首刀

1—2.白人。 3.甘丹(邯鄲)。 4.成白。

PLATE XVII. ZHAO'S ROUND-TIP KNIVES

1-2. Bairen. 3. Handan. 4. Chengbai.



圖版十八　齊造邦刀

1.有斷緣痕跡的造邦刀。　2.不斷緣的造邦刀。

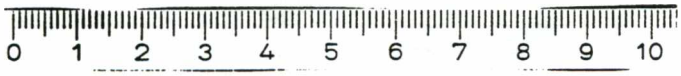


PLATE XVIII. QI CONSTRUCT-THE-NATION KNIVES

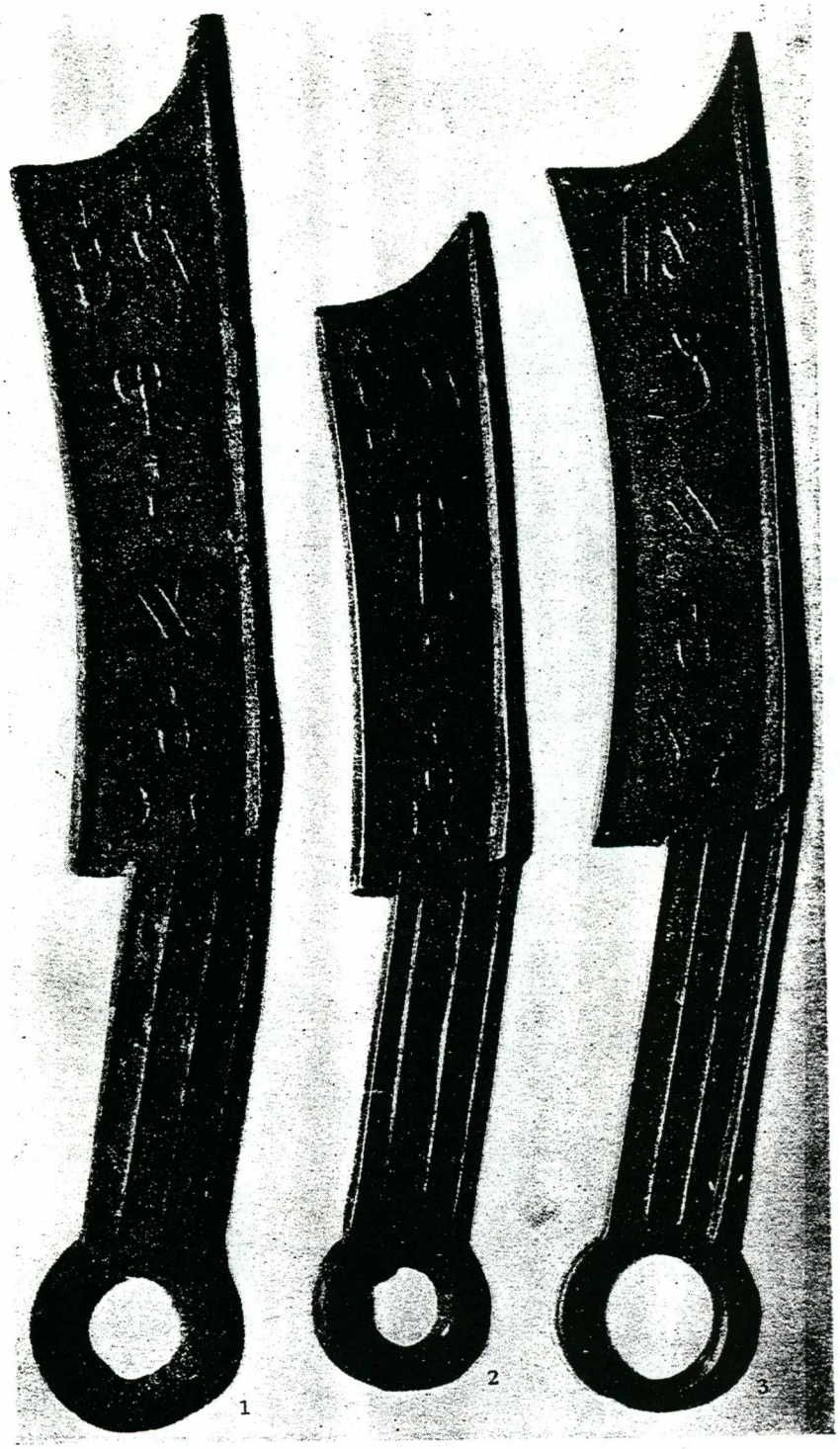
1. Construct-the-nation knife with traces of a broken edge. 2. Construct-the nation knife without broken edge.

圖版十九　齊三字刀和四字刀

1.齊夲化(俗稱三字刀)。　2.齊之夲化(俗稱四字刀)。

PLATE XIX. QI THREE-CHARACTER AND FOUR-CHARACTER KNIVES

1. Qi money (popularly called Three-character knive. 2. Qi money (popularly called Four-character knife.



圖版二十　即墨刀和安陽刀

1.即墨刀。　2.小即墨刀。　3.安陽刀。

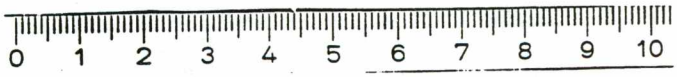
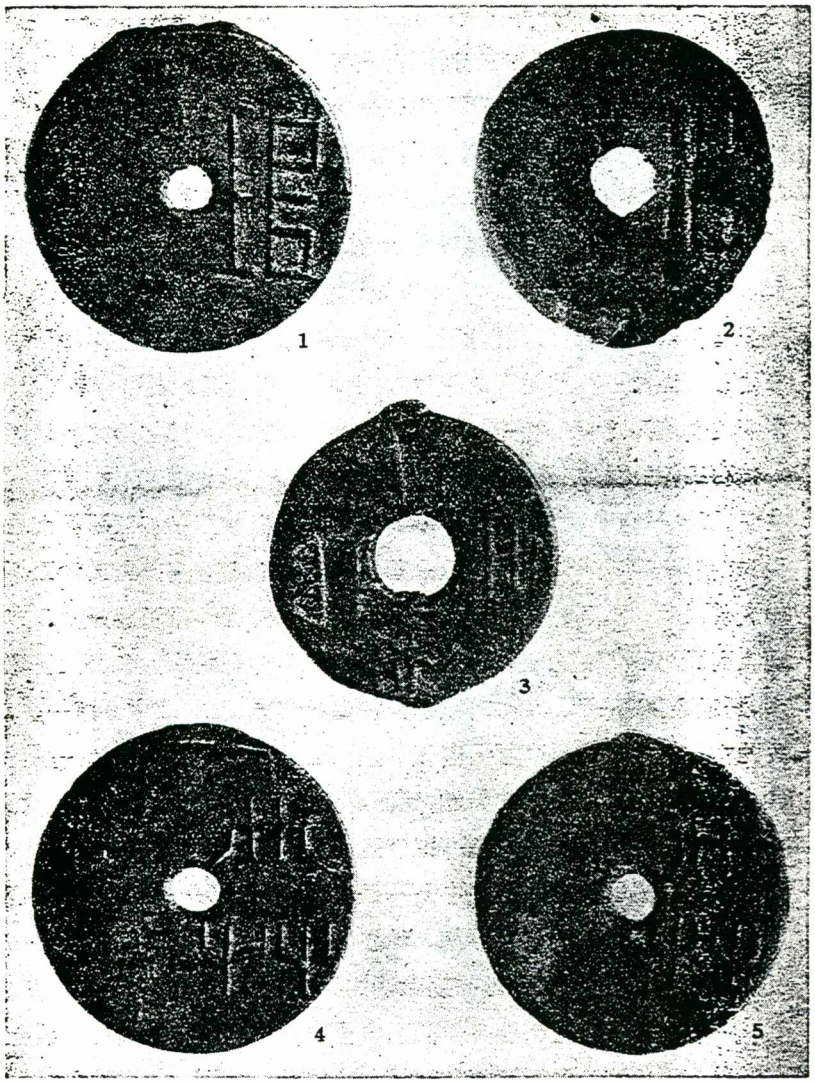


PLATE XX. JIMO AND ANYANG KNIVES

1. Jimo knife. 2. Small Jimo knife. 3. Anyang knife.

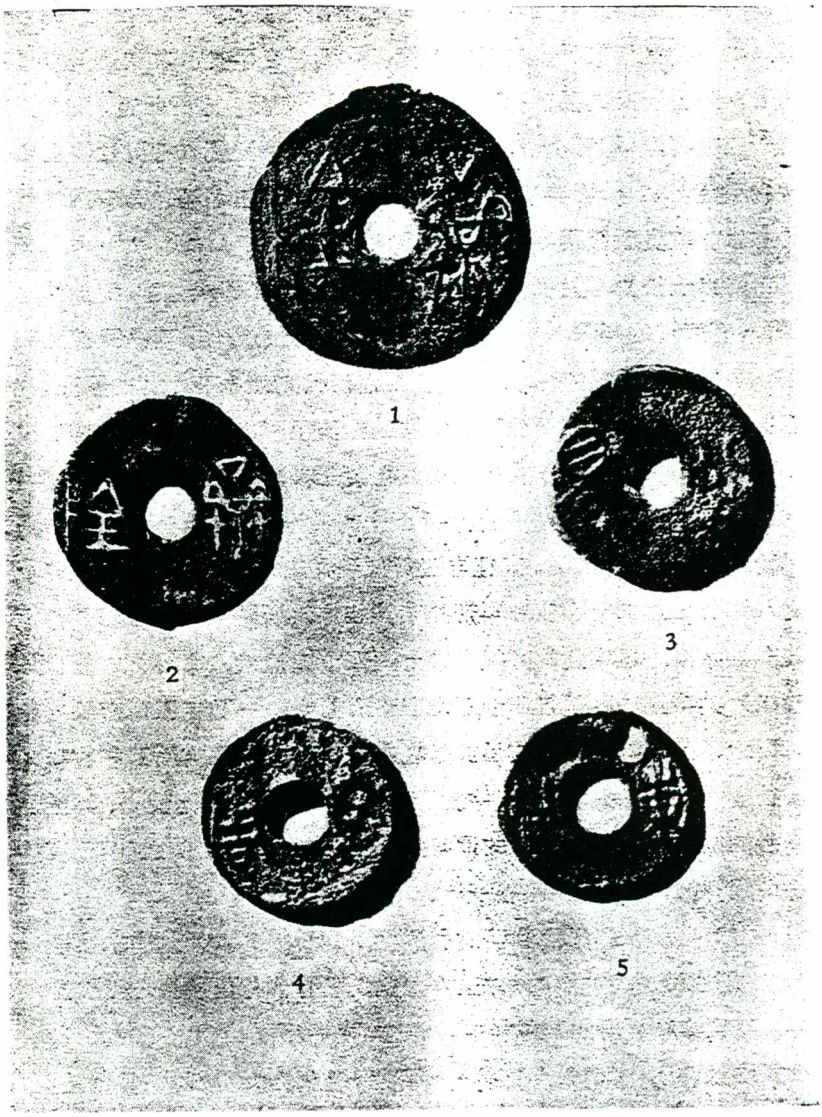


圖版二十一　環錢（一）

1—2.垣。　3.長垣一斬。　4—5.共。

PLATE XXI. RING COINS (1)

1-2. Yuan. 3. Changyuan one adz. 4-5. Gong.



圖版二十二　環錢（二）

1.濟陰。　2.小濟陰。　3.半蜃。　4.西周。　5.東周。

PLATE XXII. RING COINS (2)

1. Jiyin. 2. Small Jiyin. 3. Half Qiong. 4. Western Zhou. 5. Eastern Zhou.

圖版二十三　楚的蟻鼻錢和爰金

1—7.鬼臉錢。 8—13.各六朱。 14.行。 15.君。 16.忻。 17.郢爰(沐園藏品)。第16品忻字錢僅見舊譜著錄，未見眞品，這裏的一枚也不可錯。第 17 品爲中國最早的金鑄幣。

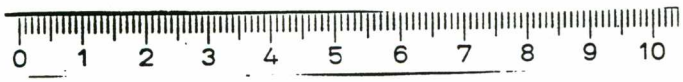
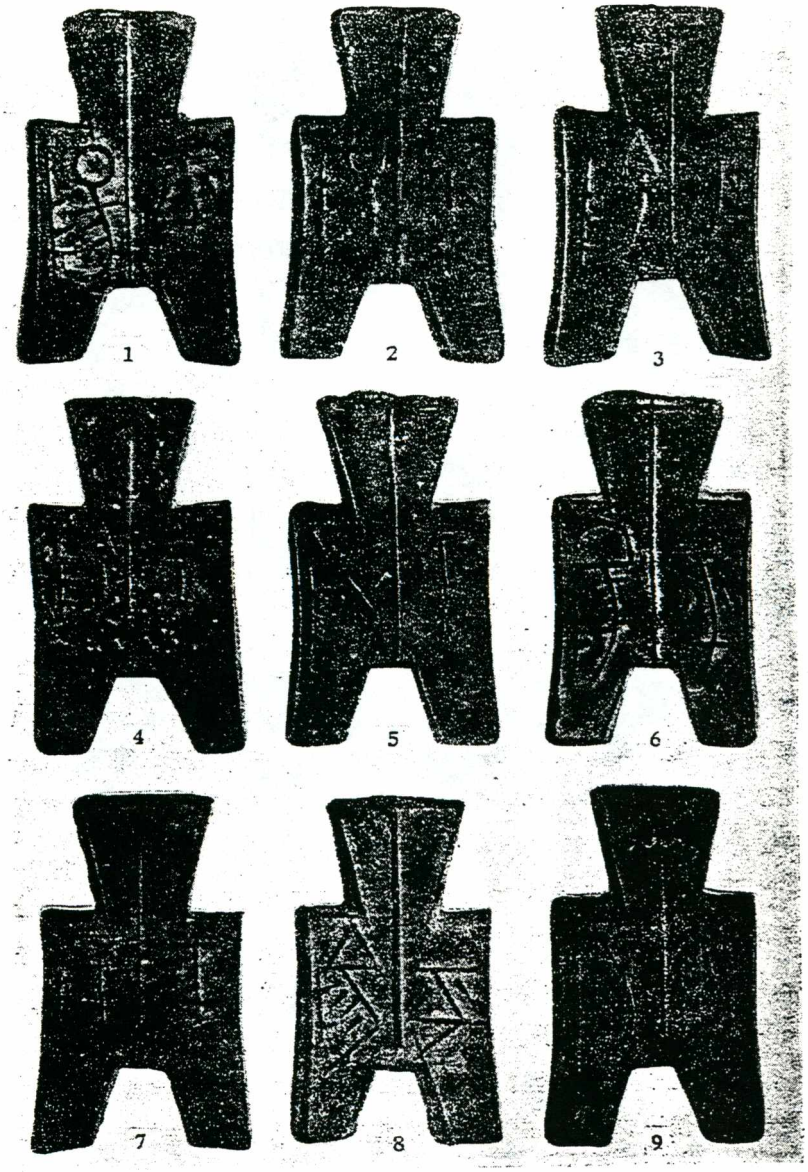


PLATE XXIII. CHU'S ANT-NOSE COINS AND *YUAN* GOLD

1-7. Demon-face coins. 8-13. *Ge* six-grains. 14. *Xing*. 15. *Jun* 16. *Xin*. 17. Ying-yuan (from the Muyuan collection). In item 16, I have only seen the *xin* coin in old catalogues. I have never seen the object itself. This coin is of doubtful authenticity. Item 17 is China's earliest gold minted coin.



圖版二十四　平陽布的各種書法

平陽布上的文字，充分表現出戰國時期中國文字書法的變化多樣。單就陽字來說，就有圓頭陽、碗頭陽、尖頭陽、倒碗頭陽、倒三角頭陽、方頭陽等。細分起來，沒有兩枚完全一樣。

PLATE XXIV. CALLIGRAPHIC VARIATIONS ON PINGYANG SPADES

The inscriptions on Pingyang spades amply illustrate the calligraphic variations on Warring States Chinese inscriptions. To consider the character *yang* alone, there is a round-headed version, a bow-headed, a pointed-head, the upside-down bow-head, the upside-down triangle head, and the square-headed version. When closely examined, no two coins are alike.

2. *Gold And Gold Coins*

The Chinese must have discovered gold very early in their history. The *Guan Zi* quotes Bo Gao's words to the Yellow Emperor: "Above there is cinnabar; below there is yellow gold."[1] The "Tributes of Yu" in the *Book of Documents* contains the words "their tribute was limited to the three metals."[2] Ban Gu writes: "Duke Tai set up the Nine Offices Round System for Zhou. One square inch of gold weighed one catty"[3] Though there is no factual basis for these statements, gold must nevertheless have appeared quite early, because lumps and grains of gold are frequently found in the sand along river banks. In foreign countries gold has sometimes been discovered even before copper,[4] and earlier even than silver, because silver ore is often full of impurities, like copper, lead,

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sulphur, arsenic and antimony. Elemental silver is quite rare in nature, and the techniques for smelting it developed late.

Though ancient Chinese documents often mention silver and gold in the same phrase, and Yin dynasty ritual bronzes of the sort excavated at Anyang and Xinzheng are sometimes inlaid with gold or silver, gold was employed more commonly. Some ancient West Asian states, like Phoenicia, Babylonia and Israel, used more silver than gold for the particular reason that the Phoenicians discovered and brought back from foreign lands large quantities of silver.[5] Among the objects excavated at Xinzheng in China are convex-concave gold leaves stamped with flowers.[6] Gold-clad cowries, gilded cowries and pure gold cowries have also been excavated.

Gold was valued by primitive man not because of legal regulations or popular vote, but because mankind developed a passion for gold for symbolic use. Since gold cannot be made into weapons or tools, its beautiful luster would alone have been insufficient to move the heart of ancient man. Foreigners have said that in ancient times gold could be used to symbolize the sun, and silver the moon.[7] Foreign countries in ancient times made artificial cowries out of gold. It is said that in 4,000 B.C. the people living between the Red Sea and the Nile River did this.[8] In Egyptian writing the hieroglyph for gold was a pictograph of a chain of cowries. The oldest gold ornaments excavated from *Tel Yi* [Peng's transliteration. EHK] in Asia Minor are coarsely made gold cowries used as hair ornaments.[9]

As stated above, gold cowries have also been excavated in China. For this reason some have conflated mankind's superstitious belief in gold with its superstitious belief in cowry shells. Ancient Chinese records do not mention gold as being precious, but the ancient Chinese were also superstitious. Since they believed that "jade is sufficient to harbor good grain so that there will be no disaster from flood or drought," and "pearls are sufficient to ward off fires,"[10], they could also have believed that gold had some mysterious power.

When gold was discovered and collected, it must first have been used to make articles of adornment. By Warring States times it had gradually come into use as a store of value and as an instrument for making payments. Though a system of private property had been established in China prior to Spring-Autumn times, its scope was still very narrow, and land was still as a rule held collectively, so there were no large landlords. Commerce had not yet developed. An individual's wealth was limited to his

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[1] *Guan Zi*, "Enumeration of the Lands" [*Dishu*].

[71]

[2] *Historical Records*, "Treatise on the Balanced Standard." [The three metals were gold, silver and copper. EHK]

[3] *Han History*, "Treatise on Food and Money."

[4] A. R. Burns, *Money and Monetary Policy in Early Times*.

[5] By around 1000 B.C., Phoenecia and its neighbors had been circulating silver for more than a millennium, and silver was more expensive than gold. The ancient Greeks believed that gold was only one-tenth the worth of silver. The *Old Testament* records the same situation for the seventh century B.C. In "The Book of Genesis," a silver offering was valued at twenty times an equivalent amount of gold. Though the Egyptians used gold, silver and copper, when they traded with the Phoenicians, they employed silver. "Silver and Gold in Antiquity as Money," *The Historians' History of the World*, Vol. II, part V, *Phoenicia*, chapter VII, "Phoenician Commerce," pp. 339-342.

[6] J. G. Anderson, "The Goldsmith in Ancient China," *Bulletin of the Museum of Far Eastern Antiquities*, no. 7 (Stockholm, 1935).

[7] A. R. Burns, *Money and Monetary Policy in Early Times*, p. 19.

[8] Elliot Smith, letter to the *Times*, March 15, 1924.

[9] Elliot Smith, *Evolution of the Dragon*, p. 222.

[10] *Dialogues of the States*, "Dialogues of Chu," latter part, 18: "I have heard that the treasures of a state number only six. Enlightened kings and sages can control the hundred things so as to aid the state, and so these things are treasured. Jade is sufficient to harbor good grain, so that there will be no disaster from flood or drought. Thus it is treasured. Turtle plastrons are sufficient to evaluate the laws, and so they are treasured. Pearls can ward off fire, and so they are treasured. Metal can ward off military disorder, and so it is treasured. Mountains, forests and marshes can prepare wealth for use, and so they are treasured. As for things of clamorous beauty, even though the Chu are barbarians, they cannot treasure them." Metal here means copper.

personal holdings of agricultural produce, which was of no great quantity, and inconvenient to save.

Later, either because of gifts or the opening up of virgin land, collective fields were supplemented by private fields. As time went on, the quantity of the private fields increased, and a tendency appeared to concentrate the ownership of land. This probably was going on by the time of the transition from Spring-Autumn to Warring States. At the same time, because of technological progress such as the adoption of iron agricultural tools,

[66]

productive power rose, and the landlords' private wealth also increased.

With this increase, it began to be realized that agricultural commodities were not the ideal instruments for storing value. Nor were copper coins ideal stores of value. Even if people did not begrudge the space needed to store agricultural commodities, such goods would not keep for very long, and so gold took on its function as the instrument for the store of value.

There are a number of places in Warring States sources where the word "metal" (*jin*) occurs. Most often copper is being referred to.[11] Sometimes, however, it means gold. Hitherto scholars have mostly supposed it referred to one catty of gold.[12] Others have said it refers to ten-thousand cash (*qian*).[13] The meaning of the character *jin* has changed considerably. In ancient times gold, silver and copper were all called *jin*, metal. On bronze inscriptions the character mostly refers to copper. During the Spring-Autumn to Warring States transition it sometimes meant copper, and sometimes some kind of monetary unit.

Sometimes, however, it meant gold. The *Gongyang Chronicle*'s reference to "a hundred *jin* of fish" and the *Annals of Master Lü*'s "a thousand *jin* of swords" would not seem to be references to gold, since in these contexts gold would have been valued too low. Here coins were probably intended, with one *jin* being one coin. But not all uses of *jin* should be so interpreted. For example, the *Guan Zi* tells how Duke Huan of Qi sold salt and "obtained gold to the amount of over 11,000 catties," and also says that "when the price of grain is level at forty, then the price of *jin* is 4,000."

One ounce of copper, or even one catty of copper could never reach 4,000 cash, even if the coins in question were thick and heavy knives or spades. Therefore we cannot deny that in such cases gold was being used, particularly since some sources clearly refer to a certain number of *yi* or catties of gold. The *Guan Zi* states that "gold is used to measure," and that "gold, knives and spades are the people's circulatory medium." The *Lie Zi* and *Annals of Master Lü* both tell the story of the man of Qi who went to the gold-seller's booth to steal *jin*.[14] Here *jin* obviously means gold. The story also shows that there were already goldsmith shops in Warring States times.

It is hard to doubt that gold was in use during Warring States times. This is not to say, however, that by then gold had become fully monetized. Still less can we say that all references in Warring States sources to gold were to its use as money. The ancients did not distinguish between money and wealth, and not all forms of wealth were necessarily money. For example, the cowries in the *Book of Changes*' "countless numbers of cowries were lost" and the strings [presumably of cowries] in its "in the southwest strings are obtained, and in the northeast they are lost" may both be said to have been allusions to forms of wealth, but not necessarily to money.

Similarly, there is the story in the *Stratagems of the Warring States* of how Su Qin returned to his home town wearing brocaded garments, and asked his sister-in-law why she had formerly been haughty to him, but had now turned respectful. The lady replied that it was "because your position has become honorable, and you have much *jin*." The *jin* here must be a form of wealth, but is not necessarily money.

In addition to its use as a store of value, gold has mainly been employed as an instrument for making payments, whether as rewards,[15]

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gifts to superiors,[16] or bribes.[17]

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[11] Cf. page 19 of the original Chinese text of this book.

[12] *Zhuang Zi*, "Leisurely Travels": "Only several of *jin*." Note in conjunction with the second note to the phrase "thirty catties" in the *Stratagems of the Warring States*, "Eastern Zhou."

[13] *Gongyang Chronicle*, 5th year of Duke Yin: "one hundred *jin* of fish."

[14] *Lie Zi*, "On Tallies,", no. 8: "Formerly there was a man of Qi who desired gold. One bright morning, he donned his clothes and hat and went to the market, where he encountered a goldseller's booth, from which he snatched some gold and fled. The clerk stopped him and asked: 'Why did you snatch the gold with people standing all around?' The man replied: 'When I took the gold, I did not see the people. I only saw the gold.'" The *Annals of Master Lü*, 16, "Investigation of Minor Matters," has the same story.

[15] *Stratagems of the Warring States*, "King Xi of Yan:" "The King of Qin has for a long time been confused. He rewards his ministers and officeholders differentially, but the gifts he confers do not exceed 200 *yi* of gold."

The next two uses are hard to distinguish from each other. Gold does not fulfill the two most important functions of money, to serve as measure of value and as instrument of purchase or circulation. If the "hundred *jin* of fish" and "thousand *jin* of swords" had involved gold, the metal would have been serving as a measure of value, but *jin* must not have been used in the sense of gold in these contexts. There are instances in the sources of gold being used as the standard for expressing rewards for the capture of criminals, as when the First Emperor of Qin offered a thousand catties of gold for the head of Fan Yuqi.[18] This might seem to be using it as an instrument for making purchases, but actually this was not a normal exchange, and so we cannot from this evidence reckon gold to have been an instrument for making payments.

Therefore, gold's function during the Spring-Autumn to Warring States transition was almost the same as during Homeric times in Greece. In the *Iliad*, gold is a precious good, an object sought by men, sometimes used as an instrument of payment, but not used to indicate value or as a medium for making purchases. Oxen were used as the measure of value and as purchasing medium. An object's price was stated as being a certain number of oxen.[19]

The earliest Chinese units of weight were the *yuan* and *jun* found in bronze inscriptions, but we have no way of knowing the size of the *yuan* or its relationship to the *jun*. Both of these units of weight were clearly still in use during Warring States times, but Qin and early Han sources are not consistent on the weight of the *yuan*.[20] Probably customs differed by locality, just as was the case with the shekel and mina units used by the ancient Assyrians. There were two standards for the shekel, 17 grams and 8.5 grams. Later, the Phoenicians and Syrians adopted this unit, also with various differing standards. Fifty shekels equalled one mina. Sixty mina equalled one talent. This system of weights was transmitted from Babylon to Greece, but the size of the Greek talent also varied by locality.

Although the Chinese *yuan* came in two weights, the most commonly used was likely the heavy one, with three *yuan* weighing 20 ounces. This can be shown from the phrase "took thirty *yuan*" on the Duke Mao bronze *ding*. In that context the *yuan* could not have been merely 11 grains in weight. There were only two units of weight during the Warring States Era, the catty and the *yi*. One catty was 16 ounces; one *yi* was 20 ounces. Judging from contemporary sources, these two units appear to have been used haphazardly.[21]

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[16] *Dialogues of the States*, "Dialogues of Jin, 2:" "With but forty *yi* of gold, six pairs of white jade girdle pendants, I dare not face Your Grace. Please offer them to those on the left and right."

[17] *Stratagems of the Warring States*, "King Huai of Chu:" "When the Southern Queen, Zheng Bao heard it, she was in great fear, and had someone say to Zizhang that she had heard that when the General reached the state of Jin, he happened to have a thousand catties of gold, which he gave to those around him for provender. Zheng Bao was also given 500 catties of gold."

[18] *Stratagems of the Warring States*, "King Xi of Yan:" "Jing Ke knew that the Heir Apparent could not bear to do so, and so surrepetitiously went to see Fan Yuqi, and said to him: 'Your confrontation, general, with Qin may be said to be deep. Your parents and clan have all been exterminated. Now I hear there is a price on your head of a thousand catties of gold and a city of ten-thousand families. What are you to do?'"

[19] The *Iliad* (in Alexander Pope's English translation), chapter 4, p. 81, has the following lines:

For Diomed's brass arms, of mean device,

[72]

For which nine oxen paid, (a vulgar price)
He gave his own, of gold divinely wrought,
A hundred beeves the shining purchase bought.

[20] Cf. p. 7 of the Chinese edition of this work.

[21] The following are examples from ancient records of Warring States Era gold units:

Zhou...*yi*: *Han History*: "A thousand *yi* of gold were used to seek out the precious goods of the world."

Qin...*yi*: *Annals of Master Lü*: "A thousand *yi* of gold." *Stratagems of the Warring States*: "Ten-thousand *yi* of gold were used." *Historical Records*, "Biography of Lord Mengchang": "The King of Qin was greatly pleased . . .and welcomed him with a hundred *yi* of gold." *Historical Records*, "Biography of Jing Ke": "Two hundred *yi* of gold were conferred on Xia Wuqie."

catty: *Historical Records*, "Biography of Lord Xinling": "The King of Qin was distressed by it, and so sent ten-thousand catties of gold to Wei." "Biography of Lü Buwei": "The prince consulted with Lü Buwei, and sent six-hundred catties of gold to the commandants.""Biography of Jing Ke": "The King of Qin bought it for a thousand catties of gold." *Stratagems of the Warring States*, "Qin: Su Qin": "A hundred catties of gold was exhausted." "King Zhuangxiang, the First Emperor": "A thousand catties of gold."

Song...*yi*: *Mencius*: "Seventy *yi*." *Stratagems of the Warring States*, "Song": "Three-hundred *yi* of gold."

Jin...*yi*: *Dialogues of the States*: "Forty *yi* of gold."

Qi...*yi*: *Guan Zi*: "One *yi* of gold is exhausted overnight by a hundred teams." *Historical Records*, "Biography of Nie Zheng": "Master Yan Zhong received a hundred *yi* of gold."

These two units, like the *jun* and *yuan*, seem not to have been formally connected, which is rather hard to explain. Though posterity has linked these four units by way of the grain and ounce, expressing all four as multiples of the grain or ounce, the grain and ounce units do not seem to be present in oracle bone texts or on Yin and Zhou bronze inscriptions. The grain and ounce do not appear as units of weight before their use on the three-hole spades. That was in the last years of the Warring States Era, and even then they were only part of the Qin system, and not used by the other states.

Before then, the character for ounce [*liang*] was written [],[a] made up of []b and [],[c] meaning a religious offering of sheep. Later on it was used

[68]

in the sense of a joined pair, as in a cart or chariot, because these had two wheels. In bronze inscriptions the character *liang* was used in this sense, and not as a noun signifying a certain weight.[22]

The character for catty, *jin*, was in ancient times the name of a tool, a type of hatchet, and was not a name for a weight. The character *yi* evolved from the character *peng*, which was used to mean "string," as in string of cowries, and it probably only became the name of a unit of weight after the appearance of the grain and ounce units. And so the question of how the Western Zhou bronze inscriptions' *jun* and *yuan* were replaced by the Spring-Autumn and Warring States documents' catty and *yi* is one worthy of study.

There is no record of the shapes taken on by gold during Warring States times, but gold passed into and out of the hands of the ruling class, and must have done so in some particular forms. Sometimes, of course, it took the forms of utensils and ornaments. At other times it could have been processed into other particular shapes. If it was not made into particular shapes, and was merely given and received in the form of various gold objects by weight, then it was still merely a commodity. [This commodity could, however, already have begun to add value in exchange to its value as commodity. It would, in the jargon of modern Austrian School economics, have been a money or near money or commodity-money, but not a coin. EHK]

In ancient times the state of Chu circulated gold in abundance because it produced a great deal of gold.[23] For example, the Ru and Han rivers were famous as producers of gold.[24] Guan Zhong envied

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catty: *Guan Zi*: "A hundred catties of gold is worth 8 piculs of food." "I have a hundred catties of gold hidden." "Succeeded in gaining over 11,000 catties of gold." *Sun Zi*: Wu Qi "was victorious in archery, and obtained 5,000 catties." *Historical Records*, "Biography of Fan Sui": "King Xiang of Qi . . . sent men to confer on Sui ten catties of gold." *Stratagems of the Warring States*, "Qi, Feng Xuan": "Five-hundred catties of gold." "Ten catties of gold." "Yan": "With a thousand catties of gold gave thanks to his followers." "The King of Liang . . . with a thousand catties of gold . . . went to present them to Lord Mengchang."

Han...*yi*: *Han Fei Zi*: "A hundred *yi* of lustrous metal." *Stratagems of the Warring States*, "Enumeration of the Nobles": "A hundred *yi* of gold."

Zhao...*yi*: *Stratagems of the Warring States*: "A thousand *yi* of gold." "Ten- thousand *yi* of gold." "A hundred *yi* of gold." *Xun Zi*: "A thousand *yi* of treasure." *Historical Records*, "Biography of Su Qin": "The King of Zhao . . . with a hundred decorated chariots and a thousand *yi* of gold." "Biography of Fan Sui": "The King of Zhao conferred . . . a hundred *yi* of gold (on Yu Qing)."

catty: *Historical Records*, "Biography of Lü Buwei": "Six-hundred catties of gold were distributed among the commandants."

Yan...*yi*: *Han Odes Informal Chronicle*: "A hundred *yi* of gold." *Stratagems of the Warring States*: "A thousand *yi* of gold for horses and provender." "Two-hundred *yi* of gold."

catty: *Stratagems of the Warring States*, "Wang Xi": "A thousand catties of gold." *Yan Dan Zi*: "A city of ten-thousand households and a thousand catties of gold."

Liang...yi: *Mencius*: "Ten-thousand *yi*." *Historical Records*, "Biography of Chun Yukun": "(The King of Liang) a hundred *yi* of gold."

catty: *Stratagems of the Warring States*,"Qi": "The King of Liang . . . a thousand catties of gold . . . went to present to Lord Mengchang."

Chu...catty: *Stratagems of the Warring States*: "Happening to gain a thousand catties of gold, he advanced it to those around him. . . Zheng Bao also used 500 catties of gold."

Yue...*yi*: *Historical Records*: "The King of Yue agreed to send Zigong a hundred *yi* of gold." King Goujian of Yue "loaded a thousand *yi* of gold into coarse containers, and carried them on ox carts."*Stratagems of the Warring States*: "The King of Yue enfeoffed Su Qin . . . a thousand *yi* of gold."

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[22]Luo Muyuan, "On the Ounce," Coins, no. 26. Nuki Ginjiro, "An Hypothesis on the Ideograph Liang", Money, no. 135 (Showa 5 [1930], June).

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[23]*Stratagems of the Warring States*, "Chu, 3": "The king said: 'Gold, pearls, rhinocerous horn and ivory are produced by Chu. I need not seek them from Jin.'"

[24]*Guan Zi*, "Calculations": " Gold comes from the right side of the Ru and Han rivers." Wang Chong, *Balanced Discourses*, "Section on Unusual Things": "Yongzhou produces pearls, Jingyang produces gold."

the gold of Chu.[25] At least a portion of the gold used in the north came from Chu. The "Tribute of Yu" section of the *Book of Documents* alludes to Yangzhou giving tribute of three objects of gold.

Chu gold was made into a particular shape, a small cake of gold resembling a dried bean curd, the upper surface of which bore an inscription. [Cf. Plate xxii.17 at end of preceding subsection.] Most inscriptions were incised, as was the case on the Ant-nose coins. It is said that occasionally there are ones with raised inscriptions, but these are extremely rare, and were not the norm under the Chu system. These small gold cakes were not minted separately, but rather in the form of large flat sheets of gold stamped with a number of seal marks. Pieces were broken off when needed for use. These marks resemble personal seals, and so in Song times these objects were called seal-gold.[26]

Judging from the objects themselves and clay molds, there was no fixed number of gold cakes per sheet. Sometimes there are 16, or 20, or 24 squares. On the basis of a small number of examples, some have concluded that one square was equal to one ounce, and one sheet equal to one catty or one *yi*. This is implausible, because there are sheets with different numbers of squares.

Actually, the number of seals was determined by the size of the sheets. Large plates had more seal marks; small ones had fewer of them. Nor were the seal marks laid out evenly. Uniform pieces could not be broken off. Nor have all excavated gold cakes been perfectly square. Sometimes a corner was lacking, or there is only half or a third of a square. Sometimes two half squares were joined together, or there is one and a half squares. Sometimes a number of squares are joined together, with some damaged or incomplete.[27] Hence when circulated they would

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[25] *Guan Zi*, "Enumeration of the Lands": "If I were to obtain the gold of Chu, I could provide food without the farmers plowing, and clothing without the women weaving."

[26] *Collectanea of Ancient and Modern Books and Illustrations*, 337, "Gold, Miscellaneous Records," quotes *Mountain Stream Dream Jottings*: "In Shouzhou, by the side of Bagong Mountain, from the earth and from mountain streams there have frequently been obtained small gold cakes, which bear in seal script the words 'Master Liu.' These are pharmaceutical gold come down to posterity from the King of Huainan. Very many people have found these. This is what everyone calls seal gold. Those bearing only one seal mark weigh only half an ounce each. Large ones are rare. I once got a cake in Shouchun, from a fisherman. He said he had found it in the Huai River. It weighed more than seven ounces, and bore more than twenty seal marks. Its back bore traces of five fingers and a palm, the outline of which was clearly visible. Such things are traditionally believed to have been transformed by the soil, but the outline of a hand is what a clay mold would capture." [Bruce W. Smith notes that the gold sheets were often highly irregular in shape.]

[27] The weights set down in Gong Xinming's *Small Record of the Pukou Spring* are as follows:

Yingyuan 1.5 squares. 0.45 oz.
Yingyuan 1+ squares, 0.38 oz.
Chenyuan 6 squares, all broken and incomplete: 1 oz.
Yingyuan 1 square incomplete: 0.34 oz.
Yingyuan 1+ squares, O.34 market oz.
Yingyuan 1+ squares, 0.39 market oz.
Yingyuan 1 square incomplete, reverse seal [],[d] 0.25 oz.
Yingyuan 2 squares, 0.9 market oz.
Chenyuan 1 square incomplete, 0.25 oz.
Yingyuan 2 squares incomplete, 0.95 market oz.
Yingyuan 1 square, raised small sealmark []^{e} below, 0.54 oz.
Yingyuan 1 square, 0.4 oz.
Yingyuan 1 square, raised sealmark []^{f} on side, 0.3 oz.
Chenyuan small half square, 0.1 oz.
[]^{g} 2 squares, 0.69 oz.
Yingyuan 1 square, 0.3 oz.
Yingyuan 1.5 squares, 0.7 market oz.
Yingyuan 1 square, 0.42 oz.
Yingyuan half square, 0.19 oz.
Yingyuan 1 square irregular, 0.3 oz.
Yingyuan 5 squares, onely one complete, 1.07 oz.
Yingyuan large half square, 0.3 oz.
Label unclear, large half square, 0.24 oz.
Yingyuan 1 square, 0.49 oz.
[]^{g} 4 squares incomplete, 0.95 market oz.

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Fragment, below the *yuan* a small "[]^{h}", 0.1 oz.
*Zhuan*yuan 2 squares incomplete, reverse sealmark [],[i] 0.54 oz
Chenyuan fragment, 0.13 oz.
Yingyuan 1 square, 0.4 oz.
Yingyuan 1 square, 0.4 oz.
Yingyuan 4 squares incomplete, 1.77 oz.
Yingyuan 1 square, 0.28 oz.
Yingyuan 1 square, 0.43 oz.
Yingyuan 1 square, traditional shape, excavated in Henan, 0.416 oz.
[],[j] 1 fragment of a square, 0.428 oz.
Yingyuan 1 square, 0.505 oz.

In addition to these, there are the 35 squares investigated in the Japanese Mitsui collection by Kato Shigashi, four squares in the Chinese collection of Luo Zhenyu, and one held by Fang Ruo, making forty altogether. All of these are Yingyuan. We have only their weights. Wu Jie (trans.), "Investigation of Yingyuan" in *Investigations of Chinese Economic History*. Judging by a few accompanied by illustrations, only three or four of this number are relatively intact. Individual squares weigh from 3.2 to 4.6 *momme*. The *momme* is a Japanese unit of weight, the equivalent

have had to be weighed at each exchange. Even a relatively intact square,

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because of variations in thickness of the plates and sizes of the seal marks, could not have attained a standard weight.

Even if this is the case, the people who made these objects could not have deliberately sought such lack of uniformity. They must have had some standard in mind. The low technical level and the fact that these objects were produced at different locations would account for such large variations. Aside, however, from the especially large Yingyuan, most gold cakes, when intact, weighed no more than from 0.3 to 0.5 ounces, averaging 15 grams apiece.

As far as is known, there are five types of inscription on the Yingyuan, Chenyuan, Zhuanyuan,[g] *yuan*, and one fragment of a square of which only half a character remains, which is written as [],[l] resembling the character *wen*.[k] [Bruce W. Smith notes that other types have been discovered in recent years.] Ying (the present Jiangling county in Hubei) was the capital of Chu until the 21st year of King Xiang (278 B.C.), when the Qin general Bai Qi captured it, and the capital was moved to Chen (the present Huaiyang county in Henan). In the 22nd year of King Kaolie (241 B.C.), the capital was moved once more to Shouchun (the present Shou county in Anhui). The name Ying was retained. Zhuanyuan was written [].[m] The character for *yuan* seems to have a radical on its left side, perhaps the metal radical. Zhuan, written with the radical for "town" omitted from the right side (the present Yanzhou in Shandong), was the name of a place which belonged to Lu in Spring-Autumn times, but during the Warring States Era was joined to Chu.[28] It too was probably an important city then.

The character []^{g} is transcribed into modern script by some people as *ying*.[n29] Even if this reading is correct, it would be hard to link this to a particular place. There was an Yingzhou (that is, Fuyang) in Anhui, and an Yingshang. There was a Linying in Henan, but its location is not known. It so happens that all three of these places lay along the course of the Ying River.

We do not know what place is represented by the half a character on that last fragment. It merely attests to the existence of a fifth type of gold cake.

Nor is it easy to fix the date when gold cakes were first minted. Theories have been appearing since antiquity.[30] During Northern Song times quite a few of them were unearthed in Shouzhou. They have also been excavated in modern times in Anhui, Henan, Shandong and Jiangsu. Hunan has only yielded funerary versions made of pottery, but there must have existed gold ones as well. Nevertheless none have been excavated in Hubei. If that continues to be the case, that will show that they were not minted until after the move of the capital, probably not until after King Kaolie moved the capital to Shouchun. Shouchun was their center of production. The other large cities would have followed its lead.

Nor was the production of gold cakes limited to the cities named in their inscriptions, most of which bore the characters Yingyuan. This follows from the fact that the inscription Yingyuan is the one most commonly found on gold cakes excavated from a variety of places, and the other place names are found on gold cakes unearthed at Shou county. The latter, however, are quite few. It is said that the Yingyuan unearthed in Henan are in a different style of sealscript than those from Shou county, and that their gold content is somewhat diluted.[31] The quality of the metal in gold cakes is, however, in general very good, sometimes approaching absolute purity.

Because the Yingyuan are the most frequently seen of the gold cakes, and the other types are also called *yuan*, this type of

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gold cake is universally called *yuan* gold or gold *yuan*. With or without the metal radical, this is the same character. Hitherto scholars have also identified []^{o} as its abbreviated version.[32] Others,

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of 3.75 grams, slightly heavier than 0.1 Chinese treasury ounces, which is 3.73 grams. A tenth of a market ounce is 3.665 grams. In addition, I have myself weighed one coin which was 1.25 squares large. It weighed 15 grams. There are others held by collectors and museums, and some unearthed in recent years, amounting to a hundred odd coins in all. Of these, only nine are Chenyuan, none of which is intact, six squares are [],[g] of which only one is intact. There are two Zhuanyuan, neither complete. In addition one fragment bears the character *wen*, [k] and there is one fragment whose inscription is unclear. All the rest are Yingyuan.

[28]Gong Xinming, *Small Record of the Pukou Spring*.

[29]Gong Xinming, *Small Record of the Pukou Spring*.

[30]*Taiping Youlan*, 810, ""Gold," quotes the *Record of Activity and Repose of the Yonghe Era of Jin*: "The Commandant of Lujiang, Lu Yongbiao, said that north of Gucheng he had seen a purplish-red glint on the riverbank, and found a gold coin with an inscription like a seal impression." This might have been *yuan* gold.

[31]Gong Xinming, *Small Record of the Pukou Spring*.

[32]*Rituals of Zhou*, "Record of Investigations of Artisans." The smelterer Zhen Xuan's notes quote the *Explanations of Words*: "Xu Shuzhong's *Explanations of Words* says that []^{p} is the same as [].[q]"

however, disagree, arguing that in ancient times these two characters were written quite differently, and that it was not until Han times that they were erroneously conflated into a single character.[33]

This problem is resolved by the calligraphy of the character *yuan* on *yuan* gold. There are two main ways of writing it. On Yingyuan and Chenyuan it is written as [],[u] which must be [].[r] On Zhuanyuan it is written as [],[v] which must be [].[o] Evidently the two must be alternate forms of the same character.

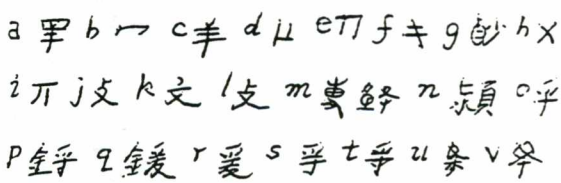
Yuan must originally have been a unit of weight, and later also became a monetary unit. Similarly, the Babylonian *shekel* was originally a unit of weight, and later turned into a monetary unit. The same character, but with the metal radical, encountered in Warring States sources, must have been a unit of value. That it was also a unit of weight is not so clear from the sources. The isolated statement "his fine is a hundred *yuan*" may be explained in terms of a unit of value as well as a unit of weight, but the former seems more appropriate. It can even be taken here as a monetary unit, and so the *yuan* of *yuan* gold might also be taken as a unit of value.

The broken and irregular character of these objects would not have hindered the *yuan* from functioning as a unit of value or monetary unit. Several centuries ago the Tierhengmu silver coins of Central Asia and English silver pence were frequently cut up into halves or quarters to make change, but this did not destroy the value of these two coins as units of value or monetary units.

It is said that there are Yingyuan made of silver,[34] as well as lead ones clad in gold. The latter, like the pottery versions, were funerary coins.

The knives and spades of the north evolved from tools. Chu's Ant-nose coins evolved from bronze cowries. *Yuan* gold is harder to explain. It does not seem to have evolved from any tool. Nor does it seem to have been an article of adornment. Only India seems to have employed a coin of such a shape. Some time around the fourth century B.C. there circulated in India square shaped silver and bronze cakes, the surfaces of which also bore various seal marks, and which were also broken into pieces.

Might there have been some connection between these and Chu's gold cakes? Why did the Chu coinage simultaneously embrace the most backward and most advanced of elements? The only way to satisfactorily explain this phenomenon is by linkage with external influences. The use of Ant-nose coins as successors to cowry shells was a retrogressive element in the Chinese monetary system of that time, but gold coins were a progressive element.



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3. The First Emperor of Qin Unifies China's Coinage

The First Emperor of Qin's unification of the nation in 221 B.C. was not only a significant turning point in Chinese political history, it also opened a new chapter in Chinese monetary history. He abolished the great variety of Warring States Era coins, and spread the square-holed round Half-ouncer throughout the nation. This monetary system based on the grain and ounce units of weight remained in use within China for over a millennium. It did not, however, begin with the First Emperor, but rather had been evolving in Qin all through the Warring States Era in interaction with the moneys of the other states of the time. The Qin political unification was short-lived, and so we should not treat it as the beginning of a new era, but rather as the conclusion of the old one. Actually, it was but an episode in a continuous process.

Unification of the coinage was a political act, the consequence of the military unification and consequent cultural melding. When we unfold the map of Spring-Autumn and Warring States times, we see its central area occupied by a number of small states surrounding the territory of the royal Zhou house,

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[33] Dai Zhen's *Record of Investigation of Artisans Illustrated* had already raised such doubts. Guo Moruo's *Collected Investigations of Bronze Inscriptions*, p. 288, says: "The identification of []^{r} with []^{o} is mistaken. In ancient times []^{o} was written as [],[s] and []^{r} as [],[t] which are clearly two different characters. Han scholars read them erroneously and blurred them together. Cf. also note 29 of subsection one of this chapter above.

[34] *Literary Evidence on Zhou Gold*, 6, latter part, displays an ancient cake of silver, on which is a seal mark the meaning of which is not easy to distinguish. It is larger than the late Qing double bronze dollar. Zou Anfu notes: "It is like cake gold, and is newly excavated in Shandong." Zheng Jiaxiang, *History of the Development of China's Ancient Money*, pp. 198-199. [Bruce W. Smith notes that the American Numismatic Society in New York has Ying*yuan* in lead and in copper, the former clearly being a funeral piece. He also notes that many imitations in clay have been excavated in recent years.]

which preserved the ancient cultural traditions. These states lacked space to develop, and could only grow by annexing each other's territory. They were surrounded by several large states: Yan, Zhao, Qin and Chu, all of which possessed hinterlands of limitless extent. Yan and Zhao were, however, isolated in the north. Their climate was cold, their cultures backward, and they were not very productive.

Only Qin and Chu were truly wealthy and strong, especially Chu. Eventually Qin established temporary superiority, but Chu still believed that the three successor states of Jin could destroy Qin.

The other states then mainly used knife and spade coins. Qin employed ring coins, and Chu gold. The later Chinese coinage was an amalgamation of the Qin and Chu systems. Qin also used gold. We are told that "when Qin was prospering, tens of thousands of *yi* of gold were in use."[1] Qin was not, however, notable as a gold producer. Only Chu was, and there are Chu gold coins surviving to attest to this.

The history of the Qin coinage is still not entirely clear. We are told that in the 2nd year of King Huiwen (336 B.C.) coins were first circulated.[2] Does this imply that before this no coins were being circulated in Qin? Not necessarily. In the time of Duke Xiao, Wei Yang [i.e. Shang Yang] used a system of rewards in metal so as to establish the government's prestige. There are accounts of ten and fifty in metal [unit not specified] being so disposed.[3] Dong Zhongshu wrote that Qin used Shang Yang's methods, abolished the well-fields, and allowed the people to buy and sell.[4]

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All of this clearly shows that money was employed then. It may be that other states' coins were being used. [It is also possible, observes Bruce W. Smith, that the money may have been cloth.]

What this reference to the beginning of the circulation of money in the 2nd year of King Huiwen must mean is that it was then that an independent Qin monetary system was first set up. This system probably employed the grain-ounce weight units. These units could either have been adopted by Shang Yang or reworked by him. What was the shape of the earliest such coins? Some say they were the three-holed round-foot spade; others make them ring coins.

Advocates of the three-hole round-foot spade theory give three reasons for their choice: First, the place names on these coins were all later taken over by Qin. Second, their shapes are uniform and their inscriptions regular, something that only the power of Qin could have enforced. Third, their monetary units were the grain and ounce, the Qin units. These arguments are not, however, entirely persuasive.

First of all, the other six great powers were all eventually taken over by Qin, and so sooner or later every place would have belonged to Qin. One would hardly ascribe all knife and spade coins to Qin through similar reasoning.

Second, uniformity of shape and regularity of inscription was not unique to Qin coins. This is evident from the Weight One-ounce Fourteen-grain and Half-ounce ring coins, and it is debatable whether the three-hole spade inscriptions were truly regular, since too few of them have been excavated to provide a basis for judgment. The characters for grain and ounce are not actually uniform. Nor is the character *yang* uniform on the Anyang, Luyang or Biyang coins.

There remain some other difficult problems for the advocates of the three-hole spade theory to resolve. First, the inscriptions on the spades are not easy to read. For example, there is one which is written as []^{a} (deciphered by some as "Wenyan Township" []^{b}) but which has not yet been reliably rendered into modern characters. If we grant that the characters abolished by Li Si were those of the other six states which were not in harmony with the Qin seal script, the ones he would have changed were those with complicated arrangements of strokes. Qin's own original characters would not have undergone many changes. Why, then, are these characters so unfamiliar to us?

Second, even for those inscriptions we can read, it is not easy to find the places to which the names refer. In principle, Qin place names would not have been changed so drastically. This would only have happened to places taken over by Qin from the other states.

Third, the three-hole spades are extremely rare, and so would not seem to have been minted and in use for a long period. If, however, the name Anyang on one such spade is the place Qin took over from Wei and which was originally called Ningxinzhong, that event only occurred during the 50th year of King Zhaoxiang (257 B.C.), eighty years after King Huiwen. Naturally, the Anyang spade would have been made after the place's name was changed, and eighty years is not a short period of time. Why have fewer of the three-hole spades been unearthed even

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[1] *Stratagems of the Warring States*, "Stratagems of Qin," 3.

[2] *Historical Records*, 15, "Chronological Table of the Six States." [Bruce W. Smith observes that "actually what it says is that the Zhou ruler congratulated Qin for issuing money. Commentators *assume* this was the first time Qin issued money."]

[3] *Historical Records*, "Biography of Lord Shang."

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[4] *Han History*, "Treatise on Food and Money."

than of any of the hollow-socket spades? Before Liberation, only twenty or thirty of them had been excavated. [According to Bruce W. Smith, "it is now thought that at least some of the 25 or so different kinds of three-hole spades were made by the state of Zhongshan. This would explain the difficulty in reading some of the inscriptions; Zhongshan was a state of the Di barbarians."]

Fourth, if

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the three-hole spade was Qin money, then so too were the Weight One-ounce Fourteen-grain, Weight One-ounce Twelve-grain and Half-*qiong*, and when did Qin carry out so important a monetary reform as to start making these latter coins?

Advocates of the ring coin theory encounter fewer difficulties. They view the three-hole spade as an outgrowth of the round-foot spade. Beginning in the 2nd year of King Huiwen, they say, Qin adopted the Weight One-ounce Fourteen-grain ring coin. Eventually, the First Emperor merely turned the round hole into a square one and produced the Half-ouncer. Though there are not many ring coins, they are much more numerous than the three-hole spades. The inscriptions on ring coins are remarkably similar to those on Half-ouncers, and much different from those on the three-hole spades. [Cf. Plates xxi-xxii at end of preceding subsection. According to Bruce W. Smith, "since 1980, archaeological excavations have shown that the Half-ouncer was in circulation as early as 306 B.C. Thus, the coinage of 336 B.C. mentioned in the *Historical Records* could be the Half-ouncer."]

The problem is, if the coins of the 2nd year of King Huiwen were ring coins, and not three-hole spades, then the grain and ounce monetary units used on the latter were not the creation of Qin, but borrowed from some other state's system. What state could that have been? Aside from Qin, only Wei carried out a major reform during Warring States times. Marquis Wen of Wei employed Li Kui as his chief minister and carried out a major reform, but I have not heard that this involved the system of weights and measures. In any event, Wei used square-foot spades and adz-spades, and never used the grain or ounce as monetary units on these. Nor at that time was the storm-shaken Zhou house capable of carrying out such a reform. Hence it is most logical to ascribe it to Qin.

But if the three-hole spade was the money adopted by King Huiwen, that would prove that money was only in very limited circulation then in Qin. Perhaps these coins were only circulated symbolically, in far smaller numbers than coins were in Yan, Zhao, Qi or Wei. Though the Lin and Lishi were modeled on the round-foot spade, those made in just one locality were more numerous than those made in all of Qin during many decades. Hence perhaps the three-hole spade's period is later than that of the Weight One-ounce Fourteen-grains, and it was not made by King Huiwen, but rather in some locality near a place making round-foot spades.

Study of the inscriptions on these coins is also of interest. Large seal script is employed on the three-hole spade, and small seal script on the ring coins. For example, the character for ounce, *liang*, is written as []c on the three-hole spade, and as []d on the ring coin. In oracle bone script it is written [],e where it means the sacrifice of a sheep. Later, when it was borrowed to transcribe the word meaning cart wheel, it was written [].f Perhaps it was not until the time of Duke Xiao or King Huiwen, or even still later, that it was used to represent a weight or monetary unit. Therefore, some believe that the inscription on the three-hole spade should be read as two characters, meaning "one ounce," and not as just the single character for ounce. The later small seal version of the character added a stroke on the top, and this supposedly caused people to misread the two characters on the earlier three-hole spade as a single character. Perhaps, though, when Qin adopted the character for ounce as its monetary unit,

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it added a stroke on the top to distinquish its new use, but there is no way to know if that was the case. The *Explanation of Words* considers []g and []h to be two separate characters.

Sima Qian says that after the Qin unification there were two classes of money, but that pearls, jade, tortoise shell, cowry, silver and tin were only used to make articles of adornment and as treasures, and were not used as money. That would suggest that before unification these things were used as money, but the sources do not attest to such use, and in principle it would not have been possible to simultaneously use so many different kinds of money. Actually, by that time all the states were minting coins, and there was no need to use these objects as money. Probably Sima Qian was just taking this for granted. What he wrote was not incorrect, but merely easily misunderstood by posterity.

The First Emperor not only banned the use of various forms of wealth as money, he likely also banned the knives and spades and ring coins of the states as money too. He extended to the entire country the gold-cash coin bimetallic system originally used inside Qin. The two metals were gold and bronze cash, using gold as the upper money, with the *yi* as its unit (equal to twenty ounces), and bronze cash as the lower money, with the Half-ouncer as the monetary unit. The upper money was likely limited to making such large pay-

ments as imperial gifts and gifts among the aristocrats. Exchanges in daily life employed the Half-ouncer.

Though the Half-ouncer [Cf. Plate xxv at end of this subsection.] was minted before the unification, it could not have been long before the First Emperor assumed the throne, and it was probably created during the reign of the First Emperor as King of Qin. Of course quite a few Half-ouncers exist, but from the time the First Emperor came to the throne of Qin state until the fall of the Qin empire was some forty years. That many coins would have been minted during such a time of continuous military activity is understandable.

During the eighty or ninety years before the First Emperor's time, the three-hole spade and ring coin must have been in use. That was not a time of peace either, so the survival of so few ring coins is hard to explain.

In fact the Zhou and Qin epochs witnessed first the beginnings of money and then the first high tide of its circulation. Production of coins grew at an accelerating rate. Their production during the last decade or two of Qin could have been as great as during the several preceding centuries. After the First Emperor's unification, the Half-ouncer became the standard money of the entire country. It had to satisfy the needs of the whole nation. Naturally its quantity would be large, and since the entire nation was using the Half-ouncer, all the knives, spades and ring coins would have had to be reminted. One Qi knife would have made five Half-ouncers, and reminting would have increased the numbers of the latter.

The First Emperor's measure calling in all weapons could also have influenced the quantity of coins. When the people handed over their weapons, the best thing to do with them would have been to recast them into coins.

There is no clear textual evidence as to how the First Emperor carried out the monetary unification. Was it only a unification

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of monetary types and units? Or was even the right to manufacture the coins unified? In principle, under so centralized a government, the minting and distribution of coins should have been a national monopoly. The histories tell of Xiang Liang's subordinates privately minting large coins,[5] so it is evident that private minting was a crime.

But even if the right to mint coins was a government monopoly, this monopoly would only have been nominal. Surviving Half-ouncers, like peony leaves, are each unique. Up to now no standard for their manufacture or rule for their inscriptions has been discovered which would enable one to tell at a glance that a particular Half-ouncer was minted at an official smelter. Hence it is difficult to determine the Qin weight standard from the weights of Qin Half-ouncers.[6]

The lightest Qin Half-ouncer weighs only around 6 grams; the heaviest over 20 grams. Obviously some of them are not up to standard and some exceed the standard. During Warring States times weight standards varied by locality. Though the First Emperor promulgated unified standards of weights and measures, under the circumstances of the times, it would have been hard to abolish past practices. This is one reason for such weight discrepancies. Another reason is that the concept of value was not yet very well developed. Those who cast coins did not take weight very seriously. That is why there were coins heavier than the standard. [Bruce W. Smith doubts this explanation. "No one," he says, "makes overweight coins. The overweight coins, if genuine, are probably special issues or burial pieces."]

I experimented with sixty-four Qin Half-ouncers. The average weight per coin was around 10 grams. This figure is probably biased toward the high side because collectors tend to prefer the heavier Half-ouncers. Based on my experience, the Qin ounce was probably less than 20 grams. [According to Bruce W. Smith, judging from excavated weights, the Qin ounce was around 15 grams. "Thus Half-ouncers should weigh no more than 7.5 grams. However, it is possible the weight standard was reduced from the time of Qin state to the the Qin empire."] To determine the weight of the Qin ounce, it is best to first determine the weight of the Han ounce, since the Western Han Five-grainer coin was very uniform.

As far as the purity of the metal is concerned, there is no way to establish any sort of standard. Virgin copper of varying degrees of purity was used

[5] *Taiping Yulan*, 835, "Capital, 15, Cash Coins," quoting the *Annals of Chu to Han*.

[6] Wu Dacheng sought to determine the weight of the Qin ounce by weighing eight Qin Half-ouncers, and found it to be 16.1398557 grams. This figure was adopted by Wu Chengluo in his *History of Chinese Weight Measures*, but this figure is extremely unreliable. I have personally conducted such an experiment using sixty-four Qin Half-ouncers, and found the average weight of a coin to be 10.192 grams, which would make the Qin ounce 20.384 grams. I believe, however, that this figure cannot be used either. [Bruce W. Smith states "I've never had a genuine piece weighing more than 7.5 grams. Many large and heavy fakes exist."]

then to cast coins. Sometimes bronze tools were recast into coins. Judging from surviving Qin Half-ouncers, quality of the metal was very uneven.[7]

One peculiarity of the Qin Half-ouncers was the high relief of their inscriptions, which made them wear out easily, because they lacked the protection of a raised outer edge. In this respect they resembled ancient Greek coins, but it was not until several thousand years later that the Occident learned how to use an outer rim to protect the image on a coin, whereas the Qin Half-ouncer was only a temporary regression. Warring States knives and spades already had such rims, and beginning with the Western Han Five-grainer, the raised rim became an invariable feature of Chinese coins.

If the regulations on coins attributed to the First Emperor by the history books were indeed based on the laws of those times, then this was the earliest monetary code in Chinese history. Though Chinese money appeared very early, it was accompanied by no system to speak of. Ban Gu says that Duke Tai of Qi's Nine Offices Round System was a genuinely complete system, but I fear there is no basis for this statement. As for the large and small coins of King Jing of Zhou spoken of in the *Dialogues of the States*,

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there is no evidence for these either. Hence the monetary reform of the First Emperor is of great historical significance.

His monetary system may be described as a bimetallic gold-cash coin or gold-copper standard, because the cash coins were based on units of weight, roughly equivalent to those used for metallic copper. The only thing we do not know is whether or not there was a legally fixed exchange price between gold and bronze cash.[8] Gold and bronze cash probably constituted two independent forms of money. By that time, buying and selling in gold was already occurring. If the two metals had a fixed price each in terms of the other, that was not a matter of the one buying or selling the other, but a matter of exchange of currencies.

The First Emperor's monetary reform is also of historical significance for its reform in the shape of money, its change from the variety of primeval shapes to a standard round coin with a square hole in its middle. The square-holed round coin may not have been a creation of the time of the First Emperor.[9] Once he adopted it, however, the shape of Chinese money remained fixed for the next two millennia, and this shape influenced the coins of a number of other peoples. Down through the ages historians have claimed that the round coin containing a square hole was instituted by Duke Tai of Qi, but there is no material evidence for this. Before this innovation, whether in three-hole spades, knife coin handles, ring coins, or Ant-nose coins, all holes in coins were round. Why was there a change to square holes?

Some say that ancient coins were kept on square-cross-sectioned lengths of bamboo, and the square holes kept the coins from rotating and rubbing against each other. Such an explanation is hard to believe. First, ancient coins might not have been placed on such sticks. They might have been threaded onto strings. Second, the ancients could not have been very concerned about coins being effaced through rubbing against each other. This was of great concern in Europe during the Middle Ages, because coins were of gold and silver. China employed bronze coins of very little value, and so their wearing down was of no great concern. [Bruce W. Smith notes that coins could have been placed on square bars by the Han mints as an aid to filing their edges smooth. Qin Half-ouncers, however, did not have filed edges, and Han coins were already being put on strings.]

We can speculate that the First Emperor adopted this square-holed round coin for symbolic reasons. The outer roundness and inner squareness symbolized the round Heaven and the square Earth. This is how things were viewed by ancient cosmology, and the First Emperor was a great believer in the alchemists who held such concepts.

Both before and after the First Emperor's monetary reform, there were other square-holed round coins. [Plate xxvi] The first belonged to the *ming*

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[7]The Japanese have assayed two Qin Half-ouncers. Their copper content ranged from 74.2% to 78.85%. The remainder was composed of metals like lead and tin. Katō Shigashi, *Investigations of Chinese Economic History* (tr. Wu Jie), p. 150. The results of a test of only two coins is not, however, representative.

[8]*Gongyang Chronicle*, 5th year of Duke Yin: "A hundred *jin* in fish." The note states that one *jin* was worth ten-thousand cash, but this remark is not credible. The commentator is probably applying Western Han standards to Warring States times. The character *jin* here must refer here to the unit for a single coin at that time, so that a hundred *jin* would simply mean a hundred such coins.

[9]*Han History*, "Treatise on Food and Money," states that the First Emperor's bronze coins "in substance resembled Zhou cash," which would seem to make the square-holed coin a Zhou system. This statement may not be credible. Probably because Ban Gu saw the *yihuo* coin as King Jing of Zhou's money, he would naturally have thought of the Half-ouncer as imitating the Zhou system.

knife category, and embraced three coins: the one-knife [*yidao*], the *ming* knife, and the *ming* four. Because the character *ming* on these coins resembles the character on the chimingstone or humpbacked knife, they must have been minted in Yan, and have been replacements for the original knife coins minted during the generation before Qin's destruction of Yan. Probably the *ming* knife was minted first, and then the one-knife. The character for knife on these resembles the character for moon, and so some read this inscription as "bright moon" [*ming yue*]. Some even read it as "bright evening" [*ming xi*].

The character four on the *ming* four is written with four slanted vertical lines, which some say resemble the four lines on the reverse of the chimingstone knife. Very few of these coins were produced. This may have been the very first transformation of the *ming* knife into a square-holed coin, and so was probably experimental in nature. Before long it was transformed into the *ming* knife square-holed coin, and its weight was reduced. In any event, these three types of coins were not

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minted at the same time, nor is it even certain that they were three variants of a single coin. The one-knife was similar to the coins to be discussed next.

The second was the *yihuo*, which also included three subtypes: the *yihuo*, the *yi* four *huo*, and the *yi* six *huo*. Because this short form of the character *huo* used on these coins is the same as the last character on Qi knives, and because these coins were unearthed in Shandong, they must have been minted by Qi. They too were probably used to replace Qi knives prior to Qin's destruction of Qi. Ban Gu probably misread the character *yi* as *bao* [treasure] and therefore attributed them to King Jing of Zhou. Later numismatists also believed this.

The character *yi* on these coins is written as [].[i] It has two components, [][j] and [].[k] The former is frequently encountered in oracle bone texts, where it means twenty strings of cowries. It was later transformed into *yi*.[l][10] This is interesting because it links the character *yi* to the idea of the number twenty. During Warring States times, twenty ounces made an *yi* (with or without the metal radical), so evidently the word *yi* retained something of its original flavor. Probably during late Yin and early Zhou it meant twenty strings of cowries, and gradually converged in pronunciation with the version of the character with the second element, and by Spring-Autumn-Warring States times, the two had become a single character which was also used as a place name. This must be so because the character *yi* on hollow-socket spades is surely a place name. [][k] is the old form for cowry. The two side by side must be [],[n] the Qi place name Yidu.

Most ancient place names added the radical [][n] [city] and not the signific for cowry. Hence it was plausible to read this character as *bao* [treasure] since twenty strings of cowry could be called a treasure. But it would make no sense to have inscriptions reading "treasure four *huo*" or "treasure six *huo*." Perhaps Qi followed the practice of adding the radical for cowry to its place names. For example, if the Fei adz spades were minted in Shandong's Fei county, that would show that during Warring States times both Qi and Lu place names could append both the signific for city and the one for cowry to their place names. Sometimes the two of them could even be used interchangeably.[11]

Those who believe that the marks on the backs of Qi knives are numerals representing their values suppose that five of the *yi* six *huo* were equal to one large knife, and that three of the *pei* cash equal to *jin* [*peiqiandangjin*] were the equivalent of one large knife. They evidently suppose that these coins were all in circulation together at the same time.

In terms of their quality of construction, all of these coins could have come before the Half-ouncer. The one-knife coin has often been unearthed in the company of hump-backed knives. The inscriptions on all of the others are more archaic than those on the Half-ouncers. In terms of appearance, therefore, the First Emperor of Qin's Half-ouncer could have been an imitation of these coins, but for coins of that time chronological sequence cannot be inferred solely from appearances. This is because of local variations in level of technology and culture. Qin was close to the territory of the Zhou house, and was rich in reforming spirit. The *ming* knife coin and *yihuo* coin were local moneys which would have been somewhat more conservative.

Even if the Half-ouncer had come before these other coins, the latter could still have been more archaic, especially in terms of their inscriptions. The historical significance of these coins may be that if they were prior to the Half-ouncer, that would prove the Half-ouncer was not the earliest

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square-holed coin, and that square-holed coins were not created by a victorious Qin.

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[10] *Explanations of Words*.

[11] The section on "Jade" states that in the *Analects* the place name Fei is written without the signific for city. Luo Bi's *History of the Circuits*, "Record of State Names," Part D, states: "Fei, sometimes written without the city signific, was in Henan, and was not the same place as the Fei in Lu."

If they were minted after Qi's destruction at the hands of Qin, that would prove that the First Emperor of Qin had not, after all, unified the entire nation's coinage.

Perhaps, however, the Half-ouncers began to be minted before the unification, and these coins were Yan and Qi imitations of early Half-ouncers.

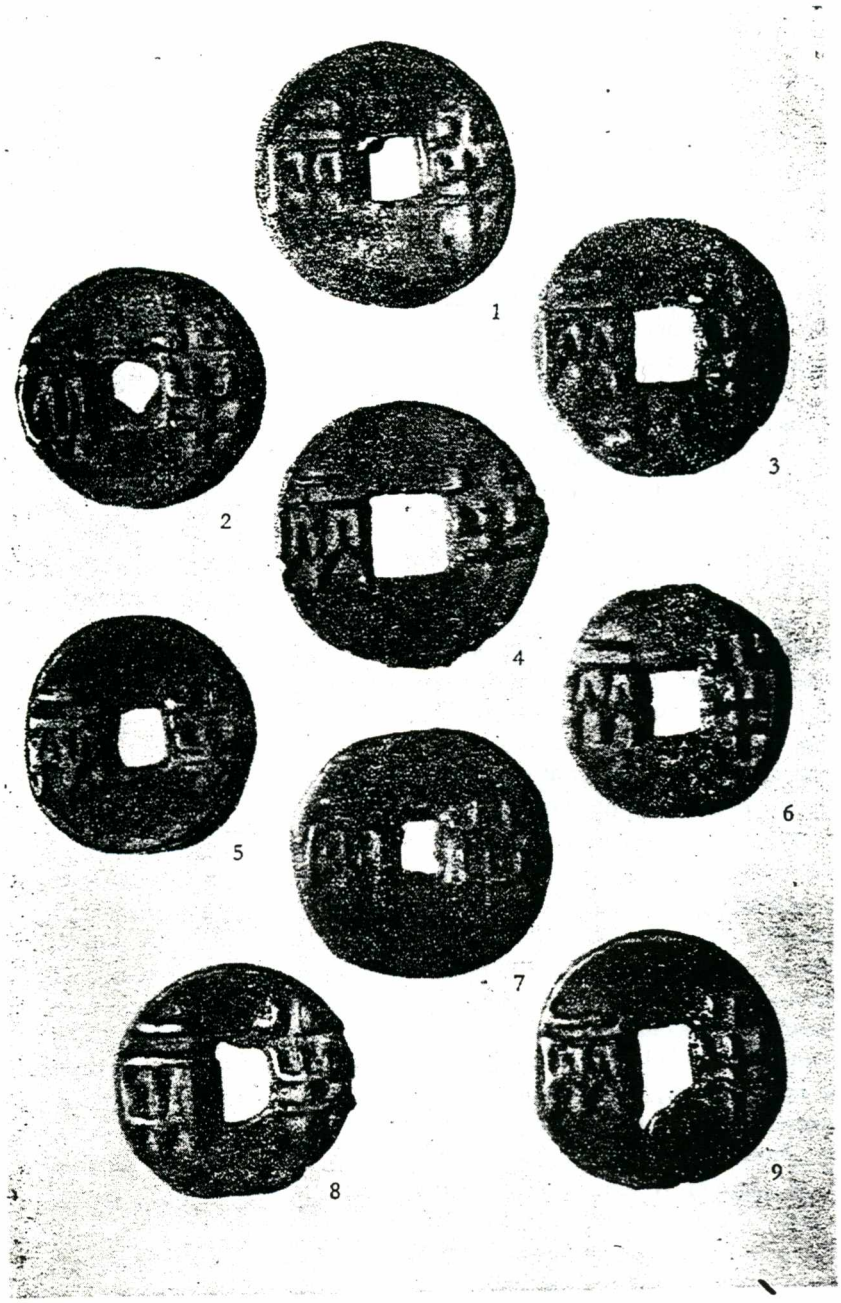
There are also the two-*zai* (written with or without the metal signific), the *wenxin*, the *chang'an* and the *changyi*, which are also square-holed coins. *Zai* is the name of a Warring States unit of weight. Some say six grains made one *zai*. If that is the case, two *zai* would be half an ounce. Others say that eight grains made a *zai*, which would make two *zai* equal to 16 grains. This coin is thinner than the Qin Half-ouncer, its inscription is raised less, and it weighs less, ranging from 5 to 7 grams. Both sides have raised rims. Those without rims probably had them worn down in use.

Some say these are early Han period local coins, since their construction somewhat resembles that of the Western Han Eight-grain Half-ouncer, but there are no Half-ouncers with raised rims on their reverses. Only pre-Qin knives and spades have this feature, as for example the Yu one-adz spade. Of Warring States ring coins like the Qi Yin, very few have inscriptions in high relief. This is also true of the Weight One-ounce Fourteen-grains Qin coin. In terms of weight, the two-*zai* coin is much like the Weight One-ounce Twelve-grain coin, except that its hole is square rather than round.

The *wenxin*'s obverse bears a rectangularly shaped mark with its corners extending outward. This is a bit peculiar, but I have not investigated it. Such shapes are frequently encountered on Han mirrors, where it is commonly called a ruled line. There is a Western Han Five-grainer commemorative coin whose reverse also contains this motif as part of its decorative design. Some say that since Lü Buwei was enfeoffed as Marquis of Wenxin, perhaps this was minted by him. Others interpret the second character as *yang*,[o] and say it was minted in Wenyang. [According to Bruce W. Smith, "a mold for the Wenxin coin has been found in Luoyang, which was the capital of the feudal territory of Wenxin. Lü Buwei was apparently the only Lord of Wenxin."]

The arrangement of the *chang'an* coin's inscription is unusual. The *chang* is on the right of the hole and the *an* is below the hole. The coin itself is a little smaller than the *ming* knife coin. There is supposed to be another coin bearing the three characters *chang xiang si* which are arranged in the same fashion. This would not seem to have been a coin actually circulated. There is, however, a *chang'an* square-foot spade coin, so this place name evidently existed during Warring States times.

The *chang'yi* inscription is very odd. The strokes are quite thick. Putting place names on coins was a Warring States practice. The character *chang* has also been interpreted as *shen*.[p]



圖版二十五　秦半兩

秦半兩和以前一樣，是用泥范鑄造，一范只鑄造一次，所以鑄出的錢，枚枚不同，輕重也相差很大。

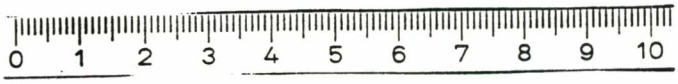
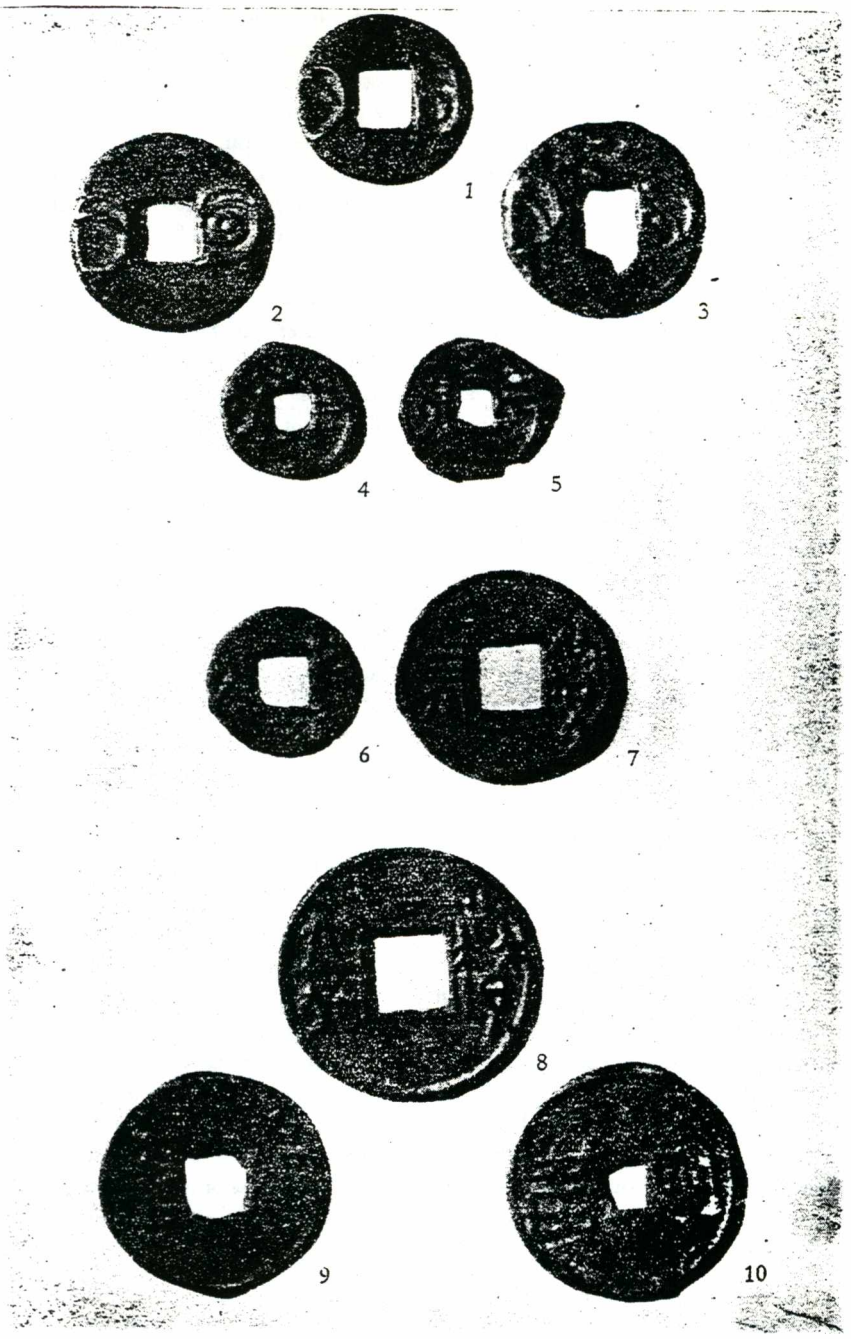


PLATE XXV, QIN HALF-OUNCER COINS

Qin Half-ouncers, like previous coins, were cast from clay molds. Each mold was only used once. Hence no two coins were identical, and also differed considerably in weight.



圖版二十六　初期的方孔錢

1—3.明刀(或釋明月、明夕)。 4—5.一刀(或釋一月、一夕)。 6.脸化(舊釋寶化)。 7.脸四化。 8.脸六化。 9—10.兩畣。

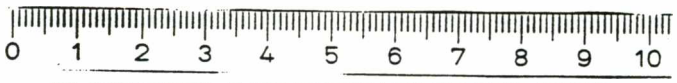


PLATE XXVI, EARLY SQUARE-HOLED COINS

1-3. *Ming* Knife (also read as Bright Moon or Bright Evening). 4-5. One-Knife (or One-Moon or One-Evening). 6. *Yihuo* (old reading Treasure Money *baohuo*). 7. *Yi* Four *huo*. 8. *Yi* Six *huo*. 9-10. Two *zai*.

4. *Effects of Establishment of the Money Economy*

During the transition from Spring-Autumn to Warring States, probably because of the use of iron tools --what the *Mencius* called "the use of iron to plow"-- productive power rose, commerce increased and economic exchanges became frequent. The histories tell us that there were many merchants or trade in manufactured goods in Yan, Han, Wei, Qi, Chu, Chen and Qin. This is clear proof that commodity production had increased. Landless peasants or peasants who had particular skills moved into the neighborhoods of markets and came to depend on artisanship to earn a living. With agricultural and handicraft products increasing daily, use of money also began to increase. The increasing frequency of exchange caused wealth to pile up in the hands of merchants, and a tendency for land ownership to become concentrated.

Land, however, could not be increased without limit, and such commodities as grain were not very good stores of value. As a consequence, the gold of Chu gradually took on this function, and was even used for making large payments. In addition, the concentration of population in the neighborhood of markets led to the formation of a number of market towns, like Qi's Linzi, Jiang in Jin, and the capitals of the other states. The population of one such place might be as much as three

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thousand families.[1]

Use of money is confirmed for the Spring-Autumn period, but is not much reflected in written sources for that time. The Qiong *you* bronze's use of the two characters "cowries and spades" is not entirely clear. In late Spring-Autumn and early Warring States sources, the word *bu* [spade] cannot always be taken unambiguously as a reference to a coin. The statement "a hundred ounces makes one *bu*" in the *Zuo Chronicle*,[2] and the references to *bu* in the *Record of Rituals*[3] are equally ambiguous. A natural economy predominated during those times.

During Warring States times commerce developed to a remarkable degree, and of course this was a reflection of the growth in production. The Spring-Autumn era market towns gradually increased in size, some of them having as many as ten-thousand households. Qi's Linzi, for example, had a very complex life.[4] The development of cities accel-

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[1] *Stratagems of the Warring States*, "Stratagems of Zhao, 3": "Of old, all within the Four Seas was divided into ten-thousand states. Even the biggest city did not exceed three-hundred able-bodied men. The most populous did not

[91]

exceed three thousand families. . . Now, cities with a thousand able-bodied men and ten-thousand families are visible everywhere."

[2] The *Zuo Chronicle* contains a story under Duke Zhao 26th year: "In summer, the Marquis of Qi was about to receive the Duke. He ordered that bribes in goods from Lu should not be accepted. Shen Feng had a Ru merchant roll up two ounces of brocade and one of thin silk to bring to the Qi commander. He said to Ziyou's man Gao Yi: 'I can provide goods for Ziyou, and 5,000 *yu* of grain for the descendants of the Gao clan.' Gao Yi took the brocade to show Ziyou, and Ziyou approved of it. Yi said: 'The man of Lu bought it, a hundred ounces for one *bu* [i.e. roll of cloth, in this context]. Because the way is not open, this wealth was sent on in first.' Ziyou accepted it." [Legge's translation, *The Chinese Classics*, V, p. 716, is modified somewhat here.]

This story reflects the following:

First of all, the important place of the natural economy, because payment here is made in cloth and grain, not money. The words "the man of Lu bought it, a hundred ounces for one *bu*" connote the existence of buying and selling, but the meaning of this phrase is not very clear, and it would be very difficult to draw a reliable conclusion from it. If *bu* here meant a spade coin, first of all, brocade could not have been so cheap. Productivity then could not have developed to so high a degree.

Second, if money's purchasing power was really that high, why wasn't money itself used in the transaction? Would not use of money have resolved the difficulty of communication between the two? If it is objected that Qi and Lu used different monetary standards, one using knives, the other spades, then why was not gold employed? Would not gold have been more convenient to carry? If one says that Gao Yi was swindling Ziyou, that would be rating Ziyou's reasoning power as too low.

The *Guan Zi*, "Teams of Horses, 5," contains the statement "one *yi* of yellow gold will be used up for a hundred teams of horses staying over one night. If there is no gold, then use thin silk. Thirty-three of the finest silk gauze is worth one *yi*. If that is lacking, then use *bu*. One hundred ounces of exposed-warp *bu* is worth one *yi*." If thirty-three ounces of the finest silk gauze was worth one *yi* of gold, one hundred ounces was worth three *yi* of gold, and brocade must have been higher in price than thin silk.

The *Zuo Chronicle*'s use of the character *bu* could be the result of a copyist's error. The textual verification school scholars of the Qing dynasty were not versed in numismatics, and did not understand the circumstances of society's development. Reading such a text literally, they had great difficulty making sense of such a sentence.

[3] *Record of Rituals*, "Sandlewood Bows": "Zishuo wished to use the remaining *bu* contributions for sacrificial implements." *Ibid.*: "At the death of Meng Xian Zi, his disciples brought back four *bu*."

[4] *Stratagems of the Warring States*, "Stratagems of Qi, 1": "Linzi is so rich and substantial that its population lacks not for

erated the circulation of money. Warring States Era sources reflect this phenomenon. The "one *bu*" mentioned in the *Mo Zi*,[5] the "knives and spades" alluded to in the *Guan Zi* and *Xun Zi*,[6] and the "hundred bundles of spades" mentioned in the *Han Fei Zi*[7] are all references to manufactured money. Not only was money employed by merchants, it was also used for such everyday life activities as selling alcoholic beverages[8] and grain.[9]

It was not until Warring States times that China's monetary economy took off. We can understand this by comparing the quantity of money during Spring-Autumn with that during Warring States times. We may take the hollow-socket spade as broadly representative of Spring-Autumn era money and the flat handle spade as representative of Warring States coins. The two periods are of approximately equal length, but there is a very great difference in the quantity of coins surviving from each. Of course we have no statistics on the quantity of spade coins produced or excavated, but comparison of current market prices suggests that there must be from ten to a hundred times more flat handle than hollow-socket spades. This demonstrates that China's monetary economy was firmly established only during Warring States times, and shows still more definitely that the first high tide in the circulation of Chinese coins occurred then.

It was because of this that a number of instances of money fetishism appeared then. Guan Zhong coveted the gold of Chu. He said that if he could obtain the gold of Chu, there would be food to eat without the peasants plowing the soil, and clothes to wear without the women weaving cloth. When Su Qin returned home in poverty, his relatives all treated him with contempt. Later, when he became chief minister of a great power, his family looked upon him with awe because his position was high and he had much gold. From that time on, the feudal rulers took advantage of this propensity, and adopted a policy of employing bribes of gold to gain their political ends. This shows just how rampant was money fetishism becoming.

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There were many forms of money during Warring States times, and there must have been a number of different monetary units, but their nature is not very clear. Theoretically, ancient Chinese monetary units ought to correspond with the forms of the coins, with the knife and the spade as the units, but very few sources speak of particular quantities of knives or spades. Only the *Mo Zi* mentions one spade as though it was a monetary unit. Appelations like *huo/hua*, adz, *yuan*, grain and ounce are found on knives and spades. The *huo* was a name and unit for knife coins. All Qi knives employed it. Later, when Qi knives evolved into square-holed coins, these were also called *yihuo*, *yi* four *huo* and *yi* six *huo*. The small Jinyang knife also bore this unit. A few spade coins did too. Adz, *yuan*, grain and ounce were spade coin names and units. The adz was probably a local Jin monetary unit, later also adopted by Wei and some neighboring states.

But why were such labels used? In the past there have been no good explanations for this. Recently some have suggested that *huo* originally named a kind of sickle, and the character *jin* [adz] was a type of ax, also an agricultural tool. There must already have been a unit of value affixed to hollow-socket spades, because among them there are identical large and small-sized coins bearing the inscriptions *fujin* and *wuyuan*. The *yuan* was originally a unit of weight encountered on late Yin and early Zhou ceremonial bronze inscriptions. Later it also became a unit of value or monetary unit. By Warring States times, the *yuan* of different localities were all different. Some say that in the Yellow River valley, a hundred *yuan* was equal to three catties, and in the north, three *yuan* weighed one catty four ounces.[10]

The ounce as a non-monetary unit of weight does not, however, seem to be present during Warring States times. The grain and ounce units are seen on three-hole spades and ring coins, with 24 grains to the ounce. This unit seems to have been adopted by Qin.

In addition, there are the short and long forms of *yuan* and related characters, with and without the metal radical. Oddly enough, these all seem to be

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players of the reed pipes, strummers on the large lute, strikers of the strings of the *zhu*, pluckers of the strings of the zither, fighters of cocks, runners of dogs, and throwers of dice. On the lanes of Linzi, cart wheels thunder, and men rub shoulders. Sleeping mats adjoin as though they were curtains, and sleeves as though screens. Sweat wiped off is as plentiful as rain. Families are substantial and rich, and men walk with a swagger." *Historical Records*, "Biography of Su Qin," is substantially the same.

[5] *Mo Zi*, "Nobility and Righteousness": "Nowadays knights do not use their bodies as carefully as a merchant uses one *bu*."

[6] *Guan Zi*: "Knives and spades were the lower money."

[7] *Han Fei Zi*, "Inner Stores, latter part": "If I were for no reason to obtain a hundred bundles of spades."

[8] *Han Fei Zi*: "Perhaps one orders a boy to take up a jug and some cash coins to go buy wine."

[9] *Guan Zi*: "In a year of middling harvest, grain sells for ten cash per picul."

[10] *Record of Investigation of Artisans*, Zheng's notes on the smelterer families.

variations on a single character. In ancient times their pronunciation was the same, all being read as *shua*. During Western Han, the two characters []a and []b were also both read as *shua*. These units seem at first to have been units of weight. Some say that one *yuan* was equal to 11 13/25 grains, and a hundred *yuan* made three catties. Others doubt this, objecting to the mixed number.[11] Some simply say that one *yuan* was equal to half an ounce, or 12 grains. Though this might be convenient, I am afraid it does not correspond to the facts. That one *yuan* could equal 11 13/25 grains might show that the *yuan* and grain were units from two different places. This is like China's treasury ounce having a fraction left over when it is converted into an English unit. Some say that in Donglai three *yuan* were one catty four ounces.[12] Others, for the sake of convenience, make it six ounces to the *yuan*.[13] Given the statement in the *Record of Investigation of Artisans* "the sword weighed nine *yuan*," this theory must be the correct one. Perhaps Chu had yet another standard.

Perhaps, however, during Warring States times these units were not just units of weight, but also units of value. This is suggested by the existence of a Worth-*yuan* spade. The sources contain references
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to fines expressed in *yuan*. The *Book of Documents*, "The Punishments of Lü" contains the words "his fine was a hundred *yuan*." The "Punishments of Fu" says "his fine was five-hundred *zhuan*.c" The "Great Transmittal" alludes to "Mu's fine was 2,000 *zhuan*." The *Historical Records*, "Basic Annals of Zhou" says "his fine was a hundred *shuai*.d" What are these all referring to? Was it a specific weight of copper? Or was it a definite value, as in Worth-*yuan* spades?

For the time when cowries were in use, there are frequent references in the records to given quantities of cowries or strings of cowries. For Warring States times, we have only labels or units of money, and not amounts of metal. The written sources do not record particular quantities of knives, spades, *huo*, adzes, grains, or ounces. The inscription on the Lord Ping'an *ding* tripod mentions 5 *yi* and 6 adz. These would seem to be weights, not values. Fines in *yuan* might imply values, but there are very few examples of this. Given these circumstances, one might almost doubt that there was in fact a high tide in the circulation of money during Warring States times.

Such doubts are not necessary. Written sources record only the lives of the ruling class, not those of the common people. The Yin and early Zhou ruling class employed strings of cowries to make payments, and so the oracle bones and bronze inscriptions frequently mention numbers of cowries and strings of cowries. These are even mentioned in the ancient Odes. By Warring States times, the ruling classes mainly employed gold, particularly for large payments. Hence the written sources often mention particular amounts of *yi* or catties of gold. Knives and spades were merely the instruments circulated among the common people, and their use would not easily find reflection in the written sources. Actually such references are not entirely absent. For example, allusions to quantities of metal could be to bronze coins. The price of grain in the quote from *Guan Zi* was clearly being reckoned in terms of bronze coins.

Circulation of cash coins was not limited to the main cities. The farming villages also rose into the stage of a monetary economy. Describing the early Warring States situation, Li Kui said that the peasant male in a standard family of five worked a field of around a hundred *mu*. Each *mu* would annually yield 1.5 piculs of grain, for a total of 150 piculs. Deducting ten percent for taxation would leave 135 piculs. Each person in the family would consume 1.5 piculs per month. Over the year the whole family would consume 90 piculs, leaving a surplus of 45 piculs. At a price of 30 cash per picul, this could be sold for 1,350 cash. The annual cost of the spring and autumn sacrifices to the spirits of the soil and gates would be 300, leaving 1,050. It would require 300 cash per person per year for clothing. A family of five would require 1,500 for the year, leaving a deficit of 450. If someone in the family took sick or died, the deficit would be still larger.[14] Under these circumstances, if the peasants could not get a higher price for their grain, they would have to abandon agriculture or carry on a subsidiary occupation.

Most peasants probably had secondary occupations as well so as to keep body and soul together. As Mencius put it, "A farmstead of five *mu*,
[87]
if planted in mulberry trees, will allow those aged over fifty to wear silk. If timely care is taken of chickens, pigs, and dogs, those over seventy can eat meat. If a field of a hundred *mu* is cultivated according to the seasons, a family of several members can avoid hunger."[15] But even so hand-to-mouth an

[11] Cai Yun, *Habitual Conversations*.

[12] *Record of Investigation of Artisans*, Zheng's notes on the smelterer families.

[13] Lu Deming, *Meaning of the Sounds in the Book of Documents*.

[14] *Han History*, 24, "Treatise on Food and Money."

[15] *Mencius*, 1, "King Hui of Liang," first part.

existence remained subject to the vagaries of the weather. Hence the fate of the peasantry was: "By the end of a good year one suffers; in a bad year death is unavoidable."

According to the *Guan Zi*, if a farmer tilled a hundred *mu*, by the end of the year his harvest would be 20 *zhong*, or 128 piculs, which could be sold for 8,000 cash. In monetary terms, this would seem to be somewhat better than the position of a peasant under Marquis Wen of Wei. But if the price of grain rises, and income increases, prices of other goods will also increase, and so too will expenditures. Hence many peasants then were in debt. "Households which lent at interest put out money by the thousands and tens of thousands. They lent grain to the amount of 3,000-10,000 *zhong*. Thirty-thousand households among the people received interest."[16]

It is necessary to point out that even by the Warring States Era, circulation of money was still far from having penetrated all aspects of life. Life still rested on the foundation of a natural economy. The peasantry still led a self-sufficient existence, and the peasantry constituted the great majority of the population. The income of officials basically also was in real goods. To speak a bit more concretely, ordinary official income or salary was paid in foodstuffs. Extraordinary income or rewards and gifts were paid in gold. This is amply attested by pre-Qin written sources. When Confucius lived in Lu, he received 60,000 in grain.[17] Mencius said: "Master Zhong is of the hereditary house of Qi. His elder brother Dai receives a salary of 10,000 *zhong*."[18] The *Guan Zi* contains the statement "given a salary of 1,000 *zhong*."[19] Special gifts and rewards might be in gold, as when Mencius was given 70 *yi* by Song Kui, and received 50 *yi* from Bi.[20] The King of Liang gave 1,000 catties of gold to Lord Mengchang.[21]

There are very few instances of giving or receiving cash coins. This shows that coins then were not minted by the government, for even taxes were rarely paid in cash, real goods like cloth and grain and labor being used instead,[22] though there was also something called the knife and spade collection.[23] That was probably limited to particular states or government departments. If coins had been minted by the government, or if governments normally had large monetary incomes, the government could certainly have used coins to pay official salaries, which would then have been used by officials to purchase goods or services, allowing this money to flow back into the government's hands through the collection of taxes. Such were the channels through which money flowed in later ages.

During Warring States times, however, the manufacture of money was probably organized by merchants, and coins mainly served as tokens in the domain of the circulation of commodities. Merchants would use coins to buy commodities from small producers. These producers, who were also consumers, would use them to buy consumption goods from merchants. Hence documents written by **[88]** the elite rarely mention coins, and when they do mention them, the context involves only merchants or small payments.

By the Qin Dynasty, a fixed system of salaries appears to have been established, but it still involved only gold and foodstuffs, not copper coins. Someone attaining to a scepter of office would have "a salary of 10,000 *zhong*, and of gold 1,00 *yi*."[24] Hence Qin used gold as its upper money, and bronze cash as its lower money. The lower money was probably something that high officials did not encounter. When they needed to make small payments, the matter was handled by their servants.

Even so, I still believe that a monetary economy had been established. That does not mean that no trace of a premonetary economy would remain, and that all of society had been monetized. Such a situation has never existed. Nor is this to say that the monetary economy was dominant. That would be hard to calculate. Not only was each locality different, each period of time was different. I am here merely pointing to the phenomenon of the circulation of money, particularly during this first high tide of its circulation during the Warring States Era.

This situation not only gave rise to the idea of calculating in terms of prices, but also to the phenomenon of seeking to obtain money. Even if in quantitative terms or relative weight the natural

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[16] *Guan Zi*, "Light and Heavy, Part D."

[17] *Historical Records*, 47, "Hereditary House of Confucius." Though this is not a pre-Qin work, Sima Qian must have based it on pre-Qin materials.

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[18] *Mencius*, "Duke Wen of Teng," latter part.

[19] *Guan Zi*, "Minor Questions."

[20] *Mencius*, "Gongsun Chou," latter part.

[21] *Stratagems of the Warring States*, "Stratagems of Qi, 4."

[22] *Mencius*.

[23] *Xun Zi*, "Enriching the State": "The collection of thick knives and spades, so as to confiscate their wealth."

[24] *Annals of Master Lü*, "Unusual Treasures": "Under the laws of the state of Jing, those who obtained the five obligations were honored with a sceptre of office, a salary of 10,000 *zhong* and of gold 1,000 *yi*."

economy still was more important, the monetary economy was more important in developmental terms because it was destined to assume a dominant position later.

Though once the circulation of coins began, the concept of calculating prices gradually took shape, the significance of records of prices during Warring States times is not great.

First, Warring States monetary systems were complex, there were great discrepancies in weight between various coins, and we do not know in terms of which coins prices were being expressed. This prevents comparisons with prices of later times.

Second, sovereignty was fragmented and communications inconvenient, so that prices varied greatly from place to place. For example, within Qi the price of grain in the western section of the state was sometimes a hundred coins per *fu* when it was only ten coins in the eastern section, a ten-fold difference.[25] According to various written sources of that time, the normal price of grain probably ranged from ten to sixty coins per picul.[26] If we reckon on 4,000 coins as equal to one catty of gold, then the price of a picul in terms of gold ranged from 0.04 ounces to 0.25 ounces, but this assumes the use of the measures of volume and weight of that time.

The gold price of thin silk then was 14.5 grains per bolt. Linen ran around 5 grains of gold per bolt.[27] The price of gold was given as one to four-thousand.[28] If we assume that the one was a catty,[29] then the price of a bolt of thin silk was 150 coins, and of linen 50 coins.

As coins were issued by localities, not only was there no way to limit their quantity, it was also hard to avoid reductions in their weight.

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The histories state that in year 21 of the reign of King Jing of Zhou (524 B.C.) large coins were minted. There is no way to tell if that is so, or if the story was fabricated later, whether it reflected conditions at the time it was concocted. The presence of light and heavy, large and small coins, is intimately related to the prices of goods.

According to another tradition, in the time of King Zhuang of Chu, because the coins were light, small coins were replaced with large ones, and because the masses found these inconvenient, there were complaints made to Sun Shu'ao, who in turn spoke to the king and secured a return to the old system.[30] This is as worthy of suspicion as the story about King Jing of Zhou minting large coins. Probably both of them were the work of Qin or early Han period writers.

Even if accounts in the written sources about reductions in coins' weights are not reliable, judging from surviving coins, this phenomenon must have occurred during Warring States times. Daliang's Worth-*yuan* spade was at first worth five thick and heavy Worth-one *yuan*. Later, it was equal to one light and small Worth-one-*yuan*. The *ming*-knife round coin, when first minted, weighed 5 grams. After later weight reductions, the lightest ran to less than 2.5 grams. The original version was itself the result of weight reduction of the heavier knife coins.

Under unusual circumstances, prices might jump to very high levels. For example in year 31 of the First Emperor (216 B.C.), because of an assassination plot, the Qin home territory west of the Great

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[25] *Guan Zi*, "Light and Heavy, Part D," 83. Qing Mao advised: "Western Qi's grain is a hundred *quan* per *fu*, or twenty per *ou*. Eastern Qi's grain is ten *quan*, or two cash per *ou*."

[26] Li Kui said the price of grain was 30 per picul at the time of Marquis Wen of Wei. The *Guan Zi*, "Light and Heavy, Part A" contains the statement "When the price of grain is normally 40, then metal is 4,000. When a *fu* of grain is 40, then a *zhong* is 400." A *fu* was 6 *dou* 4 *sheng*, so a picul was 62 cash. Elsewhere the same book states that in a middling year grain sold for 10 cash a picul, and in a bad year for 20 cash. The first figure must be for some other time or place. The picul used by the *Guan Zi* must also not be the same as the one assumed by Li Kui. Li Kui said one person could eat 1.5 piculs per month, but the *Guan Zi* said that an adult male could eat 4 piculs, an adult female 3 piculs, and a child 2 piculs, for an average per capita monthly consumption of 3 piculs.

The picul used by the *Guan Zi* must have been half the size of the one employed by Li Kui. Anyway, before Han, the picul was not employed, so there is some question about both accounts.

The *Historical Records*, "Biographies of the Money Makers," quotes Ji Ran: "If it is no higher than eighty, and no lower than thirty, then the peasant in the end will obtain a profit." On the average it was nearly sixty cash. The unit here was probably also the picul.

[27] *Guan Zi*, "Teams of Horses, 5." Cf. note 2 above.

[28] *Guan Zi*. Cf. note 26 above.

[29] In the *Guan Zi*, gold is sometimes measured in *yi* and sometimes in catties, but when that book merely speaks of a certain amount of *jin*,[e] it probably means catty, first because the catty was a Zhou unit (cf. *Han History*, "Treatise on Food and Money"'s quote from Shi Gu), and the *yi* was a Qin unit, and second because in the section in which a gold price of 4,000 is discussed, there is also a reference to selling salt for "over 11,000 catties of *jin*[e] [gold]."

[30] *Historical Records*, 119, "Biography of Sun Shu'ao." [Bruce W. Smith notes, "if there is any basis to this story, the coins would have been Ant-nose coins. I've weighed many pieces and found the heaviest to be three times the weight of the lightest."]

Bend of the Yellow River was sealed off for twenty days. The price of rice jumped to 1,600 cash per picul.[31] Such price jumps did not, however, have monetary causes.

The establishment of a monetary economy produced deep and far-reaching effects on human life. In positive terms, it not only stimulated commodity production by promoting the preservation of individual purchasing power and security, its use also obtained for human life a freedom and independence never before present. It enabled men to more fully develop their knowledge, and so caused human culture to undergo a quantum jump in development. This can be proven from mankind's history. We need only compare three archetypical human societies to understand this.

The Mayas and Incas of the American continent were at the highest cultural level of those civilizations lacking money. Egypt and Babylonia were at the highest cultural level of all civilizations at the beginning stages of a monetary economy. From the fifth century B.C. on, China and Greece were the highest civilizations to enjoy the first high tide in the circulation of money. The cultural level of each of these three is known by all, so there is no need here to make any detailed comparisons.

We can, however, compare Homeric Greece (before the establishment of a monetary economy) with the situation in Aristotle's time, after the establishment of a money economy. The difference in cultural levels is startling. Sculpture was Greek culture's

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most conspicuous accomplishment. Before the money economy, blocks of stone were used to represent the gods, thirty such blocks representing thirty gods. After the appearance of a money economy, the situation was greatly changed. The creative force welled up like a spring of water, and poured up like a volcanic eruption.

Some say the circulation of money is merely a reflection of the circulation of commodities. The rise in the cultural level was not stimulated by money but by commodity production. It was the result of a rise in productive power. Money was the inevitable consequence of commodity production. Basically, such a statement is correct, but not entirely so. At most it is a literal narration of what actually happened, but does not bring out the internal connections of these events. Why is commodity production inevitably accompanied by money? Why is not barter resorted to? Can it be that it is because money has some positive function in its own right? Is it not that the appearance of money encourages the production and circulation of commodities, and even promotes rises in productivity?

Money's influence on culture rests precisely on its possession of these powers. Under the circumstances of a natural economy, man cannot separate himself from his group or from his native place. He cannot move his wealth to some other location. Hence his body is not free, and as a consequence, neither is his mind. His ideas are shackled by religion, the traditional customs of his native place, and its prejudices.

After the appearance of money, all such bonds are gradually weakened, because a man can then walk far and fly high. Just as Chao Cuo said: "It causes the servant to treat his master with contempt, and the people to easily leave their native places." It lets a man think, and dare to speak. Novelties from strange places easily put his imagination and creativity into motion. This is a necessary precondition for a high tide of culture. The "hundred schools contending" within China's Warring States Era culture were thereby set in motion.

Nevertheless, use of money was not entirely positive and constructive. It also had its negative and destructive side. Money's appearance fragmented society and increased the degree of inequality between poor and rich. As one of the ancients put it, it caused "the peasantry to be fewer in number, and the itinerant merchants to be more numerous. Grain was insufficient, and there was a surplus of goods [money?]." "Licentious fellows committed transgressions and lusted after profit."[32] Money even came to be used as an instrument of exploitation by the ruling class, and this allowed very great encroachment on the lives of the people. Such phenomena are frequently encountered in the history of both China and foreign countries.

a 逆 b 扶 c 食 d 卒 e 金

[31] *Historical Records*, 6, "Basic Annals of the First Emperor of Qin."

[32] *Han History*, 91, "Biographies of the Moneymakers."

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1.3 Monetary Theory

The establishment of a monetary economy had a stimulating effect on society. It allowed the men of that time to attain an independence and freedom of body and spirit which they had not hitherto possessed. As a consequence, unusual blossoms of a great variety of colors bloomed within ancient China's intellectual culture. This was the period of greatest development of ancient Chinese thought. Such a phenomenon was not limited to China. The most flourishing period for ancient philosophy in Greece also occurred not long after the onset of the monetary economy. The decadence of the monetary economy during Europe's Medieval period was accompanied by an intellectual dark age. Only with the renewed development of a monetary economy in a few Italian cities did Europe's literary and artistic revival occur, and in precisely those cities.

An era's ideas cannot, however, transcend its social environment. In other words, mankind's philosophies are for the most part focused on a few pressing questions. During Spring-Autumn and Warring States times, the most pressing questions were those involving civil and military government and moral principles. The former asked how to attain unification of the land and peace, or the security of one's own state, or the realization of individual ambitions. The latter asked how to determine a new order for society. With the destruction of the well-field system, the traditional moral order had been abandoned as well. In so chaotic a society, the people whom one regularly encountered were no longer exclusively from one's own clan or one's own subordinates. In this sort of new society in which men were thrown together randomly, the nature of human relationships was a truly important matter.

Those times were not entirely lacking in economic problems. Every age has such problems. Up until then, however, the people who produced goods for a living had always been men whose social position was very low. Hence during ancient times in both China and other countries economic activities were always ranked below other activities. For most intellectuals, to even be willing to debate such questions was to compromise their status.

Although there were no explicit laws in pre-Han China denigrating merchants, their status had always been low. As Yang Hu said, "He who is rich will not be benevolent; he who is benevolent will not be rich."[1] The Greek, Plato, said substantially the same thing: Wealth in sufficiency and good fortune are

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incompatible. A wealthy man cannot be a good man, because the acquisition and use of at least a portion of his wealth must not be proper.[2] It is clear what the view of wealth then was on the part of those who considered themselves upright gentlemen. Hence not only are there no comprehensive economic theories to be found in ancient narratives, there are not even very many references to economic questions.

The transition from barter to a monetary economy had just occurred, and this transition itself gave rise to debate.

The Agrarian School very much wished to return to a barter economy, and called for the ruler himself to cultivate the soil, just like the masses did. The Confucians[3] supported the new trend, and advocated the division of labor and an exchange economy. Mencius (372-285 B.C.) said: "If one from his surplus may supply the deficiency of another, then husbandmen will have an abundance of grain, and women will have an excess of cloth." [Translation quoted from James Legge, *The Works of Mencius*, 2nd rev. ed., p. 269.] The clash between these two ideas is fully illustrated in the dialogue between Mencius and Chen Xiang:

> Mencius said: "I suppose that Xu Zi[4] sows grain and eats the produce. Is it not so?"
>
> "It is so," was the answer.
>
> "I suppose also he weaves cloth, and wears his own manufacture. Is it not so?"

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[1] *Mencius*, "Duke Wen of Teng," first part.

[2] *The Republic*, Book V, pp. 742-744. Jowett's *Plato*, Vol. V, pp.125-126.

[3] Confucius himself never expressed any opinions on the monetary economy or even on the division of labor and economic exchange.

[4] Xu Zi was Xu Xing. *Mencius*, "Duke Wen of Teng," first part: "One Xu Xing, who gave out that he acted according to the words of Shen Nong . . . he addressed the Duke Wen, saying, 'A man of a distant region, I have heard that you, Prince, are practicing a benevolent government, and I wish to receive a site for a house, and to become one of your people. The Duke Wen gave him a dwelling place. His disciples, amounting to several tens, all wore clothes of haircloth, and made sandals of hemp and wove mats for a living. . . Chen Xiang,

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a disciple of Chen Liang, and his younger brother, Xin, with their plow handles and shares on their backs, came from Song to Teng . . . and abandoning entirely whatever he had learned, became his disciple." [Translation quoted from Legge, *op. cit.*, pp. 246-247.]

"No, Xu wears clothes of haircloth."

"Does he wear a cap?"

"He wears a cap."

"What kind of cap?"

"A plain cap."

"Is it woven by himself?"

"No, he gets it in exchange for grain."

"Why does Xu Zi not weave it himself?"

"That would injure his husbandry."

"Does Xu cook his food in boilers and earthernware pots, and does he plough with an iron share?"

"Yes."

"Does he make those articles himself?"

"No, he gets them in exchange for grain."

"Then getting those articles in exchange for grain is not oppressive to the potter and the founder, and the potter and the founder in their turn, in exchanging their various articles for grain, are not oppressive to the husbandman. How should such a thing be supposed? And, moreover, why does not Xu act the potter and the founder, supplying himself with the articles which he uses solely from his own establishment? Why does he go confusedly dealing and exchanging with the handicraftsmen? Why does he not spare himself so much trouble?"

"The business of the handicraftsman can by no means be carried on along with the business of husbandry."

"Then, is it the government of the kingdom which alone can be carried on along with the practice of husbandry? Great men have their proper business, and little men have their proper business. Moreover, in the case of any single individual, whatever articles he can require are ready to his hand, being produced by the various handicraftsmen. If he must first make them for his own use, this way of doing would keep all the people running about upon the roads." (*Mencius*, "Duke Wen of Teng, first part.) [Translation quoted from Legge, pp. 247-249.]

Plato also advocated the division of labor. He said that if the division of labor was put into effect, the quantity and quality of production could be increased.

Chen Xiang's sect did not actually oppose the division of labor or exchange, but Mencius wanted to push his opponent into this position so as to strengthen his own argument. From another section of this dialogue it is evident that Mencius advocated economic liberalism and opposed controls and management of the economy.

[Chen Xiang said] "If Xu's doctrines were followed, then there would not be two prices in the market, nor any deceit in the kingdom. If a boy of five cubits were sent to the market, no one would impose on him; linen and silk of the same length would be of the same price. So it would be with bundles of hemp and silk, being of the same weight; with the different kinds of grain, being the same in quantity;

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and with shoes which were of the same size."

Mencius replied, "It is the nature of things to be of unequal quality. Some are twice, some five times, some ten times, some a hundred times, some a thousand times, some ten thousand times as valuable as others. If you reduce them all to the same standard, that must throw the kingdom into confusion." (*Mencius*, "Duke Wen of Teng," first part.) [Translation quoted from Legge, pp. 255-256.]

The Confucians" approval of the division of labor and exchange can also be seen in the words of Xun Qing [Xun Zi] (298-239 B.C.):

In the far north there are fast horses and howling dogs; China acquires and breeds them and puts them to work. In the far south there are feathers, tusks, hides, pure copper and cinnabar; China acquires them and uses them in its manufactures. In the far east there are plants with purple dye, coarse hemp, fish and salt; China acquires them for its food and clothing. In the far west there are skins and colored yaks" tails; China acquires them for its needs.

Thus people living in lake regions have plenty of lumber and those living in the mountains have plenty of fish. The farmers do not have to carve, chisel, to fire or forge, and yet they have all the tools and utensils they need; the artisans and merchants do not have to work the fields, and yet they have plenty of vegetables and grain. . . Thus, wherever the sky stretches and the earth extends, there is nothing beautiful left unfound, nothing useful left unused. (*Xun Zi*, "The Regulations of a King") [Translation quoted from Burton Watson (tr.), *Basic Writings of Hsun Tzu* (NY: Columbia, 1963), pp. 43-44.]

Tradition says that in the 21st year of King Jing of Zhou (524 B.C.) small coins were replaced by large coins. Dan Qi commented that the abolition of small coins would deprive the people of their instrument for making purchases, leaving them no way to earn a living. Hence he opposed their abolition. Though it is hard to say whether this incident actually occurred, if it was not the creation of some later writer, Dan Qi's statement is the earliest one ever made on coinage. His remarks were supposed to be as follows:

In ancient times, when there were natural disasters or calamities, goods and coins would be measured out, with order kept between light and heavy so as to relieve the people. If the people suffered from light coins, then heavy coins would be made and circulated. Thereupon the "mother" would dominate the "child" in circulation, and people would acquire both of them. If the heavy ones were not adequate, then more light ones would be made and circulated, but without abolishing the heavy. Thereupon the "child" would dominate the "mother" in circulation, and great and

small would profit from this.

Now Your Majesty is abolishing the light and making the heavy coins. The people will lose their property. Can this be proper? (*Dialogues of the States*, "The Dialogues of Zhou," latter part, section 3.)

The meaning of this passage is quite definite: The size of the unit of money ought to be proportioned to the value of the commodity. Hence there ought to be both small and large monetary units. If people consider the coins too small, mint large coins, and circulate them through the same channels as the small. If people consider the coins too large, then mint small coins for circulation too, but do not abolish the large coins. This is the so-called child-mother relationship. Here child and mother merely refer to small and large coins, and the question of legal tender does not arise. This theory does, however, advance the concept of value by stating that large and small coins have different purchasing powers.

If we completely accept this old text, then what Dan Qi said would have been the same as the phrase "if the coin [*bi*] levies are light, then make the mother so as to circulate the child" in the *Lost Books of Zhou*. To translate the word *bi* in this phrase as "coin," is appropriate for Warring States times, but not for Spring-Autumn and earlier. Even in Warring States times, *bi* did not necessarily mean coin. It generally still meant

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cloth. Nor is the meaning of "make the mother to circulate the child" clear. Literally it means to cast large coins and circulate small coins. How is this to be explained? Dan Qi's statement is less ambiguous. He says that large and small are to be circulated simultaneously. Hence if Dan Qi was not making the same point as the *Lost Books of Zhou*, then it must have been some later writer who created that statement on the basis of Dan Qi's words. Of course both could be later creations. In any event, there is no evidence that in the early years of Western Zhou the government minted both large and small coins. It is very hard to believe that monetary theory then was actually ahead of the actualities of money's circulation.

A number of people consider this child-mother hierarchy to refer to the relationship between a secondary and a primary money. They interpret the above passage as explicating a theory of secondary money. Whenever scholars of later generations discussed monetary questions, they always liked to drag in the child-mother hierarchy matter. Actually, during the two thousand years since Duke Mu of Dan, no truly secondary money has ever been circulated in China. All the forms of money had the character of primary moneys. Even if one concedes that Duke Mu of Dan understood the theory of secondary money, posterity did not preserve that understanding, or if it did understand it, never did anything with it.

As a matter of fact this passage is likely a Warring States interpolation, since no such large coin of King Jing of Zhou has ever been confirmed. If there were metal coins in King Jing's time [544-519 B.C.], they could only have been hollow-socket spades, and there are no unusually large examples of these. There are some relatively large specimens considered by numismatists to be ancient spades, which are earlier than the hollow-socket spades, but some of these might not have been coins, and hollow-socket spades of that period might not have been minted by the royal house.

From late Spring-Autumn to early Warring States, the use of coins gradually broadened, and the concept of price gradually developed. It was then that people became concerned with the question of prices. It was at this time that China produced a strange fellow named Ji Ran or Ji Ni.[5] He came up with a number of ideas for King Goujian of Yue, but unfortunately few of his doctrines have survived. On the basis of the succession of the Five Elements or Agencies, he said that "every six years there will be a good harvest, every six years a drought, and every twelve years a great famine."[6] In this he resembles the business cycle theorists of contemporary capitalist nations.

Ji Ni's ideas might not have been derived entirely from *yinyang* and Five Agencies notions. They were probably also based on his own observations, and so they have a rough statistical significance. He also proposed a method for relieving an economic crisis by using monetary policy to regulate prices. He said:

If grain is sold for as little as twenty [cash per picul], agriculture will suffer; if sold for as much as ninety, the secondary occupations will suffer. If that occurs, then wealth will not issue, while if the farmers suffer, they will no

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[5]We know very little about Ji Ran"s life. We know only that his surname was Xin[a] and his alternate names were Wenzi[b] and Yueren.[c] He was a descendant of a deposed duke of Jin. Broad in learning, there was nothing through which he did not penetrate. He was especially good at calculations. Fan Li [a Spring-Autumn Yue statesman who helped conquer Wu. EHK] was his pupil, and so gained riches. The *Historical Records* calls him Ji Ran, but the *Yue Jue Shu* calls him Ji Ni. At the time of King Goujian, he was still a young man.

[6]*Historical Records*, 129, "Biographies of the Money-makers."

longer clear their fields. If the price is kept no higher than eighty and no lower than thirty, then both agriculture and the secondary occupations will be profitable. If grain is kept at a level price and goods are fairly distributed, there will be no shortages at the customs barriers and in the markets. This is the proper way to govern a country.(*Historical Records*,

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129 "Biographies of the Moneymakers.")

He advocated maintenance of a suitable price, one neither excessively high nor excessively low. If prices got too far out of line, the method of averaging would be used to rectify them: "Dispose of expensive goods as though they were excrement; take up cheap goods as though they were pearls and jade. Wealth and money should flow like water." (*Ibid.*)

The *Yue Jue Shu*, in the chapter called "Ji Ni's Internal Classic," quotes Ji Ni's words to King Goujian:

"If Your Majesty is judicious, and uses my council, at the best you can become king, at the least you can become hegemon [*bawang*]. So what is there to lose?"

The King of Yue asked, "What would be required?"

Ji Ni replied, "When Jupiter for three years is dominated by the element Metal, then there will be good harvests; when for three years it is within the realm of Water, then there will be destruction; when for three years it is in the realm of Wood, then there will be famine; and when for three years it is in the realm of Fire, then there will be drought.

"Hence one should disperse what has temporarily been accumulated, and buy for storage what has been ordered. It should be decided that the multitude of goods will be issued after three years. . .

"Every six years all under Heaven will have a good harvest; every six years there will be a drought. Every twelve years there will be a famine. This will cause the people to disperse. . .

"That which can fundamentally restore normality is to entrust matters to the worthy and the able. Then, goods can come with a creaking of wheels from a thousand *li*. If this is not done, they will not even come from a hundred *li* away. That is what the ruler seeks, even if its price is ten-fold; that which he selects is without price."

During Warring States times, the doctrines of Bo Gui[7] and Li Kui[8] were very close to those of Ji Ran.

Bo Gui also based his discussion of good and bad harvests on *yinyang* and Five Agencies doctrines. He said the following: "When the reverse marker of Jupiter is in the sign *mao*, the next harvest will be good, but the following year the crops will be much worse. When it reaches the sign *wu*, there will be a drought, but the next year will be fine. When it reaches the sign *you*, there will be good harvests, but the next year things will be bad. When it reaches the sign *zi*, there will be a great drought. The following year will be good. When Water is reached . . ." This runs parallel to Ji Ran's "When it is a Metal year, abundance; when Water, disaster; when Wood, famine; when Fire, drought." Bo Gui also had similar methods for responding to these situations: "What men throw away, I take up; what men take up, I give up."[9]

Li Kui's policies also called for maintenance of appropriate prices. He said: "If grain purchased for storage is too expensive, it hurts the people. If it is too cheap, it hurts agriculture. If the people are injured, they will disperse. If agriculture is injured, then the state will be impoverished. Hence the harm from excessive dearness and excessive cheapness is the same. Those versed in statecraft strive to keep the people from injury and agriculture encouraged still more." Hence he advocated averaging acquisitions of grain. When harvests were abundant, the government should buy up the surplus. In bad years this grain would be sold off to relieve shortages.

For these reasons, those versed in leveling the price of grain had to carefully watch the harvests. There are top, middling, and less good harvests. In a top harvest, the product was four times the average, with a surplus of four hundred piculs. A middling harvest was three times the average, with a surplus of three hundred piculs. In a lesser good harvest, the product was double the average, with a surplus of a hundred piculs.

In a minor famine, a hundred piculs were collected. During a middling famine, seventy piculs. During a great famine, thirty piculs. Hence, during a best harvest, the goverment purchased three-fourths of the crop, leaving one-fourth for the people. During a middling good harvest, it purchased half the crop.

During a lesser good harvest, it bought up one-fourth. This allowed a sufficiency for the people. When the price had reached its average level, government purchases ceased. During a minor famine, the government issued what had been collected in a middling good year. During a middling famine, it issued what had been collected during a middling good harvest. During a great famine, it issued what had been collected during a top harvest.

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Hence, though there occurred famines, floods, and droughts, grain was not expensive, and the people did not

[7]A man of Zhou, he was born during the generation of Marquis Wen of Wei.

[8]Li Kui was the prime minister of Marquis Wen of Wei.

[9]*Historical Records*, "Biographies of the Moneymakers."

disperse because of the policy of collecting when there was a surplus to make up for when there was an insufficiency." (*Han History*, 24, "Treatise on Food and Money.") [Translation of this and the preceding quotation adopted from Nancy Lee Swann (tr.), *Food and Money in Ancient China* (Princeton University Press, 1950), pp. 139-140, 142-144.]

The work with the greatest relevance to monetary theory is the *Guan Zi*.[10] This book is for the most part a Warring States era product. Its author had a great many penetrating views on the problems of a monetary economy.

However, the fiscal policies he advocated were based on the perspective of the ruling class. He did not advocate reduction of taxes. He wrote: "There are five things which determine if a state will be wealthy or impoverished, and light excises and low land taxes are not even worth considering." This is the opposite of Lao Zi's view. Lao Zi said: "When the people starve, it is because their rulers are consuming too much in taxes. That is why there is famine." The contents of the *Guan Zi* are somewhat eclectic, and it does not seem to have come from the hand of a single author. Many passages are very obscure, and are susceptible to dubious interpretations.

The author or authors of the *Guan Zi* had several things to say about monetary studies. The first concerns the origins of money:

> The rulers cast coins to establish money. ("Husbanding the State.")
>
> The Former Kings . . . used pearls and jade as the superior money, gold as their medial money, and knives and spades as their inferior money. (*Ibid.*)

This ascribes money's origins to the subjective intentions of the monarchs, and so belongs to the nominalistic interpretation of money's origins.

The second set of statements concerns money's function:

> Knife coins are the channels and ditches. ("Calculations Regarding Earth.")
>
> Gold, knives and spades are commodities/moneys circulated among the people. ("Light and Heavy," Part A.)
>
> Gold is used as a measure. ("Establishing Government.")

These refer to money's two most important functions, its use as a medium of circulation, and as a measure of value. The other functions are directly or indirectly implied by these. It must, however, be mentioned that the ancients lacked a clear set of scientific terms, and that their ways of thought were not the same as those now in general use. When we translate ancient terminology into modern vernacular language it is hard to avoid including some conjectural elements. For example, the two words used above, "ditches and channels," literally mean just that.

The *Guan Zi*'s authors probably also intended that literal meaning, but also extended the phrase metaphorically to mean the channels of commerce. They did not literally mean that the knife coins themselves were channels for money's circulation. Because knife coins had their own channels of circulation, they themselves could not be those

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channels of circulation. And so, translated into current jargon, we can only say: knife coins were an instrument for circulation.

As for the phrase "gold is used as a measure," some say this does not point to its use as a measure of value. But whether the object of measurement is some individual commodity, the whole of society's commodities, or what is consumed, it is still a question of quantity, a question of how much. Is it a matter of how much of what? That is, how many feet or inches? How many catties or ounces? How many individual items? Evidently not, because these are all incommensurable. They cannot be compared.

If that is the case, then value must be the object of this measure. It is a matter of how much value there is. Unfortunately, the concept of value was a hazy one for the scholars of antiquity. They made no distinction between kinds of value, i.e. value in exchange, value in use, or value in the sense of price. Of course they went still less deeply into the matter of the basis or source of value, since there was no one in ancient times who specialized in the study of value or even in economics. Even modern capitalist class economists or monetary theorists often blur these several aspects of the concept of value together.

And yet, it cannot be said that the *Guan Zi*'s authors were not discussing the question of value. After all, the term value was first used by them. The content of the term is capable of development. It is constantly being corrected to make it ever more clear. Otherwise we would have to keep creating new terms, if we were not able to contradict past uses of the term.

The third aspect of monetary theory with which the *Guan Zi* concerns itself is money valuation. The authors of the *Guan Zi* were the first to discuss the relation between the value of money and the value of commodities. They wrote: "If coins are heavy, then

[10]There are many editions of the *Guan Zi*, with many discrepancies between them. I am here using the Song woodblock edition.

the myriad of goods will be light. If coins are light, then the myriad of goods will be heavy."[11] They also wrote: "Therefore, if grain is heavy, then gold is light; if gold is heavy, then grain is light. The two do not balance."[12] Elsewhere the *Guan Zi* adds: "If grain is heavy, then the myriad of goods are light; if grain is light, the myriad of goods are heavy. The two do not balance."[13] What is being discussed here is the relationship of the values of various commodities. We should not take this to mean that grain served as money then, because the book goes on to discuss the price of "heavy" grain.

This book is also the creator of the quantity theory of money. In the chapter "Husbanding the State" there is the statement "If goods are many, they will be cheap; if scarce, they will be expensive; if dispersed, they will be light; if concentrated, they will be heavy." Though money is not explicitly mentioned here, it is obviously meant to be included.

The nearly contemporary Greek, Xenophon (435-354 B.C.), denied this point. He said that while gold could be cheapened by an increase in its quantity, that could not be the case for silver. The Greeks at that time used silver as money. Gold was merely a commodity. He supposed that no matter how much the supply of silver increased, people would still demand it, and so it could not fall in price. This is to deny the commodity nature of money, and to view it as an unchanging
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thing.

Aristotle (384-322 B.C.) recognized that money was also a commodity, and so its value, like other commodities, could change, but he believed that such changes in value would be less for money. The *Guan Zi* seems to have made no distinction between the value of money and the value of commodities in general, supposing that both had their value determined by their quantity. Hence the *Guan Zi*'s quantity theory of value was not merely a quantity theory of money's value, but a quantity theory of the value of all goods. It states:

> That which the people have in surplus, they treat as light. Therefore the ruler will gather it in because it is light. That which the people do not have enough of, they will treat as heavy. Therefore the ruler will disperse it because it is heavy. ("Husbanding the State.")

This goes beyond quantity theory to approach modern marginal utility theory. The author also thought that by means of increases and decreases in the quantity of money, the prices of goods could be kept level:

> The ruler, knowing the truth, hence sees that the state makes up for deficiencies and manages its objects of value. When grain is cheap, money will be conferred to provide food. When cloth is cheap, money will be conferred to provide clothing. He will observe the lightness and heaviness of things, and manage them so as to confer them, and hence expensiveness and cheapness can be regulated. ("Husbanding the State.")

And yet the *Guan Zi* on the one hand says money is not really useful, and at the same time grants to it a special destiny, a political destiny, to be used to store up valuable goods, manage human affairs, and pacify the world:

> If you grasp three coins, there is nothing there to warm you. If you eat them, there is nothing there to nourish you. The Former Kings used it to store up goods, to manage men, and to pacify the world. That which is used to order things is called a measure. A measure fixes height and subordination, so that things are not shifting. ("Husbanding the State.") [Translation adopted from Louis Maverick (ed.), *Economic Dialogues in Ancient China: Selections From the Kuan Tzu* (Carbondale, 1954), p. 122.]

His method was to increase the quantity of money in circulation when prices were too low.

He also considered the speed of circulation of commodities, i.e. the volume of exchange, to be important:

> If the myriad of goods can flow unobstructed, they will be put in motion. If they are put in motion, then they will be cheap. ("Light and Heavy, A.")
>
> If goods are stored, they will be heavy; if issued, then they will be light; if dispersed, they will be numerous. ("Investigations and Considerations.") [Cf. Maverick, p.

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[11]Cf. *Guan Zi*, "Enumeration of Mountains," 76. This is close to what Adam Smith wrote: "The prices of goods rise in accord with the fall in the value of silver. The degree of their rise matches the degree of fall in the value of silver." Adam Smith, *The Wealth of Nations*. [This appears to be a paraphrase of Smith"s remarks on silver on p. 196 of the Methuen, University Paperback edition, edited by Edwin Cannan, 1950 edition. The terms "light and heavy" [*qingzhong*] originally referred to the weights of coins, but by this time the two words had been metaphorically extended to mean something roughly equivalent to "supply and demand." To say that "grain is heavy" meant that demand for it was greater, i.e. "heavier," than supply. To say that "grain is light" meant that demand was less, i.e. "lighter" than supply. Cf. Nancy Lee Swann (tr. & ed.) *Food and Money in Ancient China* (Princeton, 1950), p. 222n367. EHK]

[12]Cf. *Guan Zi*, "Light and Heavy, A."

[13]Cf. *Guan Zi*, "Light and Heavy, A," no. 80.

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Though his goods or myriad of goods are set in contrast with money, it is very clear that he believed that both observed the same rule. If this assumption is so, then he already understood what the effect was of change in the velocity of circulation of money.

The authors of the *Guan Zi* were born in an age of warfare and disorder, with each state taking the increase of its own wealth and the strength of its own army as its goals. Hence their theories aimed at a wealthy state and a strong army. The European mercantilists had the same goal, but their

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version of it required amassing large amounts of money, whereas the *Guan Zi*'s wealthy state required amassing real goods and wealth. Their aim was to make sure that the people within a state enjoyed low prices so as to raise their standard of living. So they did not consider money as wealth: "If in season, goods are not available, then no matter how much gold and jade there is, this must be said to be an impoverished state."[14] This is in contradiction to the doctrines of the European mercantilists.

The book's method for increasing the quantity of goods was, in addition to increasing production, to raise purchase prices so as to compete for foreign goods.[15]

> Now, grain is heavy in our state, and light in the world at large. Then the other lords' goods will spontaneously leak out like water from a spring flowing downhill. Hence if goods are heavy, they will come; if light, they will go. ("Investigations and Considerations.") [Cf. Maverick, pp. 154-155.]
>
> If the other lords' grain is priced at ten, and if we price our grain at twenty, then their grain will flow to our state. ("Enumeration of the Mountains.")
>
> If a *fu* of grain is selling for a hundred in Teng or Lu, then we make our price for a *fu* of grain a thousand, and the grain of Teng and Lu will flow through the four channels to us as though into a deep ravine. ("Light and Heavy, B.") [Cf. Maverick, p. 186.]

Judging from the doctrines contained in the *Guan Zi*, its authors would not only seem to have considered money a passive instrument for circulation, but to have seen it as a positive instrument for making purchases, and to have taken advantage of this positive character. Superficially, each purchase amounted to a single flow of money, because a sale was taking place in addition to a purchase. In economic exchange, however, the purchasers generally take the initiative, and can use this to bring into play their strength as purchasers: The decision to buy and how much is bought can affect the amount produced or its price.

The seller does not have that much strength. As the producer of a commodity, he has no choice but to sell it, but he cannot peddle it from door to door. [This point makes sense because normally in an exchange economy, producers produce far more of a specialized good than they themselves can consume. EHK] If the purchasers will not buy it, then even if he drops the price, he might not be able to sell it. Unlike money, commodities cannot be preserved indefinitely at a profit. The authors of the *Guan Zi* may not have fully understood all this, but at least they saw how to employ pricing policy to obtain the things they wanted to obtain.

The *Mo Zi* also discusses monetary problems. To begin with, it discusses the relationship between money and commodities:

> In using knife coins to buy grain for storage, the minister acts as a merchant. When knives are light, then buying for storage will not be expensive. If knives are heavy, then buying for storage will not be easy.[16]

At first sight, this statement is very obscure. Some revise it to read: "If knives are light, then buying for storage must be expensive; if knives are heavy, then buying for storage is not easy." That would make it almost identical to the argument in the *Guan Zi*, but such a revision is not appropriate, because both parts of the "Exposition of the Canon" chapter of the *Mo Zi*

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reflect the tone of the Logician School of the late Warring States Era, and the emendation merely repeats the *Guan Zi*, [which would not have been very interesting for these writers].

The book's original intention was perhaps merely to state that if coins have low value, that does not

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[14] Cf. *Guan Zi*, "The Eight Observations."

[15] The authors of the *Guan Zi* wanted both to keep domestic prices low and raise prices to attract foreign goods, which seems to be contradictory. We can only explain this by assuming they would carry out a two-level price policy, which would keep domestic and foreign trade prices separate. [Logically, this would require manipulation of foreign exchange rates, and requiring all importers to purchase foreign exchange from the government or its authorized agents, which is what modern governments do. The ancient Chinese coins from one state which bore denominations in the monetary unit of some other state could have embodied attempts at such a policy. EHK]

[16] *Mo Zi*, 10, "Exposition of the Canon," latter part.

mean that the price of grain is really high, and that if the value of coins is high, then even if the price of food is low, we can not say it is really cheap. Possibly this point was being made in reply to the *Guan Zi*. What was being discussed was still the relationship between commodities and money.

It goes on to say:

> If the king's knife coins do not change, there will still be changes in the grain purchased for storage. The harvest changes the amount purchased for storage, and so the harvest changes the knife coins.[17]

The first half of this sentence seems to adopt a nominalistic viewpoint. It assumes that the state's money does not change, and that what changes is the price of food. And yet previously it states that both knife coins and purchase for storage can be either light or heavy, while here it is stated that the knives do not change. On the surface there is a contradiction between the two. Probably it is merely saying that even if the value of money does not change [through a change in its quantity], the price of food can change [through a change in its quantity], and then influence money's purchasing power.

It states further:

> If the merchant's price is suitable, then he will be repaid. His satisfaction is in getting rid of all of it.
>
> To get rid of all of it, is to get rid of that for which he has not been recompensed. If he gets rid of that for which he has not been recompensed, then he has been recompensed, and this amounts to selling it.
>
> Whether it is suitable or not, depends on whether it is desired or not.[18]

This makes the value of the commodity absolutely determined by the desires of the purchaser, and denies that commodities have an objective independent value. This is similar to the statements in the *Guan Zi* that "when the people have a surplus of something, they treat it as light" and "when the people do not have enough of something, they treat it as heavy." It is also a forerunner of the later Austrian School's theory of subjective value.

These words in the *Guan Zi* probably reflect the point of view of Gongsun Long. Gongsun Long was a man from Zhao. He lived in Yan and Zhao at the time of the Yan army's attack on Qi. Yan, Zhao and Qi all used knife coins.

a 辛 b 文子 c 赵人

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[17] *Mo Zi*, 10, "Exposition of the Canon," latter part.

[18] *Op. cit.*

1.4. The Appearance of Credit

Borrowing must have begun after the appearance of private property. Once private property had appeared, society gradually divided into the two classes of the rich and the poor. When the rich and poor competed, the rich were generally in the superior position, which allowed them to become still richer, and made the poor still poorer. At times, if a poor man did not borrow, he would not have enough to preserve his property or even to live.

The existence of money is not a necessary prerequisite for borrowing, because borrowing need not employ money. It can be in various articles necessary for daily life. Such everyday necessities, when used to make loans, took on

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the function of instruments of payment, which is also a function of money, but there is room for argument as to whether things which just have this function can also be called money.

Hence borrowing frequently begins before the appearance of true money, and has almost as long a history as the exchange of goods for goods. Evidence for this is found in the early records of a number of ancient peoples. Borrowing flourished among the Sumerians and Babylonians prior to 2,000 B.C. Borrowing was sometimes in silver, sometimes in grain. Repayment was sometimes in the same goods, but sometimes even if silver had been borrowed, repayment might be in grain.[1] After the emergence of money, sometimes goods continued to be used as well as money, as is attested in the *Old Testament*.[2]

I have found nothing concerning borrowing in either oracle bone texts or bronze inscriptions. This, of course, is not to say there could not have been borrowing during the Yin dynasty. Private wealth and property already existed, and so the prerequisites for borrowing were all present. The Yao *ding* inscription states that for stealing official rice, the penalty was to return twice the amount. If the amount was not returned within the year, the quantity was to be doubled yet again. Though this was a fine, it can also be viewed as the exaction of interest.

An ancient tradition states that when Ji Li [the father of King Wen of Zhou] moved his capital to Western Zhou, he took out a loan from the Shang. Unable to repay them, he ascended the multi-storied terrace to avoid the debt. The Zhou people called this structure the debt-avoidance terrace.[3] This tradition is, however, implausible.

The earliest recorded reference to borrowing in ancient texts is generally believed to be in the *Rituals of Zhou*.[4] As described by this book, the "Coin Office" [*quanfu*] was something like a modern finance ministry and central bank combined. Its job was to manage various taxes and price stabilization. Its credit business involved buying on credit. The people would borrow from the government for a period determined by the purpose of the loan. If for ceremonial purposes, the loan's term was only ten days. If it was for a funeral, the loan could be for three months. The government took interest on its capital, and used it to meet its expenses. At the end of each year the accounts would be balanced.

Lending by this Coin Office may be considered the first use of government credit. Probably both the loans and their repayment, including interest, were in various local products.[5] The Coin Office operated on a very large scale. It had four upper officials, eight middle-ranking officials, and sixteen lower-ranking officials. Four men were of bureau rank,

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[1]The forty-eighth item in the "Code of Hammurabi" states: "If a man owes a debt, and his fields are destroyed by a violent storm, so that his harvest is blown away; or if because of lack of water, the grain does not ripen; then during that year he will not give grain to his creditor. He will soak his writing board (meaning the clay certificate-tally of debt, which was soaked so as to revise it), and moreover, during that year he will pay no interest."

The forty-ninth article concerns money which was borrowed (the original text possibly reading silver), and the use of grain or linseed as repayment. A number of other articles also deal with borrowing.

[2]*Old Testament*, "Leviticus," xxv.37: "When you lend money to another, you may not take interest from him; when you lend grain to another, you may not demand more in repayment." The English *Authorized Version* of "Deuteronomy," xxiii.19 reads: "Thou shalt not lend upon usury to thy brother, usury of money, usury of victuals, usury of any thing that is lent upon usury." The word "money" in the English text is sometimes lacking in the original, and sometimes the word "silver" is found instead, and so the silver may have been viewed by the Bible's authors as a commodity.

[3]*Jin History*, 26, "Treatise on Food and Money," quoting Wang She.

[4]*Rituals of Zhou*, 15, "Local Official Coin Offices."

[5]To the above cited text, Zheng Xuan of Han added the following note: "If a farm received a state loan of ten-thousand coins, it would pay an annual interest of five-hundred." Jia Gongyan even went so far as to say: "Those in nearby suburbs up to eleven *li* away, paid annual interest of a thousand for ten-thousand. Those in distant suburbs up to twenty or thirty *li* away, paid 1,500 per 10,000 cash. People cultivating land around prefectural cities paid 2,000 in annual interest per 10,000." These statements are, of course, unreliable.

there were eight scribes, and eight merchants, with eighty subordinates, for a total of 128 personnel. Evidently they must have done a brisk trade.

The date of completion of the *Rituals of Zhou* cannot, however, be determined. Some of the material it contains was probably inserted by Han dynasty writers. Some may even have been forged. Hence its account of the Coin Office is not altogether credible.

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The *Dialogues of the States*, "Dialogues of Jin," 1, states that when Duke Wen of Jin recovered his state, he "rejected his responsibilities [for his debts]." The "Dialogues of Jin," 14, tells the story of Luan Huan Zi "borrowing residence money." The *Zuo Chronicle*, under the 16th year of Duke Wen, notes that when there was a famine in Song, "Gongzi Bao used up his grain in making loans." These may really be the earliest records of credit.

Another important written source is the *Guan Zi*, which must reflect Warring States circumstances. Usurers flourished then to an extraordinary degree. Borrowing could be in either grain or cash. Some thirty-thousand families were involved in lending, according to the *Guan Zi*, and the amount lent, reckoned in grain, was over thirty-million *zhong*, with each *zhong* being 6 *hu* four *dou*. Reckoned in cash, it came to thirty-million.

The customers of the usurers were the peasant, hunting and fishing households. The peasants were those the *Guan Zi* called those "who lacked enough in a given month, but who had a surplus over the course of a year," and who normally needed to borrow. Especially to pay the taxes exacted by the rulers, they had no way to avoid paying a very high interest rate to borrow money. Hence the interest rate then ranged from twenty and fifty percent to doubling of the principal.[6]

Given the relatively direct nature of production, there was no particular inconvenience in borrowing goods. Whether for production or consumption, a borrower could easily acquire the things he needed, because in those times requirements were very narrowly defined. For production, no more was needed than seeds or tools. For consumption, no more was needed than food and clothing. These things a person could produce for himself for purposes of repayment.

As production became more developed, however, the division of labor became finer, the number of commodities multiplied, and it was no longer easy to borrow the things one particularly needed, or to use what one produced as repayment. Only with money could one buy the things one needed, and so lenders came to prefer receiving money, and even borrowers found money more convenient, since it was only with money that they could buy the things they required.

Moreover, because of money's characteristic as a general denominator of value and its function as a store of value, creditors preferred to receive money rather than goods, since goods were not convenient to store, and money could be turned into goods at any time. Hence, that the appearance of money was a stimulus to the development of credit, is absolutely unquestionable.

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[6] *Guan Zi*, "Light and Heavy, Part D":

"Bao Shu rode west, and on his return reported that the people of the west live along the rivers and where things sprout from marshes. They fish and hunt, and gather firewood to cook their food. Among their money lenders, those with the most have a thousand *zhong*, and those with the least have six or seven hundred *zhong*. When they lend one *zhong*, they receive interest of one *zhong*. Over nine-hundred households receive interest.

"Pin Xuwu rode south, and on his return reported that the people of the south live on the hills and reside in the valleys. They climb up and go down. Above they hew wheels and shafts; below they collect acorns and chestnuts. They hunt in the fields for food. Of those households which lend, those with the most have ten-million; those with the least have six or seven million. They put it out for interest of five [misprint for fifty? EHK] percent. There are over eight-hundred families receiving interest.

"Ning Qi rode east, and on his return reported that the people of the east live on the mountains and the seashore. The fishermen and hunters are the wealthiest. They make hempen cloth to earn a living. Of those who lend at interest, including the Ding, Hui, Gao and Guo, those with the most have five-thousand *zhong*, and those with the least have thirty *zhong*. They receive five *fu* of interest per *zhong*. Eight or nine-hundred families receive interest.

"Xi Peng rode north, and on his return reported that the families of the north are spread out in isolated settlements. They boil sea water to make salt, The people of Liang and Ji catch fish. They gather fuel to earn a living. Of the lending families, those with the most have ten-million, those with the least have six or seven million. They get twenty percent interest. Over nine-hundred families receive interest.

"In total they have lent out ten-million in cash, and several tens of millions of *zhong* in grain. Some ten-thousand families receive interest."

The last few phrases are evidently summations, but they do not jibe with the figures given before. For example, the number of lending families from the east, south, west and north only add up to three or four thousand. Perhaps there was a copyist's error. [The translation in Lewis Maverick (ed.), *Economic Dialogues in Ancient China: Selections From the Kuan Tzu* (Carbondale, 1954), pp. 191-192, makes the phrase rendered here as "those who *receive* interest" into "those who *pay* interest." EHK]

We ought to distinguish between lending and usury. The meaning of the term usury is quite blurred. The term has no clear definition. It was derived from the Latin, where the word *usura* originally meant "to use," and later was applied to the receiving of interest, particularly high rates of interest. Because Christianity prohibited the taking of interest for loans, all rates of interest came to be considered unjust, but with the appearance and growth of the sprouts of capitalism,

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lending at interest came to be more and more tolerated, and in English the meaning of the word "usury" came to be restricted only to loans at high rates of interest. Usury in this sense meant interest rates for loans higher than that fixed officially.

Our Chinese term for usury --*gaolidai*-- was coined as a translation of the foreign word "usury" at this latter stage of the word's evolution. But the original foreign term referred to taking interest and the translated word also to lending itself, and so the word can be used both in a broad and narrow sense. In the narrow sense it means lending at rates exceeding the official rate of interest. In the broad sense it can refer to any lending at interest, because interest itself is obtained by the lender without labor. It is not synonymous with making loans.

Borrowing is the larger category. A loan need not bear interest. Even in modern times, a loan of tools or even of money to friends frequently does not involve the taking of interest, but such transactions are still loans. Babylonian credit included loans without interest, and such loans can in no way be considered usury. Ancient China undoubtedly also had this type of borrowing, but it was no more the main form of credit than were loans of actual goods. The main form of credit was the borrowing of money with the exaction of interest. Hence we can only say that credit is a variant form of money.

The rate of interest for loans was not uniform in ancient times. It would be better to view this lack of uniformity as a characteristic of feudal society rather than as a characteristic of usury. Feudal society's lack of unity was made manifest in numerous ways, of which the interest rate was only one. Even the interest rates recorded in the *Guan Zi* are not uniform.

During Warring States times, lending at interest was extraordinarily common. It was then called *jiadai*[7] or *chengdai*[8]. The *Historical Records*' "Biographies of the Moneymakers" gives many examples of lending to attain wealth, as for example the Cao and Bing families' "carrying on of trade in credit." The most famous example was Lord Mengchang of Qi, who used his status as great aristocrat and high official and landowner to lend at interest so as to support several thousand retainers. His annual income from interest came to more than a hundred-thousand.[9]

Borrowing then was almost entirely pure credit. There was no collateral. The only record of a loan was a tally issued by the lender. Each party retained half the tally. When the term of the loan had expired, the tallies would be matched as repayment was made. When Liu Bang served as constable of Sishui, he went around with his friends, and they frequently drank wine on credit. It is said that on one occasion his creditor saw a dragon hovering above Liu's head while he was in a drunken sleep, and he thereupon "broke the tally, and forgave his debt."[10]

Non-collateral loans were the main form of credit under feudal society. There was not much risk for the creditor because

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in a feudal society the people's movements were not free. Though absconding was not impossible, all things considered, it was relatively difficult. If a debtor left the land, he frequently found living difficult. Creditors also often had complete freedom to dispose of the property and persons of debtors. Hence at times a debtor's family property might be sold or confiscated, and whole families would sink into beggary. This is what Mencius meant when he

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[7]*Dialogues of the States*, "Dialogues of Jin," 14: "*jiadai* residence money."

[8]*Mencius*, 5, "Duke Wen of Teng," first part: "also *chengdai* increasingly."

[9]*Stratagems of the Warring States*, "Strategems of Qi," 4: "There was a man of Qi named Feng Xuan who was so poor he could not maintain himself. He sent a servant to ask that he himself be placed under Lord Mengchang. He wished to be lodged and fed as one of the Lord's retainers. . . Later, Lord Mengchang put out a request among his retainers asking which of them could keep records, and was thus able to collect his debts in Bi. Feng Xuan said that he could do so. . . Thereupon Feng secured a chariot, and rode off carrying the tallies of indebtedness. As he departed, he asked what he should purchase and bring back with the proceeds when the debts had all been collected. Lord Mengchang replied that it should be something in scarce supply in his household. Feng hurried to Bi, where he had the clerks assemble all those among the people who owed debts, so that his tallies might be matched against theirs. When the tallies had been matched, Feng brought forth a false order to forgive these debts, and so he burned the tallies. The people all cheered."

[10]*Historical Records*, "Basic Annals of Emperor Gao Zu."

said "they also lent increasingly, causing the old and the very young to be cast into the ditches."[11]

[11] *Mencius*, 3, "Duke Wen of Teng."

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2.0 MONEY OF THE TWO HAN DYNASTIES

2.1 Monetary Systems

1. Coinage

Western Han's coinage was an extension and development of the Qin system. The Qin dynasty monetary system had a bimetallic gold and copper cash standard, with gold for large transactions, and the Half-ouncer bronze coin for small ones. Western Han had the same gold-cash standard at first, except that for gold, the catty became the unit.

The histories all say that a catty of gold was equal to ten-thousand cash. This is a question worth studying. This ratio may have been that of Emperor Wu's reign rather than that of the early Han. It could not have held before the Half-ouncer had been lightened to four grains.

In any event, bronze coins were not a secondary money. Their use was not limited. Gold, however, was only employed as a measure of value, as an instrument for making payments, as a store of value, and as an international currency. It was not a medium of circulation. For that purpose only bronze cash were used, and so for daily life the bronze cash was more important.

The bronze cash of Western Han were still named after their weights, but the actual weights gradually diverged from their named weights. This is common in the history of national coinages.

The Chinese and Roman situations were particularly close. In ancient times the copper *as* was the main Roman coin. It originally weighed one Latin pound (*libra*, equal to 273 grams), and hence was also called the *libra*. This coin's weight was steadily decreased, first by half, then to one sixth, and finally to one-twelfth of its original weight. In 89 B.C. (Emperor Wu's zhenghe 4), it was reduced to one-twenty-fourth of its original weight.

The situation in China was similar: The Qin Half-ouncer originally weighed half an ounce, so that its name corresponded to its weight. Reduction in its weight was effected at the beginning of Han. Though the name was not changed, during Empress Lü's

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year 2 (186 B.C.) its weight was reduced to eight grains. In Emperor Wen's year 5 (175 B.C.), it was lowered to four grains, making it one-third its original weight. This was merely the government's officially sanctioned weight. Coins in actual circulation were much lighter. This was because the coins were not minted by the government, but rather were freely coined by the people.

According to the histories, there were eight kinds of Western Han copper coins. In the early years, the Qin Half-ouncer was used. From Empress Lü's year 8, the Eight-grainer was used. In her 6th year the Five-*fen* was circulated. In Emperor Wen's year 5, the Four-grainer was made. In jianyuan 1 of Emperor Wu (140 B.C.) the Three-grainer was made. In his 5th year the Half-ouncer, also called the Three-*fen* coin, was again circulated. In yuanshou 5 (118 B.C.) the Five-grainer was minted. In yuanding 2 (115 B.C.) the Red-edged coin was produced.

In fact, however, there were only three types of coins, because the Eight-grainer, Five-*fen*, Four-grainer and Three-*fen* were all Half-ouncers, differing only in size, and the Red-edged coin was a variation on the Five-grainer.

The question of who had the right to mint coins during early Han still awaits an answer. Sima Qian and Ban Gu both say that because the Qin coins were too heavy, during early Han the people were permitted to mint coins. This would make it appear that anyone could do so. Some even say that this was one way of dismantling the Qin tyranny.[1] In any event, the earliest coins to be so produced must not have been the so-called Pod-cash. The Qin Half-ouncer weighed 12 grains. The Pod-cash were as light as 1 grain or less. Liu Bang would not have allowed the people to make so drastic a weight reduction.

Sima Qian also says that in the time of Emperor Wen, "the people were permitted to mint coins at their discretion." The "Chronological Table of Generals, Ministers and Famous Officials Since the Rise of Han" in the *Historical Records* says this ocurred in Emperor Wen's year 5 [175 B.C.]. The *Debates on Salt and Iron* merely says that "in the time of Emperor Wen, the people were allowed to mint coins." Neither work says at what time the people were forbidden to mint coins. Perhaps such a prohibition occurred in Empress Lü's year 2 [186 B.C.], when the Eight-grainer began to be circulated, bacause during Emperor Wen's reign Jia Yi alludes to a "former prohibition on minting coins," as though it were something in place not long before.

There were not just four kinds of Han Half-ouncer. Actually, these coins come in many variant forms. Most people consider any smaller coin which resembles the Qin Half-ouncer to be an early Han Half-ouncer. This is quite reasonable. There are

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[1]Katō Shigashi, "Concerning the Money of Early Western Han, Particularly the Four-grainer," in Wu Jie (tr.), *Investigations of Chinese Economic History* (1959), 1, p. 147.

small but thick Half-ouncers with highly irregular inscriptions, sometimes in high relief, which may be early Han Half-ouncers. [Cf. Plate xxvii, at end of this subsection] The Eight-grain Half-ouncer is generally identified with the larger and thinner coins whose inscriptions are in low relief. The Five-*fen* coin is most logically explained as being one-fifth the weight of 12 grains,[2] or 2.4 grains. Most people identify this with the Pod-cash. Small coins with neat inscriptions might all be considered as Four-grain Half-ouncers. Some people even profess to be able to distinguish those minted by Deng Tong from others minted by Pi, the Prince of Wu, but that is hard to accept.

The Three-*fen* coin was

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one-third of 12 grains, or 4 grains, and was still a Four-grain Half-ouncer. Because it was minted after the Three-grainer, all coins which closely resemble the Three-grainer must be Three-*fen* coins. The so-called Pod-cash was also called the Elm-pod Half-ouncer. Strictly speaking, this lablel should be applied only to those thin and small Half-ouncers with extremely large holes compared to the size of the coin, and so which seem to form the character for "mouth" with the four thin strips of their bodies. In the broader sense, however, all light and small Half-ouncers may be spoken of as Pod-cash.

The written sources are not consistent on the inaugural and terminal dates for the Three-grainer. The *Historical Records*' "Treatise on the Balanced Standard" mentions the coin by name, but does not state clearly in what year it began to be minted. Later writers[3] infer from the context that Sima Qian

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[2]*Han History*, 3, "Annals of Empress Gao": In the 6th year, 6th month "the Xiongnu raided the Di circuit and attacked Heyang. The Five-*fen* coin was circulated." There are two opinions on this coin. Hong Zun quotes Gu Xuan's statement that it had a diameter of five *fen*. Cai Yun (in *Habitual Conversations* says it was one-fifth of a Half-ouncer, because the "Chronological Table of Generals, Ministers and Famous Officials Since the Rise of Han" in the *Historical Records* speaks of the Four-grainer as the Three-*fen* coin. Cai Yun's theory is acceptable.

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There is a yellow quartz coin mold with impressions of Four-grain Half-ouncers on one side and still smaller Half-ouncers on the other. Both sides have casting channels down their centers. The Four-grain Half-ouncer side has seven coin molds laid out on both sides of the channel. On the other side there were originally three rows of twelve coins. This mold was originally designed for small Half-ouncers. Later it was converted into a mold for Four-grain Half-ouncers, and so the original mold was cut down by one row, causing the small Half-ouncer side to retain only one and a half rows on the right side. From this we can tell that the small Half-ouncer was the Five-*fen* coin reminted after Empress Lü minted the Eight-grain Half-ouncer. That is, it was the 2.4 grain Half-ouncer. There is a similar mold in the Shanghai Museum.

[3]Most Chinese numismatists and historians adopt the thesis of the *Record of Han*. The *Book Hall of the Original Tortoise* accepts both theories, but says the Three-grainer was abolished in yuanshou 5 [118 B.C.]. Cai Yun (*Habitual Conversations*, 5) points to the contradiction between the *Han History*'s "Treatise on Food and Money" and its "Annals of Emperor Wu." From the *Historical Records*' "Treatise on the Balanced Standard" statement that "from the time Emperor Wen made the Four-grainer until this year, it has been some forty years" he calculates that the Three-grainer was minted in yuanshuo 6.

The Japanese writer Katō Shigashi ("Investigation of the Date of Manufacture of the Three-grain Coin," in *Investigations of Chinese Economic History*, 1, pp. 156-166) holds to the *Historical Records* theory. His reasoning, which is persuasive, is that the minting of the Three-grainer by Western Han was a major reform. Before this, coin names did not correspond to their weights. Only with the Three-grainer was this finally the case. Hence thereafter they could no longer return to the past practice with a Four-grain Half-ouncer. But was the Three-grainer actually intended to have its name correspond to its weight? This is hard to demonstrate.

In my view, Emperor Wu's goal in minting the Three-grainer was still the standard one of lightening the coinage. It was only after the Three-grainer proved too light and small that the Four-grain Half-ouncer was restored.

The *Sea of Jade* says that the Three-grainer was first minted in the Winter of yuanshou 4 [119 B.C.]. The Japanese Okudaira Masahiro (*Record of East Asian Coins*) accepts this thesis. Chen Tieqing ("The Necessity to Follow the Thesis of the *Record of Han* On the Period of Circulation of the Three-grain Coin," *Coins*, no. 28) supports the thesis based on the *Han History* "Annals of Emperor Wu." Aside from the discrepancy of over twenty years, the main difference between these two theses is over the length of the period during which the coin was circulated. According to the *Historical Records* theory, the Three-grainer only circulated for from three months to a year.

The latter discrepancy can provide a clue as to how to resolve the problem of when the coin was abolished. This can be investigated in terms of the quantity of Three-grainers. The length of time the Eight-grain Half-ouncer circulated was four or five years. If the Three-grainer was first minted in jianyuan 1 [140 B.C.], it too circulated for four or five years. How many of each still survive? If one asks people in the coin trade, they will certainly tell you that the Three-grainers are fewer than the Eight-grain Half-ouncers, because they command a higher price.

This in turn raises the question of the link between quantity and price. Those who believe in a mechanical quantity theory will, of course, adopt the viewpoint of those in the coin trade, but in fact price is not a faithful reflection of quantity.

intended to place this in yuanshou 4 [119 B.C.]. He does not, however, specify in which year its use was halted. Later writers believe that its use was halted when minting of the Five-grainer began in yuanshou 5.

Concerning this contradiction, the *Han History* "Treatise on Food and Money" simply echoes the "Treatise on the Balanced Standard," but its "Annals of Emperor Wu" is more concrete, saying they were first minted in jianyuan 1, and were abolished five years later. Usually the *Historical Records* is more reliable than the *Han History* when dealing with monetary materials, but on this point the *Historical Records* is too vague, and so I feel we ought to accept the position of the *Han History* "Annals of Emperor Wu." This coin was only circulated for four or five years in small quantities. The coins weigh about 2 to 2.5 grams apiece.

In modern times a large number of varieties of Four-grainers and Three-grainers have come to light. The majority have squared-off incised inscriptions. A minority has rounded ones. There are also some raised inscriptions, but these coins mainly have square, incised inscriptions. Their obverse inscriptions are merely the two characters meaning "four grains" or "three grains." Their weights are highly variable. Some bear place names, either on the obverse or reverse. Those on the squared off incised inscription Four-grainers include: Dong'e, Chunyu, Linzi, Zi, Gumu, Chen, Lü (with and without the bamboo signific), Yangqiu, Puyang, Zou, Gao'an, Lanling, Zhongling, Bi, Pingyu, Gaoyang, Fei, Hucai, Gaoliu, Dingxiang, Chengxiang, and Jianguo. The place name Qu appears on raised inscription specimens. The rounded incised inscription type bears such place names as Ping'an and Gumo; the raised inscription subtype bears Xiacai, Qieyang and Linqu.

The Three-grainers come in only a few varieties. I have only seen a squared off incised inscription and a Chengxiang version, as well as a rounded raised inscription version. In terms of construction, we can distinquish between those cast with holes and those with drilled holes, some in the center. Of these, the rounded raised inscription types have somewhat larger holes, like the small ring coins, but the Ping'an Four-grainer has two holes, one above, one below. On some, the holes go right through the top and bottom, like a belt buckle. Most of those with squared off inscriptions are small and have shoulders. The Dingxiang Four-grainer's is perfectly square, with a small loop at one end.

The localities named on them are spread through modern Shandong, Hebei, Henan, and Anhui provinces. We cannot locate some place names. The Chengxiang and Jianguo

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inscriptions seem to be official titles.

There are firm relationships among the various types. The squared-off incised inscription and the rounded incised inscription Gumu Four-grainer seem to be from the same place. The squared-off incised inscription Chengxiang Four-grainer and Three-grainer must also be from the same place. The squared-off raised inscription Qu Four-grainer must be an abbreviated form of the same name on the rounded raised inscription Linqu Four-grainer. From these we can tell that the same place might sometimes mint versions with squared off and sometimes with rounded inscriptions. The Four-grainers and Three-grainers must have appeared in sequence.

The discovery of these coins has provoked much debate among numismatists. Some say they were steelyard weights[4] because the Dingxiang Four-

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First of all, demand by collectors for the Eight-grain Half-ouncer is far less than for the Three-grainer, since the former is merely a variant form of the Half-ouncer, preceded by the Qin Half-ouncer and followed by the Four-grain Half-ouncer. Nor is it entirely clear just what coin is specified by the label Eight-grain Half-ouncer. Hence it is not so important to people whether or not their collections contain this Half-ouncer. The Three-grainer is one about which there is no confusion. It is unique, and collectors must have it to complete their collections.

Second, the Eight-grain Half-ouncer is hard to distinguish. If you use weight as your criterion, there must have been some such coins made in the course of the early Han depreciation of the Qin Half-ouncers, and not all of them would have been made from years 2 to 6 of Empress Lü. This would have the effect of much increasing the number of coins so identified.

The matter can be viewed from yet another angle. If the Three-grainer began to be minted in yuanshou 4, and were only in use for a year, then their number should be about as few as the Yongguang and Jinghe coins of Liu-Song or the Chonghe and Jingkang coins of Northern Song. Of these, however, the market price of the Chonghe coins is ten or twenty dollars (prices reckoned in [presumably prewar] silver dollars). The others are all a hundred dollars apiece and more. Three-grainers only run to five or six dollars.

Because the Chonghe was minted during Emperor Huizong's reign, when the quantity of coins turned out was relatively large, it is something of an exception, but even it is more expensive that the Three-grainer. The Three-grainer belongs to a much earlier period, and yet more of them survive. This would make it evident that it could not have just been produced for one year.

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[4]Jiang Fu, "Colophon on Han Official Coin Standards," *Encyclopedia of Ancient Coins*, last section, five strokes, "Four-grainers." This theory is not unreasonable. Although there are

grainer's small loophole was unique in a coin. Most have accepted them as coins, but there is no agreement on their dating. Some place them in Warring States times.[5] Others date them to the Six Dynasties.[6] The calligraphy of the inscriptions is not, however, that of Warring States times. The Lanling, Zhongling, Donge, Chen, Puyang and Gaoyang coins have post-Qin orthography. Nor do they fit into the Warring States money systems, unless as small denomination Qin coins, but none of these places fell within the Qin sphere. Many of them are Qi place names, and Qi then used the knife and spade units, and did not calculate in terms of grains and ounces. The Six Dynasties theory is even less plausible.

I think these coins must belong to Western Han, dating to some time between the reigns of Emperors Wen and Wu, and that they were local coins circulated along with the Four-grain Half-ouncer and Three-grainer.[7] Not one of these place names was of a place so named after Western Han times. Dong'e was Eyi during Spring-Autumn times, and became Eqin during Warring States. Linqu was established during Former Han. The bureaucratic title Chengxiang was used from Emperor Wen's to Emperor Wu's time.[8]

Although the character for grain was written both with and without the metal signific, description of the Four-grainer of Emperor Wen's time as having the metal signific was the work of later writers. The coins actually produced then did not have the metal signific. This is not to be wondered at, particularly for those localities minting the coin which were far from the centers of government. Jia Yi at the time clearly stated that the coins in use among the people varied according to locality.

Later, Emperor Wu changed over to the Three-grainer, and some localities also produced this coin without the metal signific. They were only in use for a short time, and there are far fewer of them than of the Four-grain Half-ouncer. Hence that there are fewer Three-grainer without the metal signific than Four-grainers, corresponds to the situation back then. The variety of forms is also not hard to explain. Emperor Wen's year 5 [175 B.C.], when the Four-grain Half-ouncer began to be minted, was only forty-seven years after the First Emperor of Qin unified the empire. People in their fifties could have used or seen Warring States Era coins of various sorts, and even after the unification, not all of the old coins could have been melted down immediately.

At the end of Emperor Wu's yuanshou 4 (119 B.C.) or at the beginning of yuanshou 5, a monetary **[113]**
reform was carried out. As Zhang Tang had recommended, the White Metal and Hide Money were adopted.

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many kinds of incised inscription Four-grainers, there are very few examples of each kind. If we compare the market prices of the two, the incised Four-grainer is a hundred times the price of the Four-grain Half-ouncer, but it should be noted that the market treats each Four-grainer bearing a different place name as a different coin, whereas Four-grain Half-ouncers with different place names are all lumped into one category. This is what raises the price of the incised Four-grainers. In fact none of the places named on these coins produces copper, and hence it is natural that few such coins exist.

All places having close relationships with the central government minted the Four-grain Half-ouncer. Even the great aristocrat Pi, the King of Wu, and the high official Deng Tong minted it. They had control of an abundance of copper. If the Four-grain Half-ouncers from various locations also bore place names, their modern prices would also be much higher.

Cheng Yuncen, "Investigation of Ancient Coins," *Ancient Coin Magazine*, no. 2, says they are steelyard weights. He had obtained a jade Dong'e Four-grainer, and said that in Spring-Autumn times Dong'e was called Keyi, in Warring States times E (the same E as in Dong'e), and was called Dong'e by Qin.

[5]Lo Zhenyu, *Yonglu Diary* attributes them to ancient Qi. Zheng Jiaxiang's *History of the Development of China's Ancient Money* says they belong to Warring States times, and were still in use during early Han.

[6]Gao Huanyan's *Miscellaneous Record of Discussions on Coins* says that the Jianguo Four-grainer must date to Six Dynasties. He also says that the Dong'e, Linzi and Chunyu Four-grainers must date to after Qin and Han. The Japanese Yamaue [or Yamagami] Kaya[?] says it is a Southern Qi coin. Because the Liu-Song had a Four-grainer, Xiao-Qi must have minted this Four-grainer, he reasons. (Cf. *Shōwa Coin Catalog*.) Nakamura Fusetsu does not agree.

[7]Liu Tizhi's *Rare Bronzes of the Skillful Studio* [*Shanzhai jijinlu*] said they were minted by Western Han.

[8]The title Chengxiang seems to have been established by King Wu of Qin (309 B.C.). According to the *Historical Records*' "Basic Annals of Qin": "In the 2nd year of King Wu of Qin, the Chancellorship [*Chengxiang*] was established. Shuli Ji and Gan Mao were made Left and Right Chancellors." This office was not found in other states. Qi just used the word *xiang*, and not *chengxiang*. According to the *Zuo Chronicle*, Duke Xi 24: "The Marquis of Qi established archery [?] as an equal skill and made Guan Zhong the *xiang*." Under Duke Xiang 25 it states: "Cui Zhu set up Duke Jing and made him *xiang*, with Qing Feng [?] as Left *xiang*." When Emperor Gaozong of Han ascended the throne, he established the position of *Chengxiang*. In his 11th year the title was changed to *xiangguo* --"minister of state." Under Emperor Hui and Empress Lü, the Left and Right *Chengxiang* posts were established. In Emperor Wen's year 2,

This White Metal was an alloy of silver and tin used to make three kinds of denominations of coins. The first of these was the round Dragon-coin, weighing eight ounces, and called White *xuan* or *zhuan*, the latter two characters then being homonymous with the character for ounce. Each coin was worth 3,000 cash. The second was the square Horse-coin, worth five-hundred. The third was the oval Tortoise-coin, worth three-hundred. All of these values are expressed in terms of the Four-grain Half-ouncer. The standard coins then were copper cash. The White Metal were token coins.

Hide Money was made of the hides of white deer from the Shanglin (Upper Grove) Park in the palace precincts. Each piece was one foot square, decorated with colored lines, and was worth 400,000. It was used as gifts for princes and other nobles coming for an audience, and cannot be deemed genuine money. It had no intrinsic value, since a small piece of deerskin, no matter how decorated, could not be worth 400,000 cash. Yan Yi, the Grand Minister of Agriculture then, said that the princes and aristocrats came to court with precious articles worth thousands as gifts, and yet were requited with hides nominally priced at 400,000. The two did not match. This may be said to have been the beginning of Chinese paper money.

White Metal was China's earliest silver coin. Though the so-called three metals had been spoken of since antiquity, and though the histories said that the First Emperor of Qin did not use pearls, jade, tortoise, cowry, silver or tin as money, one might presume upon hearing this that before the First Emperor's unification these things were all used as money. This presumption would, however, be mistaken. It was an inference by historians, not necessarily drawn from the First Emperor's laws. Since *de jure* gold and copper cash were the moneys, none of these other valuable objects was so used. Probably during Qin and early Han people believed that in ancient times pearls, jade, tortoise and cowry were moneys.

That silver and tin were used as money during Emperor Wu's time was known to Sima Qian. Of course this does not rule out the use of silver in specific regions prior to Qin.

White Metal was, however, unusual in shape, being quite different from the traditional forms of coins in China. Perhaps it was influenced by foreign coinages. China then had trade relations with the lands beyond the western frontier (including India). The *Han History* mentions the coins of Jibin (modern Kashmir) and Anxi (Parthia). The coins of Jibin bore the image of a horse, as was then actually often the case for the coins of that region. However, dragons, horses and tortoises were animals with which the Chinese were familiar. The Four-grainers exist in square and round forms, and though they were very small, some have survived. What is strange is that no White Metal coins have survived, and after Han no one has ever seen any. One cannot but be suspicious.

Several months after the issue of White Metal and Hide Money, the Five-grainer was first minted. [Plate xxviii] The number of types of Five-grainer multiplied. There are a number of types even for Emperor Wu's reign, because at first they were not minted exclusively by the central government, but also by various commanderies and princely fiefs. The central minting institutions were the Three Offices of the Shanglin Park, that is, the Office for Coinage, the Office for Sorting Copper, and the Office of Price Equalization

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Through Transportation. The Office for Coinage was in direct charge of the minting of coins. The Office for Sorting Copper was responsible for assaying copper. The Office of Price Equalization and Transportation supervised the transportation of copper and tin.

Generally, both faces of the Five-grainers had raised edges. In this respect they differed from previous coins. An extremely small minority of Four-grain Half-ouncers had raised edges, and some had inner as well as outer raised edges, but their reverses were invariably flat. A very small number of Five-grainers also had flat reverses. All those with irregular edges may be termed yuanshou year period Five-grainers, the earliest of these coins.

The Red-edged coins are hard to explain. In the past, numismatists have supposed that red elemental copper was used for their rims. They based this on textual evidence. No one had seen such a Red-edged Five-grainer. The character for "red" perhaps should be interpreted as a verb, with the meaning of "to file even," as in the expression "to lathe" something. The character here translated "lathe," normally means wheeled vehicle, and it and the character for "red" were probably originally variant forms of the same character. So the words normally now thought of as meaning "Red-edged" actually refer to the filing smooth of the outer rim, which was an advance in coin making techniques. As a consequence, later Fiver-grainers would all have been Red-edged Five-grainers.

Why, then, are we told that Red-edged coins were later abolished? We know only that these coins began to be made in yuanding 2 [115 B.C.] in the

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the *Chengxiang* title was restored. (*Han History*, "Table of Official Ranks.")

capital, in the official foundries, and that minting continued in the commandaries and kingdoms, with one Red-edged official coin being equal to three local coins. What may have been abolished two years later was merely this price ratio between the two. Of course the original Five-grainers continued to circulate, but once the Three Offices of the Shanglin began to mint coins, the commanderies and kingdoms could no longer do so.

Some numismatists distinguish between "Three Offices" and "Shanglin" Five-grainers. This is because they do not understand the meaning of these two terms. The Shanglin Park was the name of the place. The Three Offices were the three bureaus located in the Shanglin Park. Of these, only the Office for Coinage was directly involved with the making of coins.

In summation, the right to mint coins in China was not centralized into the hands of the government until yuanding 4 [113 B.C.]. Of the Five-grainers, there are some unusually fine and thin rimmed coins which may be Red-edged Five-grainers minted by the Office for Coinage. They each weigh around 4 grams.

Of the Five-grainers made after Emperor Wu's time, we can distinguish only those of Emperor Xuan, because several coin molds survive with year periods of his reign on them. A characteristic of these is that the two crossed lines of the character for five are drawn in toward the center of the coin, and their rims are broader than normal. They also frequently bear other marks, such as a stroke above the inner rim, or a half star on the lower part.

The several surviving types of small Five-grainers average 0.7-0.8 grams per coin, about a fifth the weight of ordinary Five-grainers. They are extraordinarily finely made. There is one which is exactly like the Emperor Xuan Five-grainer. In the past some numismatists have ascribed it to Eastern Jin's Shen Lang, or make it a Wang Mang Five-grainer. These attributions are clearly incorrect. These coins must belong to the years of Emperors Zhao or Xuan [86-48 B.C.], as five of them equal one ordinary Five-grainer. From the time Emperor Wu abolished the Red-edged Five-grainer one-equal-to-five rule,

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all Five-grainers circulated at parity with each other. Prices fell during the reigns of Emperors Zhao and Xuan, and the Five-grainer's purchasing power became very great.

Under Emperor Xuan, grain sold for 5 cash per *hu*. If people wanted to buy smaller amounts, like a *dou* or several *sheng* of rice, they had no way to pay for it. It was probably for this reason that the small Five-grainer was minted: to make change with and for making small purchases. If this inference is correct, this small Five-grainer has a special meaning in the history of Chinese money. This is because the standard cash coin was for several thousand years the smallest unit of value, except for this coin, which had no successors. Small coins are mentioned on Han bamboo slips, but we do not know if it was this small Five-grainer that was being alluded to.

There is no way to distinguish Western Han Five-grainers minted after the time of Emperor Xuan. In the future, once well-planned excavations have taken place and coin molds are studied, there is certain to be progress in the more precise dating of Five-grainers. As of now, we can only judge the more finely made coins resembling those of Emperors Wu and Xuan to be late Western Han Five-grainers.

The Five-grainer is the coin used longest and most successfully in Chinese history. Historians consider its weight to have been exactly appropriate. Since the opening of its monetary economy, China had used a vast number of coins of various sizes. Some were as heavy as the 40 gram Qi knives, or as light as the Han Pod-cash, which was not even 1 gram.

The several centuries prior to yuanshou 5 [118 B.C.] were an age of experimentation in the weight of coins. From that date on, with the adoption of the Five-grainer, that coin not only remained China's sole main coin over the next seven centuries, even after its abolition during the first decade of Tang, the new coins retained the size and approximate weight of the Five-grain standard, and coins which departed from that standard usually failed.

That weight and size standard happens to have been settled upon independently not only in China, but also in foreign countries. The ancient Greek *drachma*, though it varied slightly by locality, normally weighed 4 grams. The Roman silver *denarius* also weighed around 4 grams. The standard Chinese Five-grainer was precisely 4 grams.

The Five-grainer was not only of a suitable size and weight, it also represented progress in shape, particularly with its use of the raised rim. Rim and inscription were of the same height, which protected the inscription from being easily rubbed away. Though the Warring States knives and spades sometimes had such rims, particularly the pointed-tip knives and the Qi knives, there were spade coins which lacked rims. Ring coins and Half-ouncers not only lacked rims, but had high relief inscriptions which were very easily rubbed

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away. Most Three-grainers lacked rims. With the Five-grainer, this feature became a permanent one. Europe's coinage was, in this respect, far behind.

In modern times some foreigners have found several kinds of large and small bronze coins in Khotan, Xinjiang. In ancient times the state of Yutian was located in Khotan. Though these coins lack holes, we may say that they were equally influenced by the Chinese monetary culture and that of Greece. On one side is an inscription in the Qulu language, and on the other is a Chinese text. Qulu was the written language of ancient Khotan, and so these coins may be called Khotan state Chinese language coins. The large coins weigh around 14 grams and the small ones 3 grams. The Qulu side also bears the image of a horse or camel around which is written the name of the king. The king's name is preceded by such epithets as "king of kings." As more than one king's name is found on such coins, they must have been minted during more than one reign.[9]

Before the history of Khotan had been made clear, it would have been very hard to determine the period during which these coins were made. Representations of horses and camels were directly or indirectly the result of the influences of the coins of Macedonia and the Seleucids. Alexander the Great's invasion of the East carried such coins to northwestern India, which is why Kushan Dynasty coins also bear such images. The epithet "king of kings" is first seen on Parthian coins of the mid-third century B.C.

The other side of such coins was fully under Chinese cultural influence, but they cannot be dated solely on the basis of these inscriptions. The culture they reflect is that of the several centuries from pre-Qin times through Han and Three Kingdoms Wei, rather than that of any other period.

First, though the orthography of the character for cowry, [],[a] imitates the oracle bone rather than the small seal script of Qin and early Han, all the other characters resemble those of Qin-early Han small seal script. Second, denotation of weight or value, and the layout of the inscription clearly follow the Qin Weight One-ounce Fourteen-grains and Twelve-grains coins. The circle around the character for cowry may stand for the round hole of the ring coin. Third, the character for cash-coin, *qian*, first appeared on Chinese coins with the Three Kingdoms period Taiping Hundred-cash. Judging from these three points, we can see that these coins did not fortuitously imitate a particular Chinese coin, but rather were the result of extended and deep contact with Chinese culture.

Nor were these coins limited to the cultural aspect in their relationship to China. There may also have been economic links, because these coins have the same unit as Chinese coins, the grain. But if Khotan intended to establish thereby a rate of exchange with Chinese coins, it must have been with the Chinese Half-ouncer. Two of their six-grain coins were equal to one Half-ouncer; and one of the 24-grain coins was equal to two Half-ouncers.

The lands of the western frontier probably first encountered Chinese culture when they bumped up against Qin. When Duke Xiao of Qin became hegemon [*bawang*] of the western frontier, Chinese culture's transmission to them could have begun. This is why some foreigners named China

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after Qin, and why Chinese called Rome "Great Qin."

Though there were not many Qin ring coins, seeing one or two of them would be enough to allow them to be copied. They may not even have been copied at the time of their issue. A few coins preserved by the rulers of the states of the western frontier could have had an influence during the rule of their sons or grandsons.

During Qin and early Han times, Khotanese sold jade to the Chinese. This was a great source of income for them. It is said that in ancient times Khotan called itself Qin and Maqin (literally "horse Qin"), and that some time around the second century B.C. it was invaded by the Shasiluo [allegedly] of Bhutan in the Punjab.[10] At that time Greek culture

[9]Cf. Sir Aurel Stein, *Record of the Archeology of the Western Frontier* (Chinese translation by Xiang Da), pp. 53, 64, 65.

[10]Several hundred Khotan coins have been found since the nineteenth century, most of them carried off by foreigners. Quite a few people have written essays on this subject. Because the coins' inscriptions are not clear, most of these accounts are without substance, and need not be summarized. For example, on the Chinese inscription's notation of weight, the Japanese Haneda Toru says it is "five grains." Cf. Zheng Yuanfang (tr.), *Outline of the History of the Civilizations of the Western Frontier*, pp. 52, 53. The article "Chinese Language and Kandaran Language Inscribed Ancient Coins," in the Japanese periodical *Archeological World*, I, nos. 5 & 7, says that the inscription is "half-metal" [*banjin*] and "metal 0 0 [?] weight One-ounce Four-grains." European scholars are even less clear. They can only use the Qulu language side of the coins.

Xia Nai's "Investigation of Khotan's Horse-coins" in *Cultural Relics*, nos. 7 & 8 combined (1962) contains rubbings in which the inscriptions are legible. The author adds his own to the opinions of several foreign scholars. He denies any relationship between the Khotan Chinese inscription coins and the ring coins of the state of Qin. He says that before the unification Qin was economically backward, with an undeveloped coinage. The ring coins were scarce even in the home territory of Qin, and so

entered Khotan by way of India, and there mingled with the already present Chinese culture to produce this type of coin. This region could also have been exposed to the Chinese Five-grainer, because Western Han Five-grainers have been excavated in Xinjiang. They have even been unearthed in Uzbekistan in the Soviet Union.[11]

The Han monetary economy was a long step ahead of that of the Warring States. Taxes were collected, salaries paid, offices were bought, and fines paid in coin. Uses for coins had greatly increased, and channels for their circulation had become more numerous. During Spring-Autumn times and before, taxes in China were paid through labor service. It was not until Warring States times that they could also be paid in goods, when, as Mencius said, "there is the levy in rolls of yarn; the grain and rice levy; the labor service levy." By Han this list was extended to the levy in cash, particularly the Reckoned-contribution of Emperor Gao and the Reckoned-string of Emperor Wu's time. The former was a head tax. The latter combined a tax on wealth and business. Both were paid in money.[12]

Khotan could not a century and more later have used them as a model. Hence he ascribes these coins to Eastern Han, and says that the Six-grain and Twenty-four-grain units were linked to the Eastern Han Five-grainer. Five of the Six-grainers would exchange for six Five-grainers. One of the Twenty-four-grainers, with one Six-grainer added, would also exchange for six Five-grainers. He states that Hornle weighed nine large Khotanese coins, and found them to average 13.66 grams apiece, which approximates the Eastern Han standard weight.

For this standard weight, Xia used

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Wu Chengluo's *History of Chinese Weight Measures*. This in turn rested on the results of Wu Dacheng's experiments on the Wang Mang Six-spring, Ten-spade and Monetary-spade.

Xia also says that the relationship between the Six-grainer and Twenty-four-grainer was patterned on the Greek monetary system. He believes that the Greek monetary system was based on multiples of four. He also claims that after Bactria changed over to the Indo-Persian weight standard units, a *drachma* weighed 3.264 grams, and four *drachma* weighed 13.05 grams. The Punjab used this standard, which was very close to that employed for the Khotan Chinese inscription coins. He goes on to say that the horse on Bactrian coins is ridden by a man, and that the coins which the Khotan coin imitated was later than the Bactrian one.

Questions can be raised about all of these opinions:

(1) The ability of Khotan to have been influenced by the state of Qin is not absolutely determined by the quantity of Qin ring coins. (Perhaps they were more numerous then, and later were melted down to make Half-ouncers.) This relationship was more likely determined by the cultural levels of the two countries, and whether trade between them was direct or indirect.

(2) If we treat the date of the Khotan Chinese inscription coins as an unknown, then rather than say the Six-grainer and Twenty-four-grainer developed a circuitous relationship with the Chinese Five-grainer, it would be simpler and more convenient to say that there was a relationship with the Chinese Half-ouncer. This is not to imply that these Khotan coins were minted before the time of Emperor Wu of Western Han. Even after the issue of the Five-grainer, the Half-ouncer remained in circulation, particularly along the borders.

(3) The Eastern Han system of weights cannot be determined by Wu Dacheng's experiment. Based on more reliable methods, I have calculated the weight of the Eastern Han ounce at more than 16 grams. I explain this in my note on the Six-spring and Ten-spade of Wang Mang. Nor can we follow Hornle's experiment for the weight of the Khotan coins. One coin extant in China weighs 14.8 grams, and not the 13.06 grams Hornle found.

(4) The Greek coinage was not based on multiples of four. The Greek monetary unit was the *drachma*. There were also two *drachma*, three *drachma*, four *drachma*, eight *drachma*, and ten *drachma* coins. Of these the four *drachma* coin was most frequently circulated in Athens and a few other places. Even the one *drachma* coin was used in large numbers. In Central Asia, however, only the one and four *drachma* coins existed, with the former dominant. This seems to have been the case in Persia. These, however, were all silver coins, not copper ones. The Greek bronze coin was called the *obolus*, was worth one-sixth of a *drachma*, and there were denominations below it as well. These did not come in multiples of four either.

(5) The horse on these coins was indeed remotely derived from Greece's monetary culture. Macedonian coins had representations of horses on their reverses prior to Alexander the Great's time. Sometimes it was an unmounted horse, sometimes a horse with rider. This motif was transmitted to Central Asia during Alexander's conquest of the East. Kushan Empire coins also bore such an illustration around the first century B.C., but their artistic level was low. Sometimes the body of the animal resembled a horse, but the head had a pair of horns. The coins of that region then at times bore a riderless horse and sometimes a horse with rider, very much like some Greek coins. The Khotan coin's horse or camel must have been indirectly influenced by the Greek model.

[11] *People's Daily*, July 15, 1956.

[12] *Han History*, 1, "Annals of Emperor Gao": "4th year . . . 8th month first decade; the Reckoned-contribution was carried out." Ru Chun states that the "Han regulation was that commoners from ages 15 to 56 paid Reckoned-contribution. One Reckoning was made up of 120 men. It was used for the vehicles and horses of the storehouse soldiers." "11th year . . . 2nd month: An edict stated a desire to reduce the Contribution substantially. Now what is paid in is not regulated. Clerks may increase the amount paid, and the aristocracy can add still more

Prior to Han, official salaries were paid entirely in grain and other commodities. Men of the Warring States period spoke of their incomes in terms of the number of *zhong* they obtained.[13] By Western Han times, though official salaries were still calculated in terms of quantities of rice, they were actually paid partly in grain and partly in cash,[14] or even entirely in copper coins.[15] During Eastern Han, official salaries were fixed at half in coin and half in rice.[16] This assured that not only did everyone have coins, but that they could not do without them. Hence allusions to coins in the histories gradually become more numerous.

Not only are there examples of the use of coins to display wealth[17] and prices,[18] there are even examples of the use of copper cash in making actual exchanges.[19] Particularly after Emperor Wu centralized the power to mint coins, the channels of circulation for money in China underwent an important change. Coins flowed from the national treasury to officials to pay their salaries and through other government expenditures into the hands of merchants. The money held by officials also flowed into the hands of merchants when the officials made purchases of commodities. A portion of this money then came into the hands of small producers. This portion then returned to the hands of merchants as it was used to purchase raw materials or things needed for daily life. Finally, it all flowed back to the state treasury as taxes were paid.

Because of this broadening of the sphere of the coins' circulation, the demand for money among the people also became more fervid.

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CHART OF TYPES OF TREASURE-MONEY

Coin Type	Name of Money	Face Value (in wen)
Spring-money (six coins)	Small-spring-value-one (wt 1 grain)	1
	Baby-spring-ten (3 gr)	10
	Adolescent-spring-twenty (5 gr)	20
	Medium-spring-thirty (7 gr)	30
	Adult-spring-forty (9 gr)	40
	Large-spring-fifty (12 gr)	50

to it, thereby vexing the people. The aristocrats were ordered to make their payments to the court by the tenth month, as were commanderies in proportion to the size and age of their populations, at an annual rate of 63 cash per head."

Field taxes seem also sometimes to have been collected in cash. *Han History*, 7, "Annals of Emperor Zhao": "Yuanfeng 2 [79 B.C.]: There was an edict to the Three Supporting Districts of the Capital and to the Grand Minister of Ceremonies' commandery to obtain the collected grain as tax." In the 6th year there was another edict: "It was ordered that the collected grain serve as this year's contribution." Evidently the everyday tax receipts were used as ready cash.

[13] *Analects*, "Yong ye," 6: "When Yuansi served as minister, he was given 900 in grain, which he declined." *Mencius*, "Duke Wen of Teng," latter part: "Master Zhong belonged to the hereditary house of Qi. His elder brother Dai had a salary of 10,000 *zhong*." *Stratagems of the Warring States*, "Strategems of Qi," 4: "A man of Qi saw Tian Pian and said: 'I have heard that you, sir, are high in the counsels of government. If you do not serve as an official, but wish to do labor service . . . you will be supported with a thousand *zhong*." *Guan Zi*, "Minor Queries," 51: "A guest wished to have audience with Duke Huan of Qi. He asked to serve

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as a high official and receive a salary of a thousand *zhong*.

[14] *Former Han History*, 65, "Biography of Dongfang Suo": When Emperor Wu first ascended the throne, [Suo] was a candidate for appointment to the Office of Official Carriages . . . and received one bag of grain and 240 coins."

[15] *Ibid.*, 72, "Biography of Gong Yu": ". . . he was appointed as Grandee Remonstrant, with a salary-rank of 800 piculs. In coins he monthly received 9,200. . . He was then appointed Imperial Court Grandee, with a salary rank of 2,000 piculs, and received monthly 12,000 coins."

[16] Liu Zhao's *Record of Han Continued*, 28, quotes a note in Xun Cho's *Table of Jin Officialdom*.

[17] *Han History*, 9, "Annals of Emperor Yuan": "Chuyuan 1 [48 B.C.] . . . the Three Supporting Districts of the Capital and the Grand Minister of Ceremonies, commandery and kingdom public fields and parks which could be reduced in number were all used to aid the poor. Those with property of less than a thousand cash were all granted or lent seeds and food." *Ibid.*, "Biography of Gong Yu": "Yu sent up a communication, stating: 'I am old and poor. My family's capital is less than 10,000 cash.'"

[18] It was already common for prices to be expressed in cash during Warring States times, and became still more so during Qin and Han. *Historical Records*, "Basic Annals of the First Emperor of Qin": "31st year . . . There was a great blockage in the Guanzhong region for twenty days. Rice reached a price of 1,600 per picul."

[19] *Han History*, 54, "Biography of Li Guang": "When Li and Cai were serving as Chancellors, an edict conferred on them grave-site land to the amount of twenty *mu*. Cai illicitly engrossed three *qing* of land, and sold it for over 400,000 cash."

Cowry-money (five coins)	Cowry (under 1.2 inches)	3
	Small-cowry (1.2+ inches) (2 cowries per string)	10 (per str)
	Baby-cowry (2.4+ inches)	30 (per str)
	Adult-cowry (3.6+ inches)	50 (per str)
	Large-cowry (4.8+ inches)	216 (per str)
Spade-money (ten coins)	Small-spade-hundred (wt 15 grain)	100
	Baby-spade-two-hundred (16 gr)	200
	Adolescent-spade-three-hundred (17 gr)	300
	Sequence-spade-four-hundred (18 gr)	400
	Legate-spade-five-hundred (19 gr)	500
	Medium-spade-six-hundred (20 gr)	600
	Adult-spade-seven-hundred (21 gr)	700
	Younger-brother-spade-eight-hundred (22 gr)	800
	Secondary-spade-nine-hundred (23 gr)	900
	Large-spade-yellow-thousand (1 oz.)	1,000
Tortoise-treasure (4 coins)	Viscount-tortoise (5+ inches)	100
	Marquis-tortoise (7+ inches)	300
	Duke-tortoise (9 inches)	500
	Original-tortoise (1 ft 2 in)	2,160
Silver-money	Ordinary silver	1,000 per liu (8 oz.)
	Vermilion-silver	1,580 per liu
Gold		10,000 per catty

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On Han coin molds, seals, and ceremonial coins are frequently found such mottos as "daily income a thousand in metal," "daily income ten million" and "great profit ten million." There is even a *ding* tripod with "daily profit a thousand metal." Sima Qian said: "Men became rich, and humaneness and righteousness became secondary."[20] Zhao Yi remarked: "The wealthy and the noble are called virtuous."[21] These were all reflections of the prevailing money worship.

Wang Mang carried out several reforms of the coinage. [Plates xxix-xxxi] The first was in jushe 2 (7 A.D.). The Five-grainer was retained, but three large coins, including one round coin and two knife coins, were minted to supplement it. The round coin was inscribed Large-spring-fifty, and was 1.2 Han dynasty inches in diameter. It weighed 12 grains. Each coin had a face value of fifty Five-grainers.

The two knife-coins were the Inscribed-knife and the Inlaid-knife. They did not have the same shape as pre-Qin knife coins, but rather looked like modern keys. The Inscribed-knife bore the four character inscription "Inscribed-knife-five-hundred." This meant that each knife was supposed to be worth five-hundred Five-grainers. The Inlaid-knife bore the five characters meaning "One-knife-equals-five-thousand." The two characters "One-knife" were inlaid with gold, and so this coin is popularly called the Gold-inlaid-knife. Each of them had a face value of five-thousand Five-grainers. The Gold-inlaid-knife was finely made, has been prized by collectors down through the ages, and has even been celebrated by poets.[22]

After Wang Mang usurped power in 9 A.D., he abolished the knife coins, and even the Five-grainer was no longer used, because the character for the old imperial house's surname, Liu, contained the components meaning "metal" and "knife." Only the Large-spring and Small-spring were kept in circulation. The former still had a face value of fifty, and the latter a face value of one, and weighed one grain.

The strangest of Wang Mang's monetary reforms was introduced in jianguo 2 (10 A.D.). This was the

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[20] *Historical Records*, 129, "Biographies of the Money-makers."

[21] *Latter Han History*, 110, latter part, "Garden of Literature: Biography of Zhao Yi."

[22] Zhang Pingzi's "Ode to the Four Worries" [*Sichoushi*] in the *Selections from Literature*: "The lovely lady bestows on me a golden-chased knife; with plate of jade her noble gift must I here requite." Du Fu's "Ode to the Snow" [*Duixueshi*]: "Bag of gold-chased knives dispersed away; jar of silver's wine is gone astray." Han Yu's ode "The Boat" [*Chuan*]: "You held a gold-chased knife; 'twould not a goose-eye pierce." And also his "Tanzhou Moored Boat" [*Tanzhou Bochuan*]: "Song wine comes cheap, I hear; so why stint gold-chased knives." Actually, what these poets were celebrating may simply have been ordinary knives and swords inlaid with gold, and not necessarily the knife coins of Wang Mang, but because most people have believed Wang Mang's coins were intended, these gold-inlaid knife coins

Treasure-money system. It comprised five monetary substances divided into six types and twenty-eight items. The five substances were gold, silver, copper, tortoise and cowry. The Six types and twenty-eight items were Spring-money (six items), Cowry-money (five items), Spade-money (ten items), Tortoise-treasure (four items), Silver-money (two items) and gold.

It is hard to say what the standard unit was in so complex a coinage, but probably it was one of the copper coins, with the lowest denomination Small-spring coin as the main money. Not only were the large denomination round Spring coins and Spade coins merely tokens, so too were the Tortoise and Cowry money. The face value of the gold and silver money may also have been too low, since compared to the exchange value in Emperor Wu's time of one catty of gold for ten-thousand cash, the cash price of specie was now down to one fourth or one fifth of that value. Hence gold and silver were most likely hoarded, and took no part in circulation. Tortoise and cowry must have varied in size over time, and so were unsuitable for monetary use.

Though the Spring and Spade coins bore specific face values, most people were illiterate, and each of the ten Spade coins differed in weight by only one grain from the next heaviest and lightest of their number, and the different denominations would have been hard to tell apart, so there may well have been confusion over them. Hence only the Large and Small Spring coins would have stayed in circulation, and in fact only these have survived in large numbers.

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The ten spades differed in shape from pre-Qin spade coins, but resembled the Pennon-cash Worth-jin and the Four-cash Worth-jin. Some people even attribute these latter two spades to Wang Mang. This is to reverse cause and effect.

It is not easy to collect complete sets of the six Spring and ten Spade coins, particularly the Adult-spring and Medium-spring. In principle all these coins were minted at the official smelters, and so should have been very fine and handsome coins, but in fact this is not the case. It is common to find broken rims from defective molds among the six round Spring coins. Some Baby-spade-two-hundreds are smaller than some Small-spade-hundreds. And yet the Large-spring-fifty, which is the most numerous type, has very regular inscriptions on both large and small specimens. This is hard to explain. Many of the Large-spring-fifties were evidently minted privately, and we would not expect private coins to be this fine.

The names Spring and Spade are anachronistic and eccentric. The "Treatise on Food and Money" in the *Han History* calls the Spade with a face value of four-hundred the thick spade. The character on the face of this coin resembles the chacter *xu*, meaning "sequence," which is close in shape to the character meaning "thick." Nowadays most call it the Sequence-spade-four-hundred. The Large-spade is not inscribed as "worth-thousand," but as "yellow-thousand." The character for yellow may here have stood for the character meaning horizontal (of which it forms the phonetic) or the homonym character meaning horizontal steelyard weight.

The numerals on Spring and Spade coins are not ordinary ones, but rather hallmark or commercial numerals. For example, the numeral six on the Medium-spade-six-hundred is written like a capital "T" in English. The numerals on Wang Mang Spades are altogether regular, except for the numeral five. Such numerals were probably linked to the counting tally calculating method used before the invention of the abacus.

We find it hard to explain why Wang Mang would adopt such a system. In this matter we can only accept the judgment of the historians that he "could not remain inactive," and believed that his system was a panacea which would "so determine things that the empire would spontaneously become pacified." In fact this was not a very good system.

In tianfeng 1 (14 A.D.), he instituted a fourth change in the coinage, abolishing the Large and Small-spring in favor of a two-coin Monetary-spade and Monetary-spring system. The Monetary-spade weighed 25 grains and was valued at 25. The Monetary-spring weighed 5 grains, and was valued at one. Before long his Xin Dynasty fell. Wang Mang's defeat had many causes, and the failure of the monetary system was one of them.

There are two kinds of coins which I have not seen in the records, but which most numismatists believe ought to be attributed to the period of Wang Mang.

The first of these is the Spade-spring. This is a round coin, extraordinarily finely made, with delicate and elegant calligraphy of the so-called "perpendicular needle seal script" like that on the Monetary-spring. There is no doubt it is a Wang Mang coin. This must be what later ages called the "male coin" [*nanqian*] If a woman wore this on her sash, she was supposed to be sure to give birth to a boy. Some say that the Spade-coin spoken of in the *Han History*'s "Biography of Wang Mang" is this coin, mistakenly supposing this to be evidence that it was

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have enjoyed unwarranted importance.

circulated then. Because the *Han History* uses the word coin or cash [*qian*] instead of spring [*quan*] for the six Treasure-money Spring coins, it also does so for Spade-spring coins. It is, however, implausible to regard this statement as evidence for the circulation of Spade-springs. Though the text speaks of "officials and ordinary people in their comings and goings carried Spade-coins
[121]
to match their tallies. Those who did not carry them lacked food or lodging, and were vexed at the passes and ferry crossings."[23] The text, however, goes on to say that "it was the heavy ones that were desired and circulated." Hence probably the Ten-spade and not the Spade-spring was being alluded to.

The other type of money was the State-treasure-gold-chest-value-ten-thousand. It had a very unusual shape. The top was shaped something like a round coin bearing the four characters for "state treasure gold chest." The lower part was square, and bore the two characters for "value ten-thousand." Ths inscription is very similar to those on Wang Mang coins, and since the Gold-inlaid-knife was valued at five-thousand, and this coin at ten-thousand, and the histories record that Wang Mang had several dozen chests of gold, this coin is attributed to him.

Though Wang Mang's monetary system failed, and was only in use for an extremely short period, his legislation has had a great influence on later ages. For example, not only was his system of weights retained by Eastern Han, the weight standards of the Six Dynasties were also based on Wang's system, with some modifications. Written records of these seem all to have been expressed in terms of comparison with his system. The system of weights of the Six Dynasties is no longer known, and can only be inferred from our knowledge of Wang's system, and that is based upon his coinage. Attempts have been made to empirically determine these weights,[24] but because of inadequate methods, reliable results could not be obtained.

Of Wang Mang's coins, only the Monetary-spades were made to very consistent standards, and so one can only use them for any experimental determination of his system of weights. I have weighed fifty-four such coins, each weighing more

Coin Name	Legal Weight (grains)	Actual Weight (grams)
Small-spring	1	1.3
Baby-spring	3	2.2
Adolescent-spring	5	1.8
Medium-spring	7	2.9
Adult-spring	9	3.6
Large-spring	12	4.8
Small-spade	15	6.2 (another weighed 8.9)
Baby-spade	16	7.6
Adolescent-spade	17	8.5
[129]		
Sequence-spade	18	8.9
Legate-spade	19	8.3
Medium-spade	20	9.8 (another weighed 13.8)
Adult-spade	21	15.2
Younger-brother-spade	22	12.0
Secondary-spade	23	12.3
Large-spade	24	18.7 (others weighed 16.6, 5.5, 13.2, 12.3 & 9.5)
TOTAL	232 grains	124.1 grams.

This calculates to 0.532 grams per grain, or 12.668 grams per ounce. If we factor in the one Monetary-spring and one Monetary-spade, the former at 3.8 grams and the latter at 16.6 grams, we get 13.224 grams per ounce, which is still somewhat lower than Wu Dacheng's figure. If, however, other coins are substituted for the Small-spade and Medium-spade I originally used, then you get 13.8 grams per ounce, which is heavier than Wu Dacheng's figure.

Obviously, this procedure is unreliable. Of the coins in the above table, the Baby-spring is heavier than the Adolescent-spring, the Sequence-spade is heavier than the Legate-spade, and the Adult-spade is heavier than the Younger-brother-spade and Secondary-spade. All of these run counter to the order of weights laid down by the regulations. How could any standard be derived from this situation? The Six Spring and Ten Spade coins are not easy to obtain, and it is very difficult to form complete and balanced sets.

[23] *Han History*, 99, "Biography of Wang Mang," middle part.

[24] On the basis of the six Spring and ten Spade coins and one each of the Monetary-spring and Monetary-spades of Wang Mang (actually he only weighed seven of the ten Spades), Wu Dacheng equated the Wang Mang ounce with 13.675 grams. But there are so many variations among these coins that no standard can be derived from them. For example, the Baby-spring-ten and Adolescent-spring-twenty were of nearly the same weight. (Wu Chengluo, *History of Chinese Weight Measures*, I, chapter 2, section 5.)

The weights of the six Spring and ten Spade coins shown in Plates xxx and xxxi of the present volume are:

than 0.4 treasury ounces. Four coins weighing less than that were put aside. These allowed calculation of the Xin Dynasty ounce as being around 16 grams. New material excavated in recent years[25] has proven this calculation to have been correct.

After Wang Mang, but before Liu Xiu, there were two other men who minted coins: Liu Xuan and Gongsun Shu. [Plate xxxii] The Prince of Huaiyang, Liu Xuan, minted a Five-grainer in 24 A.D.[26] Because coin molds for this issue have survived, these Five-grainers can be distinguished from others. The year after (gengshih 1), Gongsun Shu styled himself Shepherd of Yizhou, and before long set himself up in Chengdu as Prince of Shu. He also occupied Hanzhong, and remained in power for another twelve years, until jianwu 12 [36 A.D.], when he committed suicide.

The histories say only that he abolished copper coins, and set up an Iron Office to mint cash. Some say this occurred in jianwu 6 [30 A.D.], but do not specify what coin he minted. Later numismatists say it was a Five-grainer[27] simply because an iron Five-grainer is extant which differs little from the Han Five-grainer. Full proof that this was minted by Gongsun Shu is lacking. Gongsun Shu's minting of iron coins raised obstacles to the circulation of money, and gave rise to a nursery rhyme:

> Yellow ox's belly's white;
> Restored Five-grainer'd make things right."[28]

If we take this literally, Gongshun Shu's iron coin must not have been a Five-grainer.

There exist iron Half-ouncers, iron Large-spring-fifties and iron Monetary-springs, the latter coming from Sichuan, but these might not have been minted at that time. There is another iron coin, a Five-[],[b] which has been attributed to Gongsun Shu. This inscription is explained by theories about auguries during those times.

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People to the west of China were supposed to believe that metal was associated with the color white, and symbolized the royal clan. The term *zhu* (grain, as in Five-grainer) also meant the color red, and was a taboo word for Gongsun Shu. This is why he would have minted a coin with a changed form for the character meaning metal.[29] This theory is quite plausible, and fits the nursery rhyme "Yellow ox's belly's white; Restored Five-grainer'd make things right." Moreover, these coins come from Sichuan (Chongqing). However, this coin has a wide rim, and the calligraphy of the character for metal on it is not the same as that of the metal signific of the character for grain on Five-grainers. Hence their dates cannot be very close.

Whichever coin it was that was minted by Gongsun Shu, it is historically significant. This is the first record of iron coins in China. It is said that in 1200 B.C. the Greek state Sparta used iron as a medium of circulation, but that would seem not to have been a formally minted coin, and some doubt the story's historicity. There could have been coins made of iron in China before Gongsun Shu.[30]

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[25]In 1956, in the foundations of the Han city of Xi'an, there were discovered ten bronze ingots. On one of these was engraved the characters "one-hundred-thirty catties." This ingot weighed 68.5 modern market catties. This would make an ounce equal to 16.41 grams. (*Cultural Relics Reference Materials*, no. 3 (1956), p. 82.)

[26]*Han History*, 80, "Biography of Liu Xuan."

[27]*Mr. Chen's Illustration Classic* and Dai Xi's *Collected Words on Ancient Coins*.

[28]*Kaiyuan Divination Classic*, 113, quotes the *Han History Continued*'s statement on events in jianwu 6.

[29]Cai Yun, *Habitual Conversations*: "The place of origin of the Five-metal coin is not known. Of the iron objects I have obtained, *Hong's Record* says in passing, quoting the "Biography of Gongsun Shu" in the *Latter Han History*, . . . that Shu believed in the sequence of the Five Virtues, that Yellow succeeds Red and White succeeds Yellow. Metal, according to the westerners, has the virtue of White, and symbolizes the legitimate succession to the royal clan. According to this, metal has the virtue of White, which Shu honored, and *zhu* [the character for grain, as in Five-grainer] which means red, was what he had as a taboo. Hence he abolished the term *zhu* and kept the term *jin* --metal. Hence the inscription on these coins. People then resented this change in the Han coinage, and the nursery rhyme about restoring the Five-grainer would fit in with this explanation."

[30]Some say that Gongsun Shu's was not the first iron coin. The *Han History*, 67, "Biography of Mei Fu" contains the statement "The *yin* flourished, and the *yang* waned. It was as though metal [*jin*] and iron were flying." Zhang Yan commented: "In heping 2 [27 B.C.] the Iron Officer of Pei Commandery minted coins. They flew up like stars. This caused debate among the responsible officials." The *Kaiyuan Divination Classic*, 114, "Smelting Iron Flying," contains the following: "In Emperor Cheng's heping 2, 1st month, the Pei Commandery Iron Officer cast coins. Before the iron was poured, there was a rumble like the sound of thunder and the roll of drums. This happened twenty-three times. People fled in alarm. Later, when they returned and examined the ground, the earth had fallen several feet, and the furnace had broken into twelve pieces. Within the furnace, the melted iron pieces were scattered like shooting stars."

However, the *Han History*, "Record of the Five Agencies" contains the following: "In heping 2, 1st month, the Pei Com-

I have previously mentioned the iron Pennon-cash Worth-*jin*. It is, however, difficult to distinguish the dates of iron coins, and there are no excavation reports for this coin. Hence we dare not accept it. In recent years iron Four-grain Half-ouncers have been found in Western Han tombs in Hengyang and Changsha in Hunan. Some have rims, and some lack them. The quantity is rather large.[31] If these were not ceremonial coins, they must have been local money.

During the two centuries of Eastern Han, the monetary economy superficially seemed to be in decay. Wang Mang's policy of having a national monopoly on gold reduced the use of gold still further. Probably because people could observe the chaotic consequences of Wang Mang's monetary systems, they lost faith in money as such, and at times resorted to grain or cloth as circulatory media and instruments for making payments.

Though official salaries were half in coin and half in rice, imperial gifts gradually substituted cloth for gold. During Western Han, fines were paid in gold or in bronze coins.[32] During Eastern Han fine silk was used for this purpose.[33] By that time, however, coins had entered deeply into popular life.[34] Even if the government had wanted to limit their use, there was no way for it to completely do away with them.

Wang Mang's Monetary-spring was still in use during the early years of Eastern Han, and was even still being minted.[35] Because Liu Xiu [the founder of Eastern Han] very much believed in books of prognostication, and came from Baishui [literally, "White Water"] township of Chong Tomb City, the character meaning "spring" or "freshet of water" on the Monetary-spring coins symbolized for him the Immortal of Baishui. Hence when Ma Yuan memorialized to ask for restoration of the Five-grainer, Liu Xiu did not accept his advice. It was not until jianwu 16 [40 A.D.] that the Five-grainer was finally being minted again.[36]

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mandery Iron Officer was casting iron. Before the iron was poured, there was a rumble like the sound of thunder, and the roll of drums. The thirteen workmen fled in alarm. When the sound stopped, they returned and examined the ground. It had fallen several feet, and the furnace had split into eleven pieces. Within it the melted iron had scattered into pieces like shooting stars. It had all gone up." Judging from this version, probably iron, rather than coins was being cast.

[31]Gao Zhixi, "Discovery of Iron 'Half-ouncer' Coins in Changsha and Hengyang Western Han Tomb," *Cultural Relics*, no. 11 (1963).

[130]

[32]*Han History*, 44, Biographies of the Princes of Huainan, Hengshan and Jibei": "fine to remit death, two catties eight ounces." *Ibid.*, 6, "Annals of Emperor Wu": Tianhan . . . 4 [97 B.C.] . . . Autumn, 9th month, atonement cash for those sentenced to death is 500,000 to reduce the punishment by one level."

[33]*Latter Han History*, 2, "Annals of Emperor Ming": "(Zhongyuan 2 [57 A.D.] of Emperor Guangwu). Those in the Empire under sentence of death may have punishments remitted as follows: To reduce the death penalty, 20 rolls of fine silk; to reduce amputation of the right foot to shaving the head and being beaten at the city wall at dawn, 10 rolls; to reduce the latter punishment to being sent to the Minister of Justice, 3 rolls." *Ibid.*: "Yongping 15 [72 A.D.] . . . an edict for redeeming capital punishment to a lower degree, 40 rolls; to reduce amputation of the right foot to shaving the head and being beaten at the city wall, 10 rolls; from the latter punishment to being sent to the Minister of Justice, 5 rolls." *Op. cit.*, 3, "Annals of Emperor Zhang": "Jianchu 7 . . . to remit the death penalty, 20 rolls of fine silk."

[34]Wang Chong, *Balanced Discourses*, "Knowledge of Measures": "If one goes to market without money in hand, the owner of goods will ask: 'Where is your money?' If you reply, 'I have no money,' the owner of goods will certainly not hand them over to you." *Latter Han History*, 66, "Biography of Liu Chong": "(Chong) was appointed Prefect of the Dongping Tomb City, and because of his humaneness and kindness was loved by both officials and people. . . There was a collection for carrying out a large project. In Shanyin prefecture there were five or six old men with grizzled eyebrows and white hair who came out of some narrow mountain gorge. They presented one hundred coins to Chong. Chong expressed his appreciation to them, saying, 'Old fathers, why have you so burdened yourselves?' . . . The men selected one large coin for him to accept."

[35]Prior to jianwu 16 [40 A.D.] during Eastern Han, the Monetary-spring was in use. *Inscriptions on Stone and Metal* contains a Monetary-spring mold, with the date "jianwu 2" inscribed on its back.

[36]*Han History*, 24, "Treatise on Food and Money": "Later, in the 2nd year, Emperor Shizu received the Mandate. To wash away the petty and exacting regulations, the Five-grainer was restored so as to give a new beginning for the Empire." *Latter Han History*, "Annals of Emperor Guangwu," 1, first part: "Sixteenth year . . . Earlier, just after the Wang Mang disorder, spades, cash, gold and grain were all used helter-skelter as money. In this year the Five-grainer began to be circulated."

Book Hall of the Original Tortoise, 499, "Coins": "Five-grainers began to be circulated in jianwu 16 of Eastern Han's Emperor Guangwu. From Longxi [in modern Gansu] Ma Yuan sent up a letter saying that the Five-grainer should be minted as of old. The matter was sent down to the Three Ministries, and they memorialized that this was not possible. The matter was then put to rest. When Yuan returned, he sought out this memorial from the Ministry, and replied to each of the ten difficulties it had raised. The Emperor then took his advice. The

The histories record nothing about minting coins after Emperor Guangwu's time, but we cannot say that no coins were minted between the time of Guangwu [r. 25-58] and Emperor Ling [r. 168-189]. Though the histories say nothing about minting, they do mention Emperor He's abolition of minting, so there must have been some minting going on before then.

Of the surviving large Han Five-grainers, there are a number which do not seem to belong to Western Han. Nor do they resemble gengshi or jianwu era Five-grainers, and so they can only be Eastern Han Five-grainers. [Plate xxxii] In addition to their poor

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construction, these Five-grainers bear various marks, such as dots, horizontal and vertical lines. Some bear only one dot; others a number of them. The single dots are found in various places on the coins. The multi-dot coins mostly have them arranged in a straight line. The horizontal and vertical lines are also variously placed and of different quantities. Sometimes vertical and horizontal lines appear on the same coin to form a shape resembling, though not actually being, one or another Chinese character. Others could well be simple numerals or other characters, like *ping* --peace, or equal-- or *xiao* --small. These marks were all made by workmen at the coin furnaces, and have no great monetary importance. They might have some significance if they could be used to prove that these coins do indeed belong to Eastern Han times. Some of them are incised, and this operation was performed after the coins had been cast. They are the least significant.

Under present circumstances, the Five-grainers minted during the century between Emperor Ming [r. 58-76] and Emperor Huan [r. 147-68] can still not be distinguished by their superficial traits.

Iron coins also seem to have been minted during the last years of Eastern Han. Two of them were equated with one bronze cash.[37] We do not know which extant iron coins to identify these with. Perhaps some of the iron coins mentioned previously were minted at this time, but it could also be that the iron coins mentioned by late Eastern Han writers were Gongsun Shu's iron coins.

Right down to the time of Emperor Ling, there is only one reliable milepost for monetary history, and this is the zhongping 3 (186 A.D.) Four-corner Five-grainer. This name alludes to the four straight lines slanting out from the four corners of the hole to the rim on the coin's reverse. It is also called the "corner coin" [*jiaoqian*]. People then said that after this coin was made, things were certain to go off in all directions, showing that they were dissatisfied with the government of the times. Later, when the Yellow Turban uprising overthrew the Han dynasty, this prophecy was taken as having been fulfilled. Some say this Five-grainer was minted at the beginning of the reign of Emperor Xian,[38] but this may be an historian's error.

The last time the Han dynasty minted a coin was in chuping 1 (190 A.D.), when Dong Zhuo minted his Small-cash. It is said that Dong Zhuo melted down Five-grainers to produce this coin. It is supposed to have been a "large five-*fen*, without inscription, lacking both inner and outer rim, and not rubbed smooth."[39] This simply describes a small coin lacking an inscription or inner and outer rims, and whose edge was not filed smooth. It would not, however, have been reasonable to have minted a coin without any inscription, particularly in a country which placed as much emphasis on writing as China. Though it occasionally happens that there are ancient coins blank on both sides, these were made only for play, and at rare intervals.

There is one small coin belonging to the Han-Wei-Six Dynasties period that lacks an inscription, but yet looks as though it had actually been used as a coin. It was either privately minted or is in fact the coin Dong Zhuo minted. Some say that Dong Zhuo later returned to minting a Five-grainer with "neither inscription nor rim perceptible."[40] If this means that neither was clearly visible, that would have been the consequence of its crude construction. Such a small Five-grainer

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survives. [Plate xxxii,12] It has a very large hole and a small body, so that it looks like the Chinese

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Empire depended on this for its profit. At this time Chang'an minted many coins artfully. The Governor of the Capital, Yan Xing, had a deputy record five principles for those who supervised the minting of coins for the Chang'an market. These kept the weights even, and the people were happy to accept these coins."

[37] *Universal Statutes*, "Food and Money, 8," has a note quoting Huangfu Mi's *Biographies of High Knights*: "Guo Tai was passing by and Shi Bi went to escort him. He twice bowed from the waist, and Tai made a single bow in return, and then departed. Bi's retainers wondered and asked about this. Bi replied that it was just as with iron coins. It took two of them to equal one of the other." Guo Tai and Shi Bi belonged to the time of Emperors Ling and Huan of Eastern Han.

[38] *Latter Han History*, "Treatise on Food and Money." *Jin History*, "Treatise on Food and Money."

[39] *Record of the Three Kingdoms*, "Record of Wei."

[40] Yuan Hong, *Record of the Latter Han*.

character for mouth. It only weighs a little over 3 centigrams. It may or may not have an inscription. It may, however, be a coin privately minted at that time.

In monetary terms, Western Han had taken a very large step forward and upward. The step forward was in the method for minting coins. The step up was in the coins' artistry. Prior to Han, coins were probably cast in clay molds.[41] In the process of completing the coins, the mold was destroyed. This kept the coins from being uniform in shape, weight, and size. Nor did the coin makers take great care in preparing such molds.

Beginning with the Four-grain Half-ouncer, Western Han adopted the method of casting coins from reusable bronze molds. They still began with an original clay mold, but cast the bronze mold from it. This bronze mold was, in turn, used to make a number of clay molds. It was from these that the coins were cast. Hence, the bronze mold became the "mother," one of which could produce countless "child" molds. This ensured that the coins produced were uniform in style and size. The clay "grandfather" original could be made the responsibility of someone of high technical and artistic skills, and such a person would be willing to take pains with the job. This is why there are some extraordinarily fine specimens among Emperor Wu's Five-grainers. This method was kept up right down to Eastern Han, reaching its peak of development under Wang Mang.

Wang Mang's coinage achieved a high level of technique unprecedented within the history of China's monetary culture. Not only was the copper finely smelted and the construction beautifully done, the calligraphy of the inscriptions was also of peak quality. For example, the copper of the Gold-inlaid-knives was polished with mercury. Numismatists call these the "mercury ancients." Though this was a carry-over of a pre-Qin method, this technique was later almost completely lost. A number of people in later ages attempted to counterfeit these Gold-inlaid-knives, but they inlaid the gold incorrectly. As soon as someone in the business sees such objects, he can tell at a glance that they are counterfeits. The inscriptions on Monetary-spades and Spade-springs are delicate and beautiful. Their calligraphy is the Perpendicular-needle-seal script.

The artistry of Chinese coins decayed after Wang Mang. Numismatists of later times have coveted the "Six Spring" and "Ten Spade" coins, but in fact these are not representative of the artistry of Wang Mang's coins, because aside from the Large-spring and Large-spade, which were circulated then in relatively large numbers, not very many of the others were made, and most existing ones were minted privately. As a consequence, their artistic level is not high.

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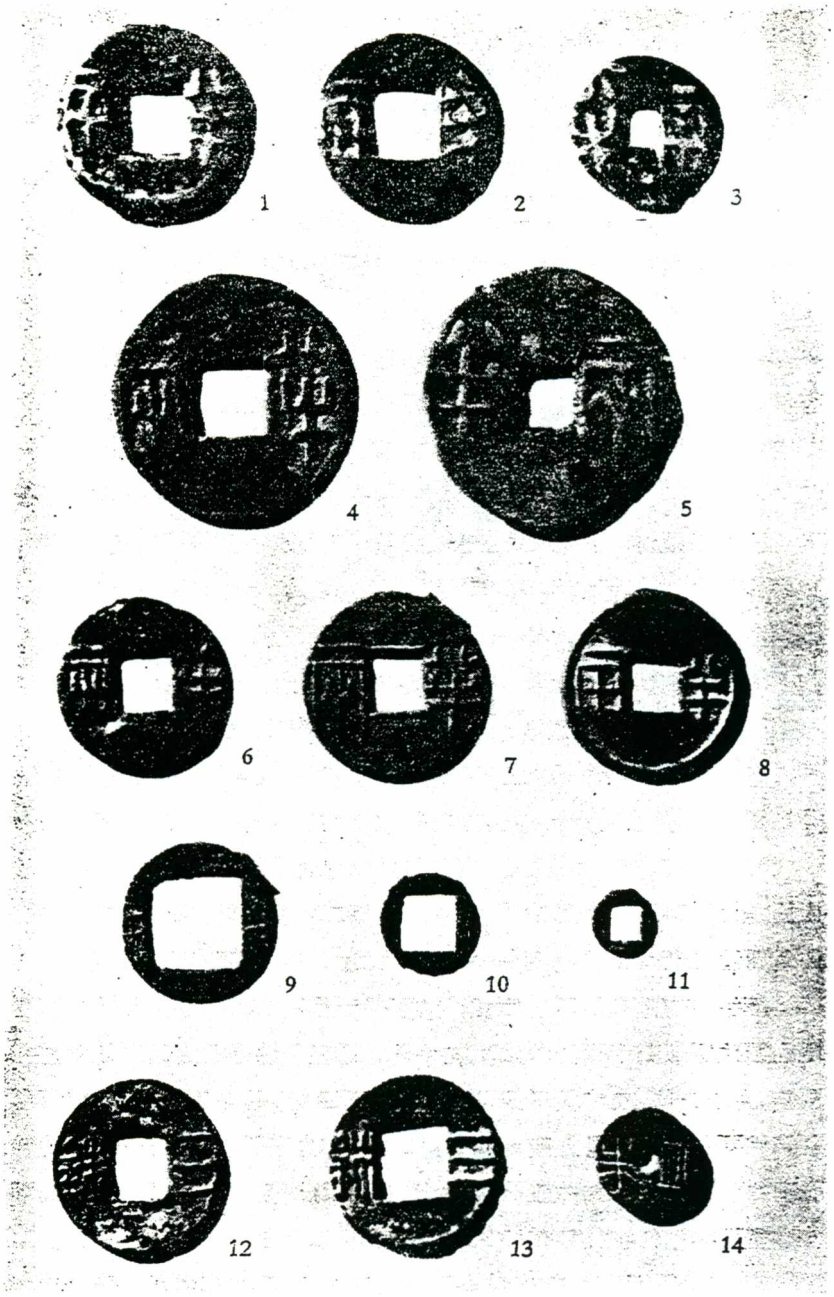
[41] All of the pre-Qin bronze molds I have seen, such as the Qi knife bronze mold, are forgeries.



圖版二十七　西漢前期的錢幣

1—3.漢初半兩。 4—5.八銖半兩。 6—8.四銖半兩。 9—11.榆莢半兩(莢錢)。
12—13.三銖。 14.陰文四朱。

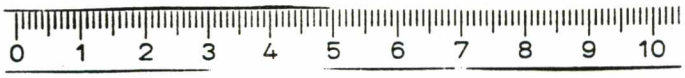
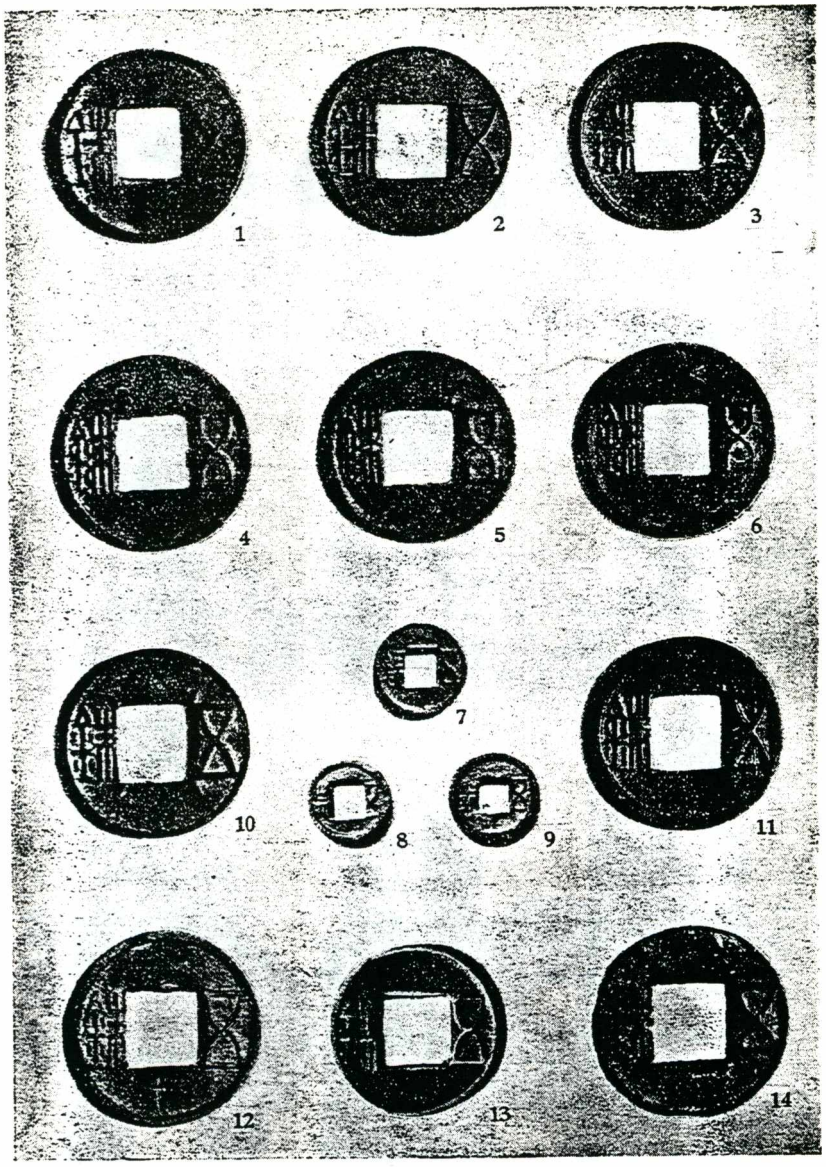


PLATE XXVII. EARLY WESTERN HAN COINS

1-3. Early Han Half-ouncers. 4-5. Eight-grain Half-ouncers. 6-8. Four-grain Half-ouncers. 9-11. Elm-pod Half-ouncers (Pod-cash). 12-13. Three-grainers. 14. Incised inscription Four-grainer.



圖版二十八　西漢五銖

1—3.郡國五銖(?)。　4—6.赤側五銖或三官五銖。　7—9.宣帝五銖。　10—12.小五銖。　13—14.西漢五銖。　第4、5兩品特別精整，大概是赤側五銖。宣帝五銖是根據錢范鑑別出來的，應屬可靠。小五銖製作像宣帝五銖，大概也是那時所鑄。第13品可能是昭帝時的東西。第14品似乎比較晚。

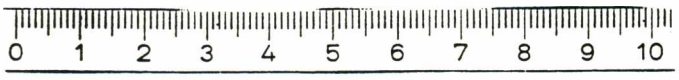
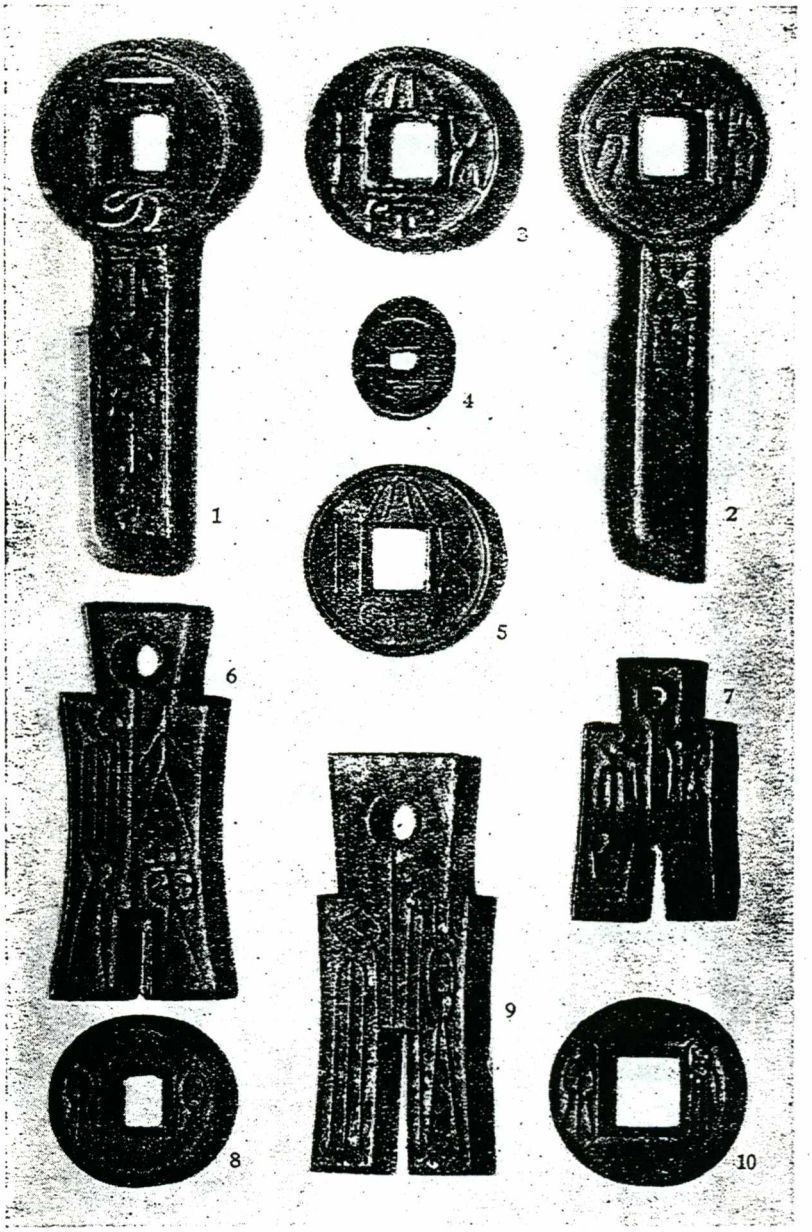


PLATE XXVIII. WESTERN HAN FIVE-GRAINERS

1-3. Commandery and kingdom Five-grainers (?). 4-6. Red-edged Five-grainers or Three Offices Five-grainers. 7-9. Five-grainers of Emperor Xuan. 10-12. Small Five-grainers. 13-14. Western Han Five-grainers. Numbers 4 and 5 are particularly fine, and are probably Red-edged Five-grainers. The Emperor Xuan Five-grainers are identified reliably on the basis of coin molds. The small Five-grainers are shaped like the Emperor Xuan coins, and were probably minted during the same period. Number 13 may belong to the period of Emperor Zhao. Number 14 appears to be somewhat late.

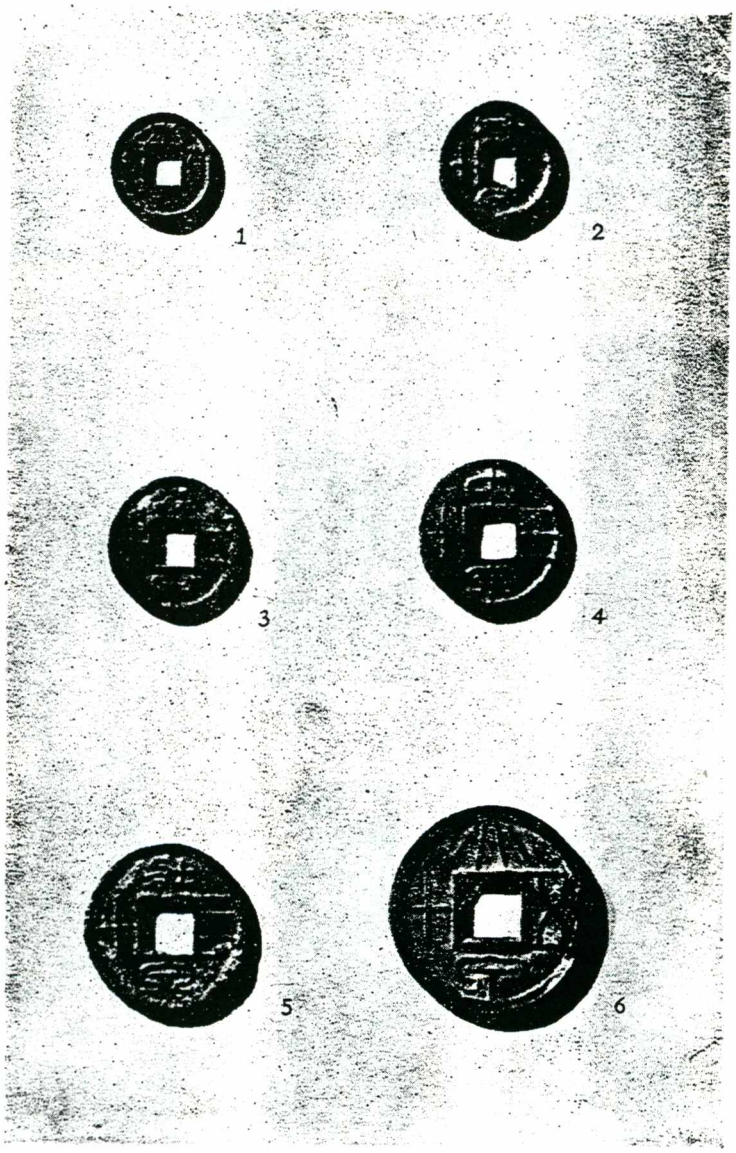


圖版二十九　王莽的貨幣

1.金錯刀。　2.契刀。　3.大泉(初鑄)。　4.小泉。　5.大泉(後鑄)。　6.大布。　7.小布(沐園藏品)。　8.貨泉。　9.貨布。　10.布泉。

PLATE XXIX. WANG MANG'S COINS

1. Gold-inlaid-knife. 2. Inscribed-knife. 3. Large-spring (as first minted). 4. Small-spring. 5. Large-spring (later minting). 6. Large-spade. 7. Small-spade (from the Mu Garden Collection). 8. Spring-money. 9. Spade-money. 10. Spade-spring.



圖版三十　王莽的六泉

1.小泉直一。 2.幺泉一十。 3.幼泉二十。 4.中泉三十。 5.壯泉四十。 6.大泉五十。

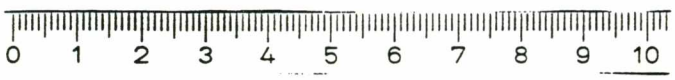
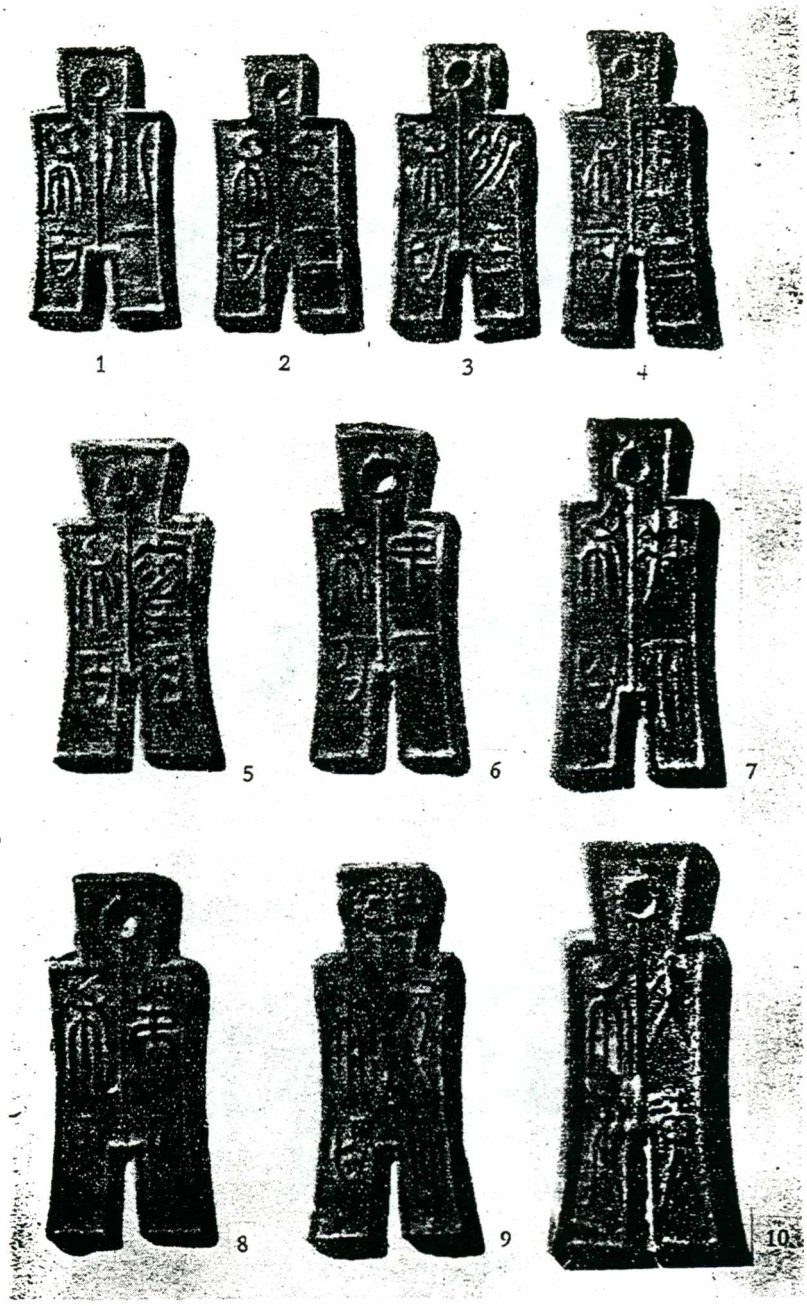


PLATE XXX. WANG MANG'S SIX SPRING-MONEY COINS

1. Small-spring-value-one. 2. Baby-spring-ten. 3. Adolescent-spring-twenty. 4. Medium-spring-thirty. 5. Adult-spring-forty. 6. Large-spring-fifty.

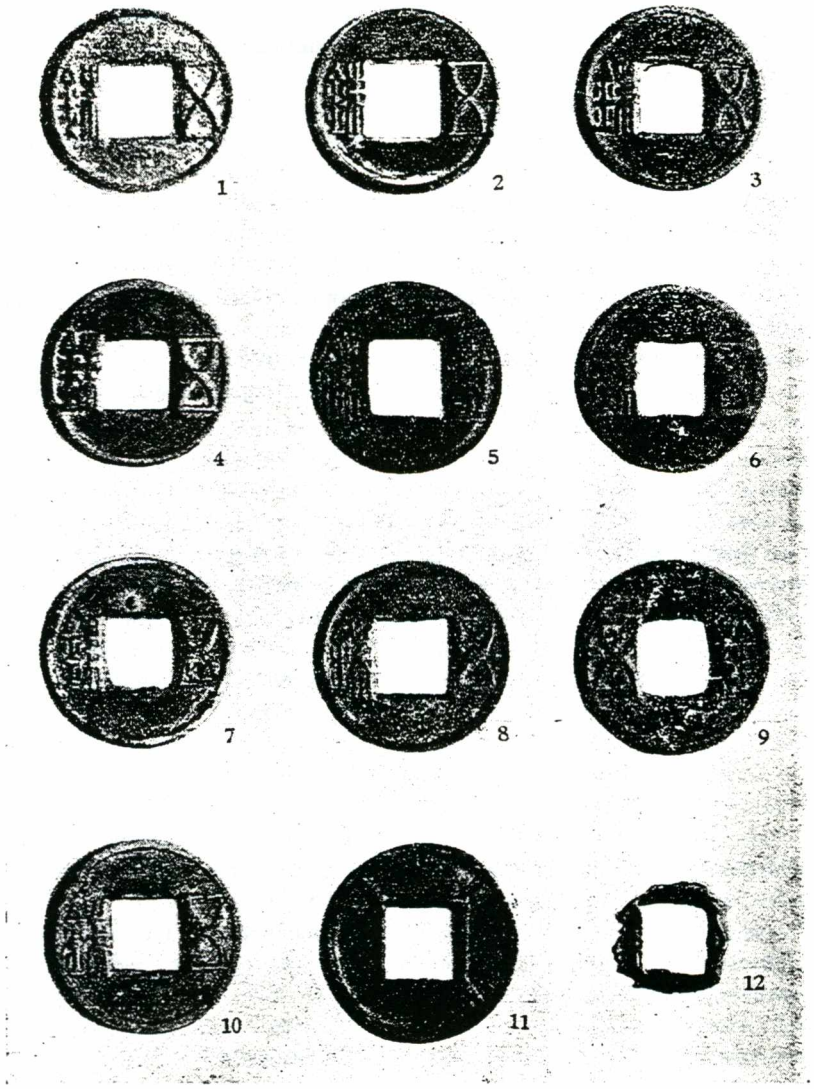


圖版三十一　王莽的十布

1.小布一百。 2.幺布二百。 3.幼布三百。 4.序布四百。 5.差布五百。 6.中布六百。 7.壯布七百。 8.弟布八百。 9.次布九百。 10.大布黃千。

PLATE XXXI. WANG MANG'S TEN SPADES

1. Small-spade-hundred. 2. Baby-spade-two-hundred. 3. Adolescent-spade-three-hundred. 4. Sequence-spade-four-hundred. 5. Legate-spade-five-hundred. 6. Medium-spade-six-hundred. 7. Adult-spade-seven-hundred. 8. Younger-brother-spade-eight-hundred. 9. Secondary-spade-nine-hundred. 10. Large-spade-yellow-thousand.



圖版三十二　東漢五銖

1.公孫述的鐵五銖。 2.淮陽王的五銖(更始五銖)。 3.光武的五銖(建武五銖)。 4—8.各種東漢五銖。 9.傳形五銖。 10.靈帝時的四出五銖。 11.四出五銖之背。 12.董卓的小五銖(?)。

PLATE XXXII. EASTERN HAN FIVE-GRAINERS

1. Gongsun Shu's iron Five-grainer. 2. The Prince of Huaiyang's Five-grainer (Gengshi Five-grainer). 3. Emperor Guangwu's Five-grainer (Jianwu Five-grainer). 4-8. Various Eastern Han Five-grainers. 9. Chuanxing Five-grainer. 10. Four-cornered Five-grainer of Emperor Ling's time. 11. Reverse of four-cornered Five-grainer. 12. Dong Zhuo's small Five-grainer (?).

2. *Coinage of the Three Kingdoms Era*

The coinage of the Three Kingdoms Era is extraordinarily complex. It is no easy task to fully and exactly explain it. There are far more coins than there are documentary materials.

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Wei coins include only Five-grainers. After Cao Cao restored the Five-grainer,[1] we do not know if new coins were minted or if they merely continued to use old ones. One would guess that not many of the old Five-grainers remained in the capital region then. Nor was it impossible that renewed minting was undertaken. Five-grainers minted then would have resembled Eastern Han Five-grainers. Those which began to be minted in taihe 1 [227 A.D.] of Emperor Ming[2] could have differed in size and weight, but there is now no way to distinguish such Five-grainers.

The Shu coins are the heart of the problem, and are almost too complex to analyze. There are at least four categories of coins which may be attributed to Shu during this period. [Cf. Plate xxxiii at end of this subsection]

The first is a Five-grainer, the so-called Shu Five-grainer. The inscription and form of these coins differ markedly from the Han Five-grainer, and so they are easy to distinguish. Practically all of them have been excavated in Sichuan. To a greater or lesser degree their inscriptions and construction resemble the Value-hundred Five-grainer, and so may be considered to have been minted in Sichuan. There are, however, quite a few varieties of Shu Five-grainer.

The largest of them weighs around 3.78 grams, lacks an inner rim, and sometimes bears a horizontal line above the hole. Another sort is also large, but has a thin body, and so weighs around 2 grams. Its wide hole also lacks a rim around it. It also sometimes has a mark above the hole, but the style of its inscription is clearly different from the first type. The two characters for "five grains" most resemble those on the Value-hundred Five-grainer, particularly those Value-hundreds minted at Jianwei in Sichwan. The third type is smaller, weighing around 2.5 grams, with some falling below 2 grams, as a consequence of coin weight reduction.

The lighter ones do not constitute a separate type. These coins are characterized by the presence of inner rims and small characters with narrow strokes. This is the most common Shu Five-grainer, the one which historically has received that label from numismatists, because the other types are all rare.

Ancient coin catalogs take the Summons-form Five-grainer for a Shu Five-grainer. That is incorrect. These Summons-form coins are Five-grainers with the character for five on the left, and the character for grain on the right. Such Five-grainers are found in all periods, not just during Shu-Han.

The second category of Shu coin is the Value-hundred Five-grainer, of which there are two main kinds. The first has a blank reverse, and was minted in Chengdu. The other has the character *wei*[a] on the left side of the hole on the reverse. These were

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[1]The histories do not agree on whether Cao Cao restored the Five-grainer. The *Universal Statutes*, "Food and Money, 8," says: Dong Zhuo minted more Small-cash, and "because of this, money became light and goods expensive. One *hu* of grain reached a price of several million cash. When Duke Cao became chancellor, he immediately abolished that coin, and returned to use of the Five-grainer." The *Universal Record* accepts this version of events. The *Record of the Three Kingdoms*, "Record of Wei" does not, however, raise the matter of Cao Cao's restoration of the Five-grainer. It merely says "In Emperor Wen's huangchu 2, Spring, 3rd month, first ten-days, the Five-grainer was restored." This contradicts the theory that it was Cao Cao who restored the Five-grainer.

Investigation of Literary Remains mentions neither Cao Cao nor Cao Pei as restoring the Five-grainer. It merely notes the latter's abolition of the Five-grainer. But if it had not been restored, how could it later have been abolished? Chen Shou lived during the Three Kingdoms period, and his statement is quite definite. In principle, he should be a reliable source.

But the *Record of the Three Kingdoms* lacks monographic treatises, is very sketchy in its accounts of systems of laws, and has long been criticized by later writers. The *Universal Statutes* appeared later, and must have some basis for the new statements it contains. It is not as specific in dates as the *Record of the Three Kingdoms*, but it is more concrete in tracing the causes and consequences of events. Xun Yue had by then already raised the question of the restoration of the Five-grainer, so this was obviously something being generally discussed then. As for the statement by Kong Linzhi of Liu-Song times that once Dong Zhuo had made the Small-cash, for several decades coins went out of use, he had probably based this on the *Record of the Three Kingdoms*.

[2]*Record of the Three Kingdoms*, "Record of Wei," says that in Emperor Ming's taihe 1, Summer, 4th month, day yihai, the Five-grainer was put into circulation. This would seem to be saying that the constraints of a barter economy were being loosened by a return to the use of coins. It does not imply that new coins were being minted. However, the *Jin History*, "Treatise on Food and Money" states: "Sima Zhi requested that more Five-grainers be minted, and so Emperor Ming reestablished the Five-grainer." The *Universal Statutes* and *Investigation of Literary Remains* also note this statement. The latter work's "Investigation of Coins, 1," states: "Jin used the Wei Five-grainer."

minted in Jianwei. At that time Jianwei was a commercial center, the gateway to the Southwest. A commandery was established there during Western Han by Emperor Wu, and Zhang Qian hoped to set out from there in search of India. It was probably also a mining center. Nearby Zhuti had been famous for its production of silver since antiquity. Its silver was purer than that of any other place.

There are slight differences between the inscriptions on the two kinds of Value-hundred Five-grainers. The character for grain on the Chengdu model is rounded off, with top and bottom somewhat separated. The opposite is true of the Jianwei coin. The character for grain is squared off, and the top and bottom squashed together. The character *wei* coin has a special significance in the history of Chinese coinage. It is the first round coin to have inscriptions on both sides.

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It is also the first one to record its place of manufacture. However, blank reverse coins were also minted at Jianwei. Probably only those first minted there had reverse inscriptions. Later, when their circulation expanded beyond that place, the character *wei* was no longer cast onto them.

The blank reverse coins come in various thicknesses. The thickest weighs more than 8 grams. Those of average thickness weigh 5-6 grams, and the thinnest run to less than 3 grams. Generally they are large, but there are some very small ones, which are rare. There is one variety with a thin body and wide rim, which is especially large. Its inscription places it within the Jianwei type. It weighs 4.4 grams. In construction it particularly resembles the second variety of Shu Five-grainer.

The third category is a Value-hundred. These come in various sizes and weights. Their inscriptions and construction differ from the Shu Five-grainers and Value-hundred Five-grainers. The flatness of the strokes of the characters may be linked to the thinness and small size of the coins. The largest of them weigh only 2 grams. The next largest are 1.5, 1.0 and 0.5 grams. They come as small as 0.4 grams.

The fourth category is the Value-one. In inscription, construction and small size, it is exactly like the Value-hundred. This coin was not recorded until late Qing times. In 1876 a jar of small coins was dug up in Chengdu. It contained Taiping-hundred-metal, Dingping-one-hundred, Value-hundred and Value-one coins.[3]

The dates of manufacture of the above four kinds of Shu coins cannot be determined. Even their chronological sequence is a problem. There is only one written reference to them. This is that when Liu Bei conquered Chengdu in jian'an 19 [214 A.D.], Liu Ba advised minting a Value-hundred coin.[4] It is still a controversial question whether this Value-hundred is the same as the Value-hundred Five-grainer. Some numismatists say that the coin Liu Bei minted was the Value-hundred Five-grainer. The histories omitted the two characters for five grains out of carelessness.

Liu Bei stressed the legitimacy of his rule. This reputation constituted his political capital, that which he depended on to win the support of the people. So he would not have gotten rid of the Five-grainer label. Others say that the coin Liu Bei minted was a Value-hundred, and not a Value-hundred Five-grainer[5] because that was what the histories said it was.

The key to the problem is the Value-hundred Five-grainer. Those who say Liu Bei minted a Value-hundred believe that the Value-hundred Five-grainer was a product of Eastern Han. Strictly speaking, jian'an 19 [214 A.D.] was still part of Eastern Han, but since they believe the Value-hundred Five-grainer was not minted by Liu Bei, they must believe it was minted before that year. If this theory is accepted,[6] the other problems become easy to resolve.

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[3] *Pu Gualu's Coin Catalog*: "The Han Goose-eye Value-one cash. This coin is not seen in old catalogs. At the beginning of the Tongzhi reign, a Chengdu resident was building a house when he dug up the tomb of Huang Hansheng. Within it was a jar of old coins, all as small as goose eyes. They bore the inscriptions Taiping-hundred-metal, Dingping-one-hundred, Value-hundred and this one. In all there were four kinds. All were minted during Three Kingdoms times."

[4] *Record of the Three Kingdoms*, "Record of Shu: Biography of Liu Ba" quotes the *Biographies of Previous Worthies of Lingling*: "At first when he attacked Liu Zhang, Bei and his men agreed that if they succeeded, the goods in the prefectural treasury would be left alone for the use of the destitute. When they took Chengdu, officers and men all threw down their weapons, rushed to the warehouses, and elbowed each other aside to carry off the precious goods. There was not enough for the army's needs, and Bei was terribly worried by this. Ba said: 'This is easily remedied. You must merely cast Value-hundred coins. To keep the prices of goods level, appoint officials to serve as market officers.' Bei followed this advice, and within a few months the prefectural treasury was full."

[5] Lo Bozhao, "The Value-hundred Five-grainer Was Not Minted by Liu Bei," *Coins*, no. 11.

[6] The main basis for the theory that the Value-hundred Five-grainer was minted during Eastern Han is the Huang Chong tomb mentioned in *Pu Gualu's Coin Catalog* [Cf. note 3 above]. Huang Chong died in jian'an 25, six years after Liu Bei began

The minting of the Value-hundred Five-grainer must have occurred in connection with fiscal difficulties, and in particular in connection with warfare. The largest military expenditures during Eastern Han must be reckoned to have been in connection with the war against the Western Qiang, which ran on continuously for nearly a century from the time of Emperor An to that of Emperor Ling. During the reign of Emperor Huan, there were in fact some who advocated minting large coins, but because of the opposition of Liu Tao, this was not done. Instead, iron coins were circulated at an exchange rate of two iron coins to one bronze coin.

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Later, during the reign of Emperor Ling, they continued to mint Five-grainers even in response to the Yellow Turban uprising. Under Emperor Xian, Dong Zhuo minted only Small-cash.

Evidently, the Value-hundred Five-grainer was not minted prior to Emperor Xian's time, or at least it was not minted by the Han Dynasty itself.

With these other possibilities eliminated, if it was not minted by the father and son Liu Yan and Liu Zhang, then it must have been minted by Liu Bei. The histories would have omitted the characters for Five-grainer from its label because by then the Five-grainer had been in circulation for several hundred years. There was no other coin. Any coin minted would have had to have been a Five-grainer, and so there was no need to specify that fact overtly.

I deduce that of the Shu Five-grainers, the third type was minted by Liu Yan and his son Liu Zhang in Chengdu. During the several decades they were in Chengdu, they could have minted quite a few coins. After Liu Bei took Chengdu, he minted the Value-hundred Five-grainer. The next year, after taking Jianwei, he also carried on minting there as well, adding the character *wei* on the reverse of such coins. In addition to the Value-hundred Five-grainer, he also minted ordinary coins. Probably the first kind was minted in Chengdu and the second in Jianwei.[7]

Therefore, the words of Liu Yuxi that "power was divided as though among the three legs of a *ding* tripod; commerce restored the Five-grainer coin" correspond to the historical reality.

These two standard sized coins and the Value-hundred Five-grainer with the character *wei* on its reverse were not minted for long. In Emperor Houzhu's jianxing 12 or 13 [234 A.D.] a money reform was carried out, and the Value-hundred was minted. The Value-one was probably minted not long before this. Still fewer of these were minted. The Value-hundred Five-grainers unearthed during modern times in Yunnan[8] must have been circulated after Zhuge Liang crossed the Lu River.

There are fewer problems with the Wu coinage. The two main questions are whether Sun Quan minted coins before he assumed the throne, and whether he immediately minted coins after taking the imperial title.

Given the fact that Liu Bei was producing coins before he took the title of emperor, it would be odd if Sun Quan had waited for fifteen years after taking the throne to begin minting. In jian'an 7 [202 A.D.], Zhou Yu has said, the state of Wu smelted in the mountains to make copper.[9] This could be referring to the minting of coins, because in Han times it was common to mint coins in the hills. Perhaps the Large-spring Five-grainer spoken of in the old catalogs was minted at that time.

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minting the Value-hundred coin. They say that six years was too short a time to change from the heavy Value-hundred Five-grainer to that goose-eye sized Value-hundred. Actually, though, why should a reduction in weight of the coinage require six years? In addition, according to Li Jiarui's "A General Description of the Use of Cowry Money in Ancient Yunnan," *Historical Studies*, 9 (1956), there were many Value-hundred Five-grainers in a Yunnan Eastern Han tomb. This would seem to confirm the Eastern Han theory.

However, the category Eastern Han is suspiciously broad. Jian'an 25 was still within Eastern Han.

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By that time Liu Bei had long since begun to mint coins. Nor was the evidence from the Huang Chong tomb based on a formal excavation report. The earliest account is in *Pu Gualu's Coin Catalog*, written in 1903, some forty years after the discovery of the tomb, and this was not an eyewitness account. The truth of this account, whether or not this was really Huang Chong's tomb, the date of Huang Chong's burial, and whether or not the tomb was intact, are all questions requiring study.

[7]Zheng Jiaxiang, "Studies of the Five-grainer," *Coins*, no. 17, states that this Five-grainer was minted by Liu Yan and his son Liu Zhang, and that the Value-hundred Five-grainer was this coin's successor. If we accept this thesis, then we are obliged to believe that the small Five-grainer with narrow strokes in its inscription was minted by Liu Bei. But this Five-grainer bears little resemblance to the Value-hundred Five-grainer, and the fact that there are so many of them does not square with the circumstances of that time.

[8]In recent years the Yunnan Museum has brought to light many Five-grainers and Value-hundred Five-grainers from fifteen ancient tombs in Zhaotong, Ludian. Li Jiarui, "A General Description of the Use of Cowry Money in Ancient Yunnan," *Historical Studies*, no. 9 (1956).

[9]*Record of the Three Kingdoms*, "Record of Wu," 9, "Biography of Zhou Yu," quoting in a note the "Biography of Jiang Biao."

The histories record only two types of Sun Quan coins, and there are two others which can be attributed to him on the basis of inscriptions and construction.

The first is the Large-spring-five-hundred minted in jiahe 5 (236 A.D.). [Plate xxxiv,10] Its original weight was around 12 grams, but this was later reduced to 8 grams. The second is the Large-spring-equals-thousand, minted in chiwu 1 (238 A.D.). Its original weight was nearly 20 grams.[10] It was later reduced to 11 grams, and finally to less than 4 grams. These two coins are recorded in the histories, and examples of the coins themselves are extant. The inscription Large-spring-five-hundred is read top to bottom and left to right. The Large-spring-equals-thousand is read circumferentially.

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There is also a Large-spring-two-thousand and a Large-spring-five-thousand, only a few of which have been unearthed, and which I have not seen in the records. The Large-spring-two-thousand is about the same in size and weight as the first mintings of the Large-spring-five-hundred. Only two of the Large-spring-five-thousand have been discovered, and these are about the same in size and weight as the first mintings of the Large-spring-equals-thousand.

Aside from these three large coins, there are several other kinds of coins which may be attributed to the Three Kingdoms period. These are the Taiping-hundred-cash and the Dingping-one-hundred. [Plate xxxiv]

There are very many different kinds of Taiping-hundred-cash. In terms of different inscriptions there are large seal, small seal and clerk script variants. The character for *tai*, aside from its representation as []^{b} in the clerkscript and in another kind of seal script, is otherwise written as [].^{c} These two forms were used interchangeably in antiquity, so this is not surprising. Some specimens substitute *shi*.^{d} This character was also then interchangeable with *tai*. The word for heir-apparent, *taizi*, for example, was also written as *shizi*.

In terms of their construction, these coins fall into two categories. One category has curved lines and star-points on its reverse, the latter being above the hole, but as they are not circular, perhaps they are not star-points after all.[11] Because the inscription on the reverse is usually worn down, through the ages numismatists have sometimes seen the curved lines as waves, and sometimes said they were the back of a tortoise,[12] and so have classified the coins as pseudo-coins or tokens. Since, however, they are so numerous, they must have been in regular use as money. This category of Taiping-hundred-cash is thick and heavy. One variant has an upward hook on the first stroke of the character for "hundred," which makes it resemble a deer's horn. It is called the deer-horn Taiping. It weighs more than 8 grams. There are some as light as 3 grams or less. The Shiping-hundred is the biggest, but its body is not thick, and it weighs around 5.8 grams.

The other category has a blank reverse. The inscription is in small seal, and there are not major specimen variations, except for a seal form written [],^{e} on account of which it is called the Sail-awning Taiping. Sometimes the character for *da* or *tai* is written [].^{f} Blank reverse coins come in very many sizes and weights. Large ones weigh from 3 to 4 grams. The next size down runs from 0.8 to 1.4 grams. The next smallest is sometimes inscribed Taiping metal-hundred. These average 0.85 grams, with some as light as 0.55 grams. The smallest only weigh 0.45 grams, almost the same as the extremely small Value-hundreds.

There has been much debate about and a variety of explanations offered as to the producer of the Taiping-hundred-cash. At first, it was natural to regard it as a year-period coin, and hence to ascribe it to Sun Liang.[13] In terms of period, this is plausible, because the Taiping-hundred-cash could not have been minted by Liu Bei or his son. They had a Value-hundred Five-grainer and a Value-hundred, and so would not have needed to mint a Taiping-hundred-cash. Nor can this coin be attributed to the Northern and Southern Dynasties period, because among the old coins still existing during the early years of Eastern Jin, there was only a "four-*wen*-coin," which has to be the "Taiping Four-*wen*-coin" of the Northern and Southern Dynasties period, and

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[10]Hong Zun, *Record of Coins* states that the larger ones weigh 12 grains and 6 *zi*. This work also says the Inaugural coin weighs 2 grains 4 *zi*. Hence the larger ones were 5.25 times the weight of the Inaugural coin, or 19.58 grams.

[11]Weng Shupei's *Collected Investigations of Ancient Coins* says: "There are stars above and below on the back near the rim, and a wave-like line covering the surface. There is another kind where the character *ping* is handled in the same fashion. There are wave-like lines on the reverse, and there is something resembling the image of a man above and below the hole." Obviously none of the Taiping-hundred-cash coins Weng Shuppei had seen was clearly marked. Rao Dengzhi's *Essays on Coins*, 2, even says there is a star at each corner.

[12]Gu Xuan mentions a four-line tortoise-back coin and a wave decorated coin, both of which were Taiping-hundreds. (Cf. *Record of Coins*).

[13]Lu Zhun and Weng Shupei held this view. Cf. *Collected Investigations of Ancient Coins*.

this must be the Taiping-hundred-cash, particularly since the histories clearly state that the Four-*wen*-coin was an old coin from the days of the Sun clan.
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Sun Liang's taiping year-period began nine years after they stopped minting the Large-spring. They must have replaced that coin with something.

In terms of construction, some Taiping-hundreds do indeed resemble Wu coins. Most of them, however, have been unearthed in Sichuan, and intermixed with Value-hundred coins. The Deer-horn Taipings somewhat resemble the Value-hundred Five-grainers, and their weights are virtually identical. One kind of blank reverse Taiping-hundred-cash frequently bears an incised mark. and this is a hallmark of Shu coins. Probably for this reason some attribute the Taiping-hundred-cash to the Inspector of Yizhou, Zhao Xin.[14] This fits the location of coin finds, but Zhao Xin occupied Chengdu in Emperor Hui of Jin's yongkang 1, 12th month (the beginning of 301 A.D.), and was killed in the first month of the following year, so he could not have minted so large a number of coins. There are so many varieties of this coin, both large and small, that it must have been minted over a rather extended period.

Still others say that the inscription *taiping* was not a year-period, that this was a Daping-hundred-coin, and that its inscription should be read as "large capable of equalling hundred," which would be almost the same as the meaning of the Large-spring-equals-thousand coin.[15] Some people even say it was minted at the beginning of Sun Quan's reign.[16] This too is a fascinating theory. Liu Bei minted coins before he assumed the imperial title. But Sun Quan did not mint the Large-spring for a long time after he took the imperial title. To not have minted at all, and then suddenly mint a large coin of face value 500, would have been without precedent in Chinese monetary history. Even if he had also been using Wang Mang's Large-spring-fifty, there would have been a large gap between the two denominations. It is the Chinese custom to go from fifty to one hundred before advancing to five hundred.

Hence it is plausible to place the Taiping-hundred-cash's minting at the beginning of Sun Quan's reign. That would have Sun Quan's coinage consist of the Large-spring-fifty, the Daping-hundred-cash, the Large-spring-five-hundred, and the Large-spring-equals-thousand. One might even risk reading the Taiping coin's inscription as Large-coin-equals-hundred. Not only do the histories say that the Taiping-hundred-cash was an old coin from the Sun clan, a fair number of these coins have been unearthed in Linping, in Zhejiang province.[17]

In recent years an ancient tomb in Wuchang's Renjiawan (Xiakou of Three Kingdoms times) has yielded medium sized and small versions of the Taiping-hundred-cash, along with Han Five-grainers, broken-edged Five-grainers, Value-hundred Five-grainers, and Monetary-spring coins. There were no Large-spring coins of Sun Wu.[18] This makes it clear that the Taiping-hundred-cash began to be minted prior to jiahe 5 of the Sun dynasty of Wu [236 A.D.], and probably during the last years of Eastern Han. Moreover, the clerk script version clearly bears the character *tai*, so these must be Taiping, not Daping coins. Most of them have been unearthed in Sichuan, particularly the smaller Taiping-hundreds, which have surfaced in Sichuan by the thousands. The incised marks on their reverses prove that they were circulated in Sichuan.

That they also circulated to the east in Wu, does not mean they were minted by the Sun dynasty of Wu. Consequently, some people have theorized they were minted by Zhang Lu.[19] This would link the Taiping coin with the Taiping Taoist movement. We are not told, however, why this coin came out in Sichuan, while Zhang Lu flourished in Hanzhong.

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[14]Yamashita Yoshisuke [or Yoshiya, or Kosuke], *Yoshisuke's Essays on Coins*.

[15]Dai Xi, *Collected Words on Ancient Coins*.

[16]Zhang Jiongbo, "On the Daping-hundred-coin, the Daping-hundred-metal and the Dingping-one-hundred," *Encyclopedia of Ancient coins*, latter section, four strokes.

[17]The *Collected Words on Ancient Coins* says: "In the time of Qianlong, two jars came out of an eroded bank at Linping. These two coins (referring to the Taiping-hundred-cash and Dingping-one-hundred) subsequently spread through the Southeast."

[18]Managing Committee of the Wuhan Municipal Museum, "General Report on the Wuchang, Renjiawan Early Six Dynasties Tomb," *Cultural Relics Reference Materials*, nos. 1, 2 (1955). The coins in the tomb included the following eight types:

Five-grainers	diam. 25 mm	2,454
	coins	
Clipped-edge Five-grainers	20 mm	990
Taiping-hundred-cash	13-20 mm	128
Value-hundred Five-grainers	28 mm	31
Monetary-spring	23 mm	21
Half-ouncers	23 mm	4
Four-corner Five-grainers	23 mm	1
Large-spring-fifty	25 mm	1

[19]Xiang Lingting, *The Taiping-hundred-cash and the Heavenly Master Taoists*. He says the Taiping-hundred-cash was a charm, rather than a real coin.
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The Taiping-hundred-cash should be categorized in terms of the presence or absence of curved lines on their reverses, and not according to the calligraphic styles of their inscriptions.

There is one problem about these coins which must be resolved before they can be explained at all. This is whether or not the ones with curved lines on their reverses were issued at the same times and from the same places as those with blank reverses. If that was the case, they were issued by the same government or authority. Of course we cannot reject the possibility that issue of the two was separated by several years, but there could not have been a gap of several decades or a century between them. If they were not issued contemporaneously, then which came first? The two types differ greatly in construction. If issued by the same government or authority, the thickest and heaviest ought to have come out first, followed by the lighter and thinner. Therefore, the key lies in whether the two of them belonged to the same government or authority, and this aspect of the problem cannot now be resolved.

The Taiping-hundred-cash with curved lines on their reverses might not have been minted in Sichuan, because no incised lines have been found cut into their reverses, and because their construction resembles that of Wu coins. But no matter where they were minted, they must have circulated in Sichuan, and in rather large quantities. In fact, however, they circulated in Jiangdong in the East as well as in Sichuan. The blank reverse version we can affirm as having been minted in Sichuan, since many of them have been unearthed in Sichuan in the company of Value-hundred and Dingping-one-hundred coins. All of them, large and small, have lines incised on their reverses. Though these coins were minted in Sichuan, their circulation would of course not be limited to Sichuan. After Jin extinguished Shu, the latter's coins would spontaneously have circulated into the East.

If both sorts of Taiping-hundred-cash were minted in Sichuan, then the thick and heavy ones would have been minted first, and the light and small ones afterwards. If they were minted in different places, but the two were linked in some fashion, the same order would have been maintained. If this was the case, the Taiping-hundred-cash would have been minted before the Value-hundred, because the small Taiping-hundred-cash have often been found together with small Value-hundreds, and I have never heard of large Taiping-hundred-cash being found together with Value-hundreds.

Some say the blank reverse versions were minted first as legal tender, but that the curved line reverse coins were non-legal tender tokens minted in later times. This theory cannot be said to be entirely without reason, because adding the stars to the curved lines was really not in accord with China's monetary traditions. These coins are also clearly different in construction from the blank reverse ones. Still, tokens ought not to exist in such large quantities as does this coin. There are even more of them than there are of the blank reverse kind. Hence we may reject this hypothesis. Nor is there firm evidence that they were minted later. On the star and curved line variety, the character for cash has the metal signific written as [].[g] Some say this makes it a late issue, but that form of the metal signific is not enough to establish

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a late date unless we can prove that during the time the blank reverse Taiping-hundred-cash was being minted, this form of the character for metal was still not being employed.

If we cannot prove this last hypothesis, then it is possible that this coin was not minted by a feudal kingdom, but rather by some popular organization. The feudal kingdoms were conservative. The people were rather more fond of innovation than the rulers. The presence of clerk script on some Taiping-hundred-cash would attest to this. Therefore I surmise that this coin's minting was connected with some religious organization, and perhaps it was either produced by a religious organization or by some popular group in response to a religious call. During the late Han and Three Kingdoms period, this could only have been the Taiping Taoist or a peasant movement operating under the Taiping Taoist banner.

The most prominent such movement was the one which brought about the Yellow Turban uprising. Some say Taiping Taoism was Zhang Jiao's religion, and Zhang Jiao's power reached only to Qingzhou, Xuzhou, Youzhou, Jizhou, Yanzhou, Yuzhou, Jingzhou and Yangzhou, but not into Sichuan. People who raise this objection are evidently contrasting the Five Pecks of Rice Taoists with the Taiping Taoists. In fact in modern times most people take this line, supposing that these were two different late Han Taoist sects.

I, however, believe that the Five Pecks of Rice Taoists and the Taiping Taoists were the same thing. At most one may say that the former was a branch of the latter. The histories clearly state that the methods of the Five Pecks of Rice Taoists' Zhang Xiu were nearly identical to those of the Taiping Taoists' Zhang Jiao.[20] They also say that Zhang

Lu's methods resembled those of the Yellow Turbans.[21] Moreover, Zhang Xiu and Zhang Lu started their rebellions in the same year. Is not this sufficient to show that the two were the same thing?

The label Five Pecks of Rice Taoism was originally given them by others, and they did not use it for themselves. After the Yellow Turbans had been put down, the followers of the Taiping religion may not have dared to use the name Taiping Taoism publicly for their movement, and so Zhang Lu and his followers would not have rejected the appellation Five Pecks of Rice Taoism. It was only later that they adopted the name Heavenly Master Taoism. During late Han they used rice as a means of payment because the Hanzhong region was then viewed as outside the pale of civilization. The Di and Qiang tribesmen were very numerous, the economy was backward, basically still a natural economy, and money was not much circulated. If not five pecks of rice, they would have had nothing else to use for a religious offering. In this respect they were close to the Caos' Wei state, which for some time had been using grain and cloth as instruments for making payments.

Therefore, I believe that the Taiping-hundred-cash with stars and curved lines on their reverses were minted by either Zhang Xiu's or Zhang Lu's groups. If the curved lines on the reverses are supposed to represent waves, then they may be still more easily explained, since water is one of the three ruling forms of religious Taoism, and was worshipped.

There were undoubtedly also followers of Taiping Taoism in Sichuan, because the histories note that in zhongping 5 (188 A.D.), the Yellow Turban Ma Xiang killed the Inspector of Yizhou and Grand Administrator of Ba Commandery, and proclaimed himself Son of Heaven.[22] It is easy to explain why the followers of the Taiping Taoist sect in Yizhou would have minted a Taiping-hundred-cash. Moreover,

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after Liu Bei had defeated Xiahou Yuan in jian'an 23 [218 A.D.], Hanzhong became a part of his Shu-Han state. The following year Liu Bei proclaimed himself Prince of Hanzhong. By then, perhaps no one was any longer paying attention to the political significance of the two characters *taiping*, and so they continued to mint Taiping-hundred-cash.

Perhaps the first to be minted was the Shiping-hundred-cash. Because the word *taiping* was loved by the people, or because the Taiping Taoists later changed their allegiance to work together with the ruling class, the coin may not have been minted privately by believers in Taiping Taoism.

More would have been minted in Yizhou than in Hanzhong because Yizhou's monetary economy was better developed, and even Hanzhong's existing Taiping-hundred-cash could have flowed to Yizhou.[23] The blank reverse type would have been produced in Yizhou, and at the same time as the Shu Five-grainers with inner rims, perhaps during the period of Liu Yan and Liu Zhang. The extremely small Taiping-hundred-cash were probably minted at the time of Liu Chan.

Some say the Taiping-hundred-cash could not have been minted before the Value-hundred Five-grainer. If the former had already been present in Sichuan, how could Liu Ba's advice to Liu Bei to mint a Value-hundred coin have been able to level off prices? This objection is only superficially plausible. Liu Ba's advice to mint Value-hundred coins had nothing to do with whether or not such coins existed previously. Perhaps it was precisely because Liu Ba knew of the existence of the Taiping-hundred-cash that he advised Liu Bei to imitate it.

It is only this way that we can explain why, even after the Value-hundred Five-grainer began to be minted, the Taiping-hundred-cash was permitted to circulate and be minted. Of course, the early Value-hundred Five-grainers could not have circulated in the same channels as the Taiping-hundred-cash. The two coins were of different weights. After the Value-hundred Five-grainer had been reduced in weight, however, the two could circulate simultaneously.

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[20]Note in *Latter Han History*, "Biography of Liu Yan," quoting the *Abstract of Laws*. Cf. also citation of this work in *Record of the Three Kingdoms*, "Record of Wei," 8, "Biography of Zhang Lu."

[21]*Record of the Three Kingdoms*, "Record of Wei," "Biography of Zhang Lu," citing the *Abstract of Laws*.

[22]*Latter Han History*, "Annals of Emperor Ling."

[23]Taiping-hundred-cash may also have been unearthed in the Shaanxi-Gansu region. Wang Liansheng's *Miscellaneous Notes of the Tianrang Pavilion* states: "There was an old private secretary named Zhou, who came from the east to Shaansi and Sichuan, and who passed away several decades ago. He loved to collect ancient coins. . . There was a Taiping-hundred-cash on which the character for hundred was written very strangely as [].[h] Pu Gualu in the same year got hold of this coin and lorded it over me as a consequence. Now I have put him down." In addition, Wang Wenmin sent a letter to Pan Wenqin which said that his elder brother, named Jiyan and with the alternate name Shiwu, was a county magistrate in Gansu, and had a Taiping-hundred-cash on the back of which were stars, a moon, and curved lines. This was said to be something extremely rare.

Some Five-grainers have the character *ping* added above or below their holes. Numismatists call these the Ping-equals-five-grains. In construction they are close to the Eastern Han Five-grainer, except that they are thinner. If they were not minted by particular localities, they must be relatively late. The character *ping* is written in a clerk script similar to that on the Taiping-hundred-cash. There are also some coins with the characters *tai* and *ping* cast above and below the hole, respectively. These coins may have some connection with the Taiping-hundred-cash. Perhaps when the followers of Taiping Taoism privately minted Five-grainers, they might have added one or both characters. Later, because they had become a political or military movement, they minted the Taiping-hundred-cash. This could have happened at the time Dong Zhuo was minting the Small-cash.

The Dingping-one-hundred is the most difficult to explain of Chinese coins. Only small ones exist. The heaviest of them is only a little over 1 gram. Hence they would have been minted later than the Taiping-hundred-cash and the Value-hundred. Probably they were minted in the Shu-Han ruler Houzhu's yanxi 1 [238 A.D.]. Some say they should be read Anping rather than Dingping, with An[i] as an abbreviation of *yan*,[j] and that they were minted during the yanping year period of Li Xiong of Cheng (306-310 A.D.).[24] This

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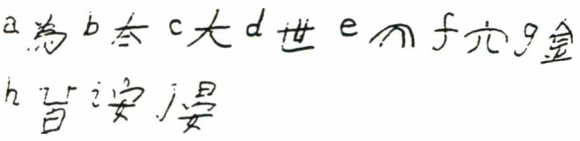
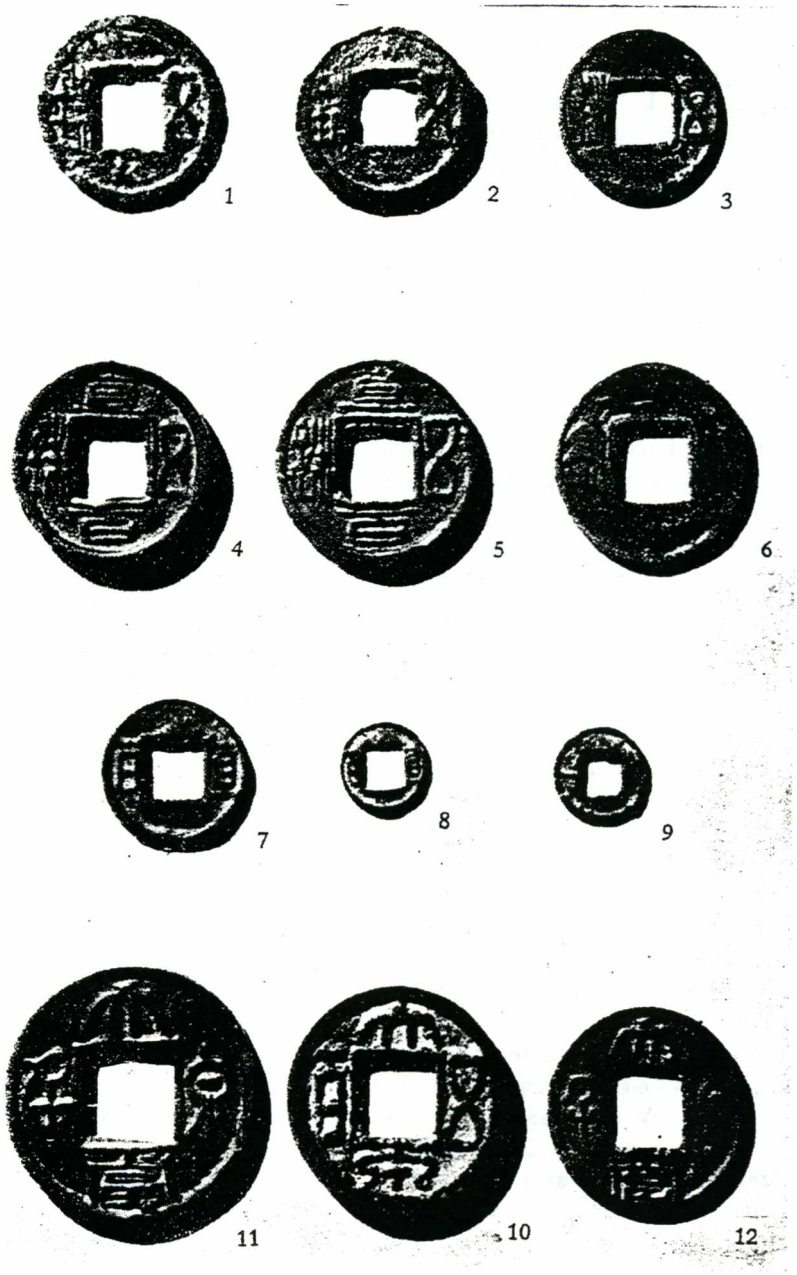
is a forced interpretation.

In fact there is no plausible explanation for the two characters Dingping. All we can affirm is that these coins are contemporaneous with and from the same place as the small Taiping-hundred-cash, because they have been found together. They are somewhat scarcer than the Value-hundred and Taiping-hundred-cash. If they were minted by the Shu-Han authorities, they could only have been some sort of a commemorative coin or some sort of special issue.



[24]Nukii Ginjiro, "On Li Xiong's Anping-one-hundred Coin," *Money*, no. 201. Cf. also his "More on Li Xiong's Anping-one-hundred Coin," *Money*, no. 204.

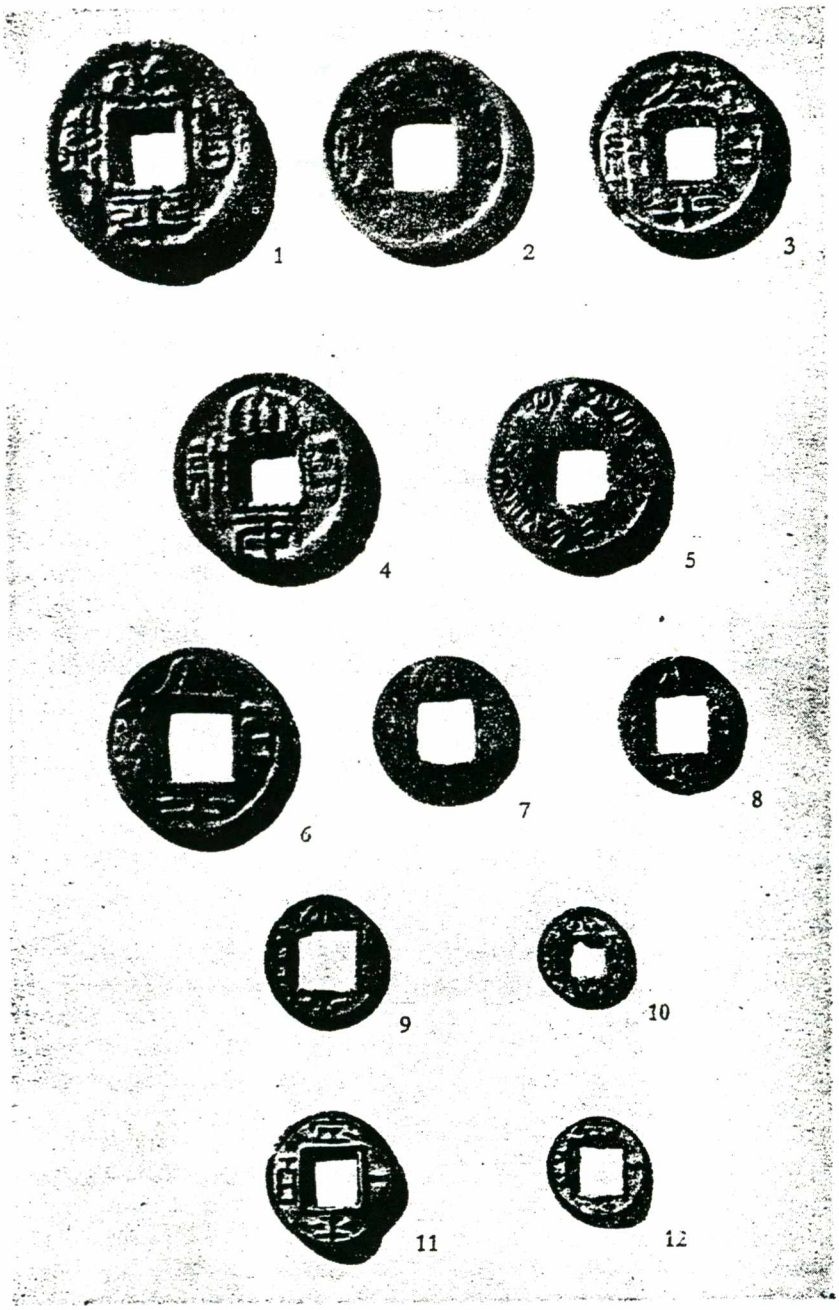


圖版三十三　三國的錢幣

1.劉焉五銖(?)。 2—3.蜀五銖。 4.直百五銖。 5.犍爲的直百五銖。 6.犍爲直百五銖之背。 7—8.直百。 9.直一。 10.大泉五百。 11.大泉當千。 12.減重後的大泉當千。

PLATE XXXIII. THREE KINGDOMS COINS

1. Liu Yan Five-grainer (?). 2-3. Shu Five-grainers. 4. Value-hundred Five-grainer. 5. Jianwei Value-hundred Five-grainer. 6. Jianwei Value-hundred Five-grainer reverse. 7-8. Value-hundred. 9. Value-one. 10. Large-spring-five-hundred. 11. Large-spring-equals-thousand. 12. Large-spring-equals-thousand after reduction in weight.



圖版三十四　太平百錢和定平一百

1.世平百錢。 2."鹿角"太平百錢。 3.背有曲折文的隸書太平百錢。 4.篆書太平百錢。 5.太平百錢背面的曲折文和星點。 6—8.光背太平百錢。 9—10.太平百金。 11—12.定平一百。

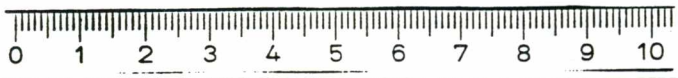


PLATE XXXIV. TAIPING-HUNDRED COINS AND DINGPING-HUNDRED

1. Shiping-hundred-cash. 2. "Deer-horn" Taiping-hundred. 3. Clerkscript Taiping-hundred with curved line reverse. 4. Seal script Taiping-hundred. 5. Curved lines and stars on back of Taiping-hundred. 6-8. Blank reverse Taiping-hundred. 9-10. Taiping-hundred-metal. 11-12. Dingping-hundred.

3. Gold and Silver

It was believed for over a thousand years after Han times that gold circulated abundantly as money during Western Han. Actually, gold was at that time still not a full-fledged money. Of the functions of money, gold fulfilled those of measure of value, instrument of payment, store of value and world money. If one could prove that it was also an instrument for making purchases or medium of circulation, it would have been a full-fledged money.

It is by no means unusual in Han sources to find the word *jin* used to represent value.[1] Of course *jin* did not necessarily refer to gold, though it frequently meant one catty of gold, or ten-thousand cash. This, however, is not to deny to gold the function of measure of value, which is basically a conceptual matter.

It was also quite common for gold to serve as an instrument for making payments during both Han dynasties, particularly during Western Han, first of all as imperial and princely gifts; second for paying taxes, as in the wine-toast for gold;[2] third, in fines to remit punishments;[3] and fourth, in bribes.[4] Storage of value was also a common function of gold.[5]

During the Han dynasty foreign trade employed gold as a world money.[6] Gold was not, however,

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[1] *Han History* 4, "Annals of Emperor Wen": "A middling person with a hundred *jin* has the produce of ten families." *Ibid.*, 59, "Biography of Zhang Tang": "At Tang's death, his family property's value was only five-hundred *jin*." *Historical Records*, 58, "Hereditary Houses: King Xiao of Liang": "At first, when King Xiao was still alive, there were piles of goblets worth a thousand *jin*." *Han History*, 65, "Biography of Dongfang Suo": "The land between Feng and Gao is considered rich. The price of one *mu* of land is one *jin*." Liu Xin's *Miscellaneous Notes on the Western Capital*, first: "At the time of Emperor Wu, the state of Shendu [in India] gave as tribute a linked ring bridle. . . One horse's ornaments were worth a hundred *jin*."

[2] *Latter Han History*, "Monograph on Ceremonials," first part, note quoting Ding Fu's *Han Ceremonials*: "The wine-toast for gold law was added by Emperor Wen. The wine was made on the morning of the 1st month of the year. By the 8th month it was done, and was called toast-wine because the nobles were ordered to offer tribute in gold to aid in its use in worship. The Han regulations for this state that the Emperor would fast overnight, and personally lead the assembled officials to worship in the ancestral temple. The assembled officials had to separately receive the requests, and nobles possessing fiefs with a thousand dependents would each offer up four ounces of gold. Those having populations of from 500 to 1,000 would also offer four ounces, and all would receive toasts from the Privy Treasurer. In addition, the Grand Herald, those gaining revenues from the nine commercial towns, from Jiaochi and Rinan, presented rhinoceros horn nine inches in length as though it were tortoise shell, Yulin presented ivory tusks three feet long as though each was the equivalent of twenty kingfishers. They were permitted to use these as equivalents to gold."

Historical Records, "Treatise on the Balanced Standard": "When the wine-toast was brought to the Privy Treasury, the gold was short, and of the marquises taking part in the ceremony, over a hundred lost their titles." (To which the appended note states that, according to the Han ceremonial, a prince's son was a marquis. Each marquis would annually give wine-toast gold to the Han court in proportion to the size of the population he controlled. The Emperor would approach to receive the tribute in gold to aid in the sacrifices. On the day of the great prayer, the wine-toast would be drunk and the gold received. If the gold was short, less a catty or an ounce, he would become angry. A prince would lose a prefecture, a marquis his fief.)

Western Han Abstract of Laws, 14, "Ceremonials, 8, Temple Sacrifices": "In Emperor Xuan's dijie 4 [66 A.D.] Marquis Sheng of Xiangwen presented wine-toast gold of 1 catty, 8 ounces, and was removed from office for being short 4 ounces." *Ibid.* "In wufeng 4 [53 A.D.] Marquis Gucheng came to court and was dismissed for presenting wine-toast gold which was short by 4 ounces."

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[3] *Han History*, 44, "Biographies of the Kings of Huainan, Hengshan and Jipei": "stripped of rank and made a common soldier; not to gain office and to serve as a clerk; if not a clerk, his remission of death gold is 2 catties 8 ounces."

[4] *Han History* 70, "Biography of Chen Tang": "The woman Can wished to seek enfeoffment for Ji. Tang accepted her 50 catties of gold and assented to her request."

[5] *Han History*, "Biography of Wang Mang." The latter part deals with the time of Wang Mang's death: "In the ministry, 10,000 catties of gold were in one chest, and there still remained sixty such chests. In the treasury of the Office of Palace Parks at the Yellow Gate there were chests in every corner." *Latter Han History*, 102, "Biography of Dong Zhuo": "Within the treasury were 20-30,000 catties of gold and 80-90,000 catties of silver."

[6] *Han History*, 61, "Biography of Zhang Qian": "The Son of Heaven several times asked Qian about the dependencies of Bactria. . . and so he said . . . extends to Wusun. From the west on, all the dependencies of Bactria can be brought over to our side, and made outer dependencies. The Son of Heaven agreed, and appointed Qian as General of the Palace Gentlemen, in charge of 300 men, each with two horses, and with 10,000 cattle and sheep, and with presentation gold and silk to the value of several tens of millions."

Historical Records, 123, "Account of Fergana": "The Son of Heaven became enamored of the horses of Fergana. He loved to hear about them. And so he had soldiers and carts carry a thousand in gold and a golden horse to go and request fine horses of the King of Fergana at Ershi City."

Han History, "Monograph on Geography": "From Gandulu the boat travelled for some two months to reach Huangzhi. . .

used during Han as a medium for making purchases or as a circulatory medium. When a purchase was to be made, it was first necessary to sell gold for copper cash before one could make an exchange for goods or some other expenditure.[7] We cannot tell if the statement in the histories that when Wang Mang fell, one catty of gold exchanged for one *hu* of grain was a normal exchange.[8] Precisely because it did not fulfill this most basic function, we cannot say that gold was money in the full sense during the Han Dynasty.

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The idea of gold's popularity during Western Han is largely based on royal gifts.[9] The size and frequency of such payments can only be discerned for royal gifts. Using data just from the *Han History*, and limiting ourselves to those gifts of gold for which definite amounts are given, we can come up with a sum of 900,000 catties, equal to 277,338 kilograms in modern terms.[10]

TABLE OF WESTERN HAN IMPERIAL GIFTS OF GOLD
(With one *jin* or one catty as the unit)

Ruler	Amount of Gift
Gaozu	42,550
Emperor Hui	68[11]

Since the time of Emperor Wu, they have come to have audience and present tribute. With interpreters of the Yellow Gate and those who are supposed to be invited, they all enter at the sea market with lustrous pearls, rings, unusual stones and strange objects. They are offered gold and silk fabrics, and then they leave."

[7]*Latter Han History*, 111, "Biographies of Those Who Went Alone: Biography of Wang Chun": "Once Chun was going to visit the capital, and in an empty hut saw a poor and sickly scholar, upon whom he took pity and with whom he visited. The scholar said to Chun, 'I had to go to Luoyang, but fell sick, and I must now die. Hung under my belt are ten catties of gold. I wish to give these to you. After I die, I beseech you to bury my bones.' Before Chun could ask the man his name, he had died. Chun sold one catty so as to arrange for the man's funeral."

Record of the Three Kingdoms, 5, "Record of Wei: Biographies of Empresses Wen, Zhao and Zhen": "Later, the Empire was wracked by military disorder. And added to this was famine. The common people were all selling gold, silver, pearls, jade, and precious objects. At this time the Empress's family possessed great stores of grain, and were buying up these things. The Empress was a little over ten years of age, but said clearly to her mother: 'Now the age is in disorder, and yet we buy many precious objects. The ordinary people have done nothing wrong. Those who harbor treasure are guilty.'"

[8]*Latter Han History*, 1, "Annals of Emperor Guangwu," first part: "At first, at the end of Wang Mang's rule, the Empire suffered from drought and locusts. One catty of gold exchanged for one *hu* of grain."

[9]*Song History*, 296, "Biography of Du Gao": "Emperor Taizong . . . then inquired why, though Western Han made gifts in gold, the commodity had become hard to obtain in modern times? Gao replied: 'At that time Buddhism had yet to arise, and so gold was very cheap. . .'"

Investigation of Literary Remains, "Investigation of Exactions and Tolls" quotes Dong Po's *Pool of Enmity Jottings*: "At the time of Wang Mang's defeat, there were 600,000 catties of gold in the ministry. Chen Ping's 40,000 catties separated Chu. [Chen was one of Liu Bang's advisers, and helped the founder of Han subvert the loyalty of the Chu officials to the Chu leader, Xiang Yu. EHK] Dong Zhuo's Meiwu gold was also plentiful. There were countless incidents involving amounts of from thirty to fifty catties. In modern times gold is not reckoned by the catty. Even the rulers have not made gifts of as much as a hundred catties. Why was it plentiful in ancient times and has become scarce now? . . . I suspect that the spirit of treasure has changed in some unknowable way. Has it reverted to the mountains and marshes?'"

We might also quote Ishibashi Yoji (Suishin): "During Han, gifts of 100 or 200 catties of gold were given to officials, and even small gifts amounted to 30 catties. Even the Prince of Yan, Liu Ze, gave the nobles fields and virgin gold to the amount of 200 catties. When the Princes of Chu and Liang died, gold amounting to over 400,000 catties was expended. Because the money was light, rice was cheap, and gold was abundant."

Gu Yanwu, in his *Record of Daily Knowledge* entry on gold, states: "During Han gold circulated among both upper and lower classes." This too was based on the many instances in the written sources of various amounts of gold being given in gifts by royalty. He also mentions the anecdote involving the Song Emperor Taizong's question to Du Gao.

The *Notes on the Twenty-two Histories* in its article, "The Abundance of Gold During Han" concludes: "In ancient times, only gold was used, and it was extremely abundant." This conclusion too was based on royal gifts during Western Han.

[10]The system of weights of Western Han must be calculated from the Eight-grain Half-ouncer, Four-grain Half-ouncer, Three-grainer and Five-grainer coins. The first three of these, however, were for all practical purposes not distinguished from the Qin Half-ouncer, since they were all freely coined among the people. Only the Five-grainer was produced at official smelters. The finest of these weigh 4 grams, which would make the ounce 19.2 grams. In this work I will tentatively take this as my standard.

[11]Emperor Hui of Han gave the following to those who were in charge of his personal lands: generals, 40 *jin*; those with salaries of 2,000 piculs, 10 *jin*; those with salaries above 600 piculs, 6 *jin*; those with salaries below 500 piculs and of rank up to Accessory Clerk, 2 *jin*. Cf. *Han History*, "Annals of Emperor

Empress Gao	11,000+[12]
Emperor Wen	12,000
Emperor Jing	1,102
Emperor Wu	806,940
Emperor Zhao	2,420
Emperor Xuan	18,370
Emperor Yuan	540
Emperor Chen	3,660
Emperor Ai	680
Emperor Ping	200
TOTAL	899,530+

To conclude on the basis of these gifts that gold circulated in abundance during Western Han, would not be entirely unreliable, but this evidence should be discounted, because the character *jin* did not necessarily refer to gold during Western Han times. Sometimes it was merely a marker of value, with one catty being equal to ten-thousand cash. Gifts of gold during Western Han were described in three ways: The first was as "a gift of yellow-metal of X catties."[13] The second was as "a gift of metal [*jin*] of X catties."[14] The third was as "a gift of X metal."[15]

Some[16] say that only those references specifically to "yellow metal" are genuine references to gold. If the word yellow is omitted, a *jin* unit, each of which was equal to ten-thousand cash, was intended. If we recalculate on that assumption, then the majority of gifts listed in the *Han History* were made in copper cash, since only thirty percent refer specifically to yellow metal, twelve percent refer to catties of metal, and fifty-eight percent refor to given quantities of metal. In fact, however, this rule of thumb is not reliable either. Sometimes the same gift is reported in the *Historical Records* as in metal and in the *Han History* as in yellow-metal.[17]

Even when yellow metal is clearly specified, payment might not necessarily have been made in gold. For example, in the "Biography of Wang Mang," there is the statement "a Director memorialized: Formerly, a gift for an empress was 20,000 catties of yellow metal, made in 200 million cash. Mang drastically discounted this. She only received 40 million, and 33 million was given to eleven bridesmaid families of assembled officials." The term yellow metal is explicitly used here, but actual payment was made in copper cash.

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Of course we cannot for this reason simply deny that gold was used at all, because there are instances of gold and copper cash being awarded at the same time. In Emperor Zhao's yuanfeng 5 (76 A.D.), the Prince of Guangling was awarded 20 million in cash coins and 200 catties of gold.[18] Employment of gold

Hui." There is no way to calculate the exact amounts.

[12]The plus mark stands for additional unspecified quantities of gifts not included in the table. For example, Empress Gao's posthumous edict granted to the princes and nobles

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of a thousand *jin* each. Cf. "Annals of Empress Gao." According to the *Han History* "Biographies of Consort Families," there were more than ten marquises and princes. I have here assumed that there were eleven of them. Another example is Emperor Jing's posthumous edict bequeathing to officials of the 2,000 picul salary level two catties of gold. Here too there is no way to know the exact total amount. In the table I have only added in two catties.

[13]*Han History*, 8, "Annals of Emperor Xuan": "Dijie . . . 3 [67 B.C.] . . . conferred on the Prince of Guangling yellow-metal to the amount of a thousand catties, a hundred catties each of yellow metal to fifteen nobles and princes, and twenty catties of yellow-metal to each of eighty-seven nobles of the feudal kingdoms."

[14]*Han History*, "Annals of Emperor Wen": "First year . . an edict stated . . .increased the enfeoffment of the Grand Commandant Bo by a city of ten-thousand households, and a gift of metal of a thousand catties; to the Imperial Chancellor Ping and General Ying, each a city of 3,000 households and metal of 2,000 catties; to the Marquis of Zhuxiu, Zhang, and the Marquis of Xiangping, Tong, each a city of 2,000 households and a thousand catties of metal; the Director of Guests, Yang, was enfeoffed as Marquis of Xinyang and given a thousand catties of metal."

[15]*Han History*, "Treatise on Food and Money," latter part: "The next year, the Grand General and General of the Flash Cavalry launched a great attack on the Hu, and were rewarded with 500,000 in metal." Cf. note 11 above.

[16]Jin Zhuo says: "Whereever yellow metal is spoken of, real gold is meant. If the word yellow is not present, cash is meant." (*Han History*, "Annals of Emperor Hui," note.) Yan Shigu says: "Those gifts spoken of as yellow metal are all in gold; where yellow is not spoken of, one *jin* was equal to ten-thousand cash." (*Ibid.*)

[17]For example, Liu Bang's gift of 40,000 catties to Chen Ping is called 40,000 catties of metal in the *Historical Records*, "Basic Annals of Gaozu: "3rd year . . . the King of Han suffered from it, and so Chen Ping's plan was used. He gave Chen Ping 40,000 catties of metal to use to drive a wedge between the ruler and ministers of Chu." However, the *Han History*, "Annals of Emperor Gao calls it 40,000 catties of yellow metal: "3rd year . . . Chen Ping was again questioned, and in accord with his plan, Ping was given 40,000 catties of yellow metal to drive a wedge between the ruler and ministers of Chu." The *Historical Records*, "Hereditary Houses: Chancellor Chen" also says it was 40,000 catties of yellow metal.

[18]*Han History*, 7, "Annals of Emperor Zhao": "(Yuanfeng)

for rewards and gifts was definitely its most important use as an instrument for making payments, because during Han times such gifts were sometimes a normal part of officials' income, and may be viewed as a part of their salaries.

In addition to its use for gifts, gold was also employed to make various payments to the government: During Western Han, fines in lieu of punishment could be paid in gold.[19] Expenses for aid in ceremonials were also calculated in gold. This was the so-called wine-toast gold. Every year, in proportion to the number of people he ruled, each noble had to offer up a certain amount of gold. This was 4 ounces per thousand people, including populations of between 500 and a thousand. If the gold was short or of poor quality, a prince would lose a prefecture, and a marquis his estate.[20] This may be said to have been one of the Western Han government's sources of gold.

In Emperor Jing 6 (151 B.C.), a law was promulgated against minting coins with false gold and distributing them in the market.[21] This represents clear recognition by officialdom of gold's monetary status.

We cannot tell the extent to which gold was employed during Western Han. If we assume the price of gold at that time to have been ten-thousand cash per catty, then one treasury ounce was the equivalent of 1,210-odd standard cash, which was really cheap. If we assume a rice price then of 70 cash per picul, it would take something over a hundred piculs of rice to acquire just a catty of gold. Most people would not, one suspects, have the opportunity to acquire gold. In Warring States times, a family of five cultivating a hundred *mu* of land could harvest 150 piculs of grain per year.

By Han times, the population had increased.[22] Land ownership was more concentrated. Even if one counts newly opened land and assumes each family still cultivated a hundred *mu*, and that the yield was unchanged, each household would itself consume 90 piculs per annum, leaving only 6,000 cash from sale of the remainder. If you deduct the land tax[23] and the head tax, not much would remain. If the remainder was sufficient to meet the year's daily expenses without going into debt, the family considered itself lucky. Given the fact that gold was apt to be dealt with by the catty during Western Han, how could ordinary people have employed it?

During the dozen or so years of Wang Mang's rule, gold and silver virtually became formal money. Particularly under the shijianguo 2 [10 A.D.] Treasure-money system, gold and silver became formal constituents of the monetary system, with legally determined prices in terms of the other constituents and with set shapes of the metals prescribed.

During Eastern Han the situation changed. In the course of the two centuries of Eastern Han, very few gifts were made in gold. The total was only 21,740 catties, or 5,564 kilograms. This was only
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two percent of the total for Western Han. The average amount per gift during Eastern Han was only 22 percent of the figure for Western Han.[24] The aver-

5, Spring, 1st month, the Prince of Guangling came to court. His fief was increased by 11,000 households, and he was awarded 20 million in coin and 200 catties of yellow metal."

[19]Cf. note 3.

[20]Cf. note 2.

[21]*Han History*, "Annals of Emperor Jing."

[22]According to the *Universal Record*, "Food and Money, 1, Population By Historical Period," the population during Eastern Zhou was 11,841,923. The vicissitudes of Warring States times and the killings of the First Emperor of Qin had greatly reduced it. However, it very quickly increased during Han times. By the time of Emperor Ping, it was 59,594,978.

[23]The pre-Qin field tax as a rule took one-tenth of the harvest in kind. This was the so-called one-tenth tax. After Shang Yang's reforms, at times the Qin tax rate reached fifty percent. (*Han Record*, in the words of Dong Zhongshu.) The Han field tax was lighter, generally being one-fifteenth. (*Han History*, "Treatise on Food and Money.") At times only half of this was collected, making the rate 1/30th, but because of the exactions of the rich, the peasantry's actual burden was very heavy. Wang Mang said: "In name it is a tax of 1/30th, but actually it is a tax of one-half." The Western Han field tax was probably paid in ready cash.

[24]The amount of gold per gift during Western Han was as follows:

More than 500,000 catties	once
More than 200,000 "	once
100,000 "	once
40,000 "	once
More than 10,000 "	once (Empress Gao)
7,000 "	once
5,000 "	twice
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2,000 "	three times
1,740 "	once (20 each to 87 men)
1,500 "	once (total to 15 nobles)
1,000 "	over sixteen times
500 "	five times
200 "	six times

age amount per reign during Eastern Han was only three percent of what it had been during Western Han.[25] The average quantity of gifts in gold per year during Eastern Han was only 2.6 percent of the figure for Western Han.[26] Gifts of gold were made during Western Han on a hundred occasions, gifts of coins on approximately fifty occasions.

During Eastern Han gold was only given nine times and coins on 64 occasions. Taking the amounts for only those occasions during Western Han when gold was clearly being referred to, Eastern Han's percentage is still very small, only 7 percent of Western Han's, and was 77 percent of Western Han's figure for the average size of gift. By reign, Eastern Han's figure is 10 percent of Western Han's. By year, it is only 7.5 percent.

Why was gold so rarely used for gifts during Eastern Han? This is one of the mysteries of Chinese history. People pile up explanations, but most miss the nub of the matter.

Some ascribe it to the spread of Buddhism, whose temple and monastery images and sutras used a great deal of gold.[27] It was not, however, until the Northern and Southern Dynasties period that Buddhist temples flourished, and so this cannot explain the phenomenon of the dearth of gold during Eastern Han. There are even people who say that, in addition to use by Buddhists, it was because domestic gold producing areas had become played out that the gold supply continued to shrink.[28]

This explanation is most unpersuasive. Gold is not something that is literally consumed. Even if the mines were really becoming exhausted, this should not have reduced the supply.

In fact, however, during and after Han times, gold continued to be produced.

During Eastern Han gold was produced in Yongchang Commandery.[29] In Emperor Ming's yongping 11 [68 A.D.], Lake Zai produced gold. The Grand Commandant of Lujiang took it as tribute. There were also a thousand and more gold mining clans in Hanzhong.[30] Though China has never enjoyed a

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	100 "	more than 26 times
	60 "	five times
	50 "	three times
	40 "	over four times
	30 "	three times
	20 "	more than 13 times
	10 "	more than twice
	6 "	not known
	2 "	more than twice
TOTAL	899,530+ catties	more than 100 times

Each gift averaged 8,995 catties or 2,773.38 kilograms.

The amount of gold per gift during Eastern Han was as follows:

	20,000 catties	once
	1,000 "	once
	200 "	three times
	50 "	more than twice
	30 "	once
	10 "	once
TOTAL:	21,740 catties	nine times

Each gift averaged 2,415 catties or 618.24 kilograms.

[25]The quantity of gifts in gold per reign during Eastern Han was as follows:

Emperor Guangwu	240 catties
Zhang	1,000 "
Huan	20,450 "
Ling	50 "
TOTAL	21,740 "

Each of the thirteen Western Han emperors gave an average of 21,334 kilograms. For Eastern Han, there are only nine emperors (Emperors Shang, Zhong and Zhi each reigned for one year and are not counted), and each on the average made 618 kilograms in gifts. This assumes the figure of 19.2 grams per ounce. Eastern

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Han's system of weights was the same as that of Wang Mang, with each ounce equal to 16 grams.

[26]Reckoning Western Han at 214 years and Eastern Han at 196 years.

[27]*Song History*, "Biography of Du Gao." Cf. note 9 above.

[28]*Notes on the Twenty-two Histories*, article "On the Abundance of Gold During Han": "In later generations gold decreased steadily, and its price rose. That was because the central lands producing gold had become played out. And after the Buddhist religion entered China, images gilded with gold were found in large sizes in the capital and great cities, and in small sizes in poor districts and in remote rural areas. There was no place without its Buddhist temple, and all of these used gilded images. For the entire Empire, this added up to an unknowable number of several billions. This was a most wasteful misappropriation of gold. If we add to this the wasteful custom of illuminating scriptures with gold, very small amounts of the metal could add up to large quantities day by day and month by month. . . This is why each day there was less than the previous day."

[29]Wang Chong, *Balanced Discourses*, "Testing the Tallies": "Yongchang Commandery also has gold. Finely polished, and large as grain seeds, nuggets are found in the sand by the edge of the water. The people each day collect five grains in weight of gold of full fineness."

[30]*Investigation of Literary Remains*, "Investigation of Exactions," 5.

major gold strike, sand-washing of gold has been carried on in every age. Therefore, the absolute quantity of gold ought to have increased year by year.

Nevertheless it is a fact that since Eastern Han times gold has rarely been used for gifts, and there is no doubt that the price of gold increased. In tianfeng 1 [14 A.D.], the silver price of gold appears to have been adjusted.[31] Aside from increases in the cost of production of gold, only if its total supply had declined, or there had occurred a reduction in the number of times it was turned over per unit of time, or if demand for it had increased, could such a phenomenon have been evoked. It would seem that these several causes for this phenomenon all existed during Eastern Han.

Though we lack concrete evidence to prove that the cost of production of gold increased, the jump in the price of rice[32] affected the cost of living of those who panned for gold, and this was one part of cost of production. This is only to show one reason why the price of gold jumped, but is not a full explanation of why Eastern Han made little use of gold for gifts. Still less can it be used to show that production of gold during Eastern Han had declined. A rise in the price of gold could have stimulated the further development of gold mining.

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The quantity of gold decreased because gold was flowing out of China. Since Western Han made broad use of gold as an instrument for making payments, a rather large quantity must have flowed abroad. For example, there were frequent wars with the Xiongnu during the time of Emperor Wu. If Xiongnu came to China to surrender, as a rule they were granted generous rewards.[33] When the Emperor sent Zhang Qian to the west to make an alliance with Bactria, he employed gold and silk gifts.[34].

This was one route out for gold, but the most important must have been an excess of imports over exports.

There was already a certain amount of foreign trade during Western Han, as shown by the purchase of horses from Fergana during Emperor Wu's time. Pearls and glass ornaments were also brought from abroad. All of these were paid for by export of gold. Some people then even believed that use of gold to buy luxury items abroad was wise policy.[35]

We can see from this that many foreign goods were exchanged for gold. The linked ring bridle of Emperor Wu's time[36] and the treasure-mirror worn by Emperor Xuan[37] both came from India. The "Chronicle of Fergana" in the *Historical Records* characterizes the territory from Ferghana to Parthia as follows: "They obtain yellow and white metal from China, and always use it to make utensils rather than as money." This too is evidence for the outflow of gold and silver.

The scale of foreign trade grew greater from late Western Han to Eastern Han. We need only compare the information on foreign countries in the *Historical Records* with that in the *Han History* and *Latter Han History* to realize this. The *Historical Records*' accounts of foreign countries are brief and vague, because before Zhang Qian returned, no one had any real impression of the western frontier region, and not even the name of India was yet known. Even the reports brought back by Zhang Qian were not very numerous. Even after Ban Zhao's return, the Chinese only had a modicum of definite knowledge of the western frontier region. Hence it was not until the *Latter Han History* that we find the state of Great Qin, the old Chinese name for Rome, mentioned.

Some say that during Western Han, Chinese went by sea to Sri Lanka (Ceylon) to carry on trade,

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[31] *Han History*, "Treatise on Food and Money," latter part: "In tianfeng 1 gold, silver, tortoise and cowry money were again announced, with their prices somewhat adjusted." Though it is not clearly stated that the price of gold was raised, during Western Jin one *jin*'s meaning was changed to indicate one ounce of gold, which shows that the price of gold had increased. Cf. subsection 7.2.5 below.

[32] Cf. subsection 2.2.5 of this work.

[33] *Han History*, 24, "Treatise on Food and Money," latter Part: "The King of Hunxie led several dozen thousand men in to surrender. Thereupon the Han dispatched a cart with 30,000 ounces to greet him. When he arrived, he received gifts and meritorious subordinates. This year expenditures totalled much more than a million." *Ibid.*: "Several dozen thousand of the Tatars surrendered. All received rich gifts. Clothing and food were the responsibility of the prefectural officials. If they did not provide these things, the Son of Heaven would contribute provisions, and send loaded wagons out from the imperial storehouses to tranquilize them."

[34] Cf. note 6 above.

[35] *Debates on Salt and Iron*, "Energetic Tilling": "The gold of the Ru and Han, fine and delicate articles of tribute, are used to delude foreign nations, and to hook onto the treasures of the Qiang barbarians."

[36] Cf. note 1 above, fifth example.

[37] *Miscellaneous Notes on the Western Capital*, first part: "Emperor Xuan received from an adjoining commandery a Di prisoner. With his arm he was leading a beautiful younger sister with a multi-colored good-looking twisted cord. On it was a treasure-mirror of India, as large as an Eight-grainer coin. It was said that this mirror was bewitched, and those who wore it at their belts obtained good fortune from the heavenly spirits. Thus

and that in the first century A.D. Greeks took advantage of the Indian Ocean's seasonal winds to sail to Ceylon, where they found a number of Chinese ships.[38] This is possible. The Han dynasty's foreign trade was, however, probably mainly overland by way of Dunhuang and Xinjiang to Asia Minor. In other words, the trade of China was mainly with Great Qin. The term Great Qin referred to the Roman Empire, including Syria and Egypt.[39] Merchants of Bactria brought the glass, jewels and textiles of the Occident to China to exchange for Chinese silks.

The nations of the Eastern Mediterranean had used gold from an early time. Although Rome of the Republic period (contemporary with and prior to Western Han) did not use gold to make coins, it made external payments in gold, and had a great deal of gold in its treasury.[40] During its imperial epoch (corresponding to Eastern Han), Rome made still more use of gold for coins. Hence the world money of that time, the intermediary in Sino-Western trade,

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would have been gold.

At that time the price of Chinese fine silk ranged from 400[41] to over 600 cash per bolt,[42] but in the Roman market it is said to have fetched the same price as gold,[43] with one ounce of gold equal to one ounce of silk. Chinese fine silk weighed 25 ounces per piece, and could be sold for 25 ounces of gold. That might have been a short run price, which could not have been maintained for long, but that silks were extraordinarily expensive luxury articles in the ancient West was known by all. The Roman historian Pliny said that the Roman Empire was annually drained of at least 100 million *sesterce*, which flowed to India, China and Arabia.[44] He also states that India alone annually obtained 25 million, leaving the remaining 75 million (equivalent to over 5,000 kilograms of gold)[45] to flow to China and

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Emperor Xuan obtained aid in avoiding danger. . ."

[38]Melvin M. Knight, "Commercial Routes," *Encyclopedia of the Social Sciences*, Vol. IV.

[39]Friedrich Hirth, *China and the Roman Orient* (1885).

[40]Theodor Mommsen, *The History of Rome*, trans. William P. Dickson (1888), Book Third, p. 381.

[41]The *Taiping Yulan*, "Enumeration of Feathers and Textiles"; quotes Master Fan and Ji Ran: "Three *fu* plain white silk, at 800 a bolt." The word "three-*fu*" is a Han idiom. *Debates on Salt and Iron*, "Disposal is Not," states: "The price of light plain silk is double that of fine silk." Thus, during Western Han, the price of fine silk must have been 400 cash per bolt. Cf. *Posthumous Works of Mister Jing'an, King of Haining*, 26, "Explanations of Coins," latter part.

The *Nine Chapter Calculating Techniques*, 2: "If now you pay 720 cash to buy fine silk to the amount of one bolt, two yards and one foot, and wish to calculate the price per yard, you must ask how many yards there are. The answer is: for one yard, the price is 118 cash and 61 divided by 2." One bolt was 4 yards. The answer should be 472 standard cash.

[42]In 1907 the Englishman Sir Aurel Stein discovered several pieces of silk in the Gobi Desert west of Dunhuang. One of these was a bolt on which was written "Rencheng *kangfu* fine silk, one bolt, width 2 feet 2 inches, length 4 yards, weight 25 ounces, price 600 cash

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and 18." Cf. Sir Aurel Stein, "Central Asian Relics of China's Ancient Silk Trade," *T'oung Pao*, Serie II, Vol. XX, p. 130. According to Wang Guowei's research, the state of Rencheng was established in the Latter Han Emperor Zhang's yuanhe 1 (84 A.D.). Cf. Wang Guowei, *Explanations of Money* [*Yibi*], latter part.

[43]*Aureliani*, c. 45, in *Scriptt. Hist. Aug.*, quoted by Friedlander l.c. Vol. III (5th ed. 1881), p. 70. The silk robe of the Roman Emperor Heliogabalus, 204-222, was purchased at this price.

[44]The original text of Pliny reads: "*Minima computatione miliens centena milia sestertium annis omnibus India et Seres et Paeninsul illa* (Arabia) *imperio nostro adimunt.*" *Pliny*, XII, 18 (14), 84.

[45]Four *sesterce* equalled one *denarius*, and weighed 3.9 grams. Twenty-five *denarii* equalled one gold *Aureus*. Each gold coin weighed one-fortieth of a Roman pound (327.4 grams). (Tenny Frank, *An Economic Survey of Ancient Rome*, Vol. I, pp. 348, 422.) Nero, however, had reduced the weight of the gold and silver coins. The gold coin was lightened one-tenth, and the silver coin by 14 percent, but the face value of the two coins remained unchanged. (A.R. Burns, *Money and Monetary Policy in Early Times*, p. 412.) Pliny's calculations were made in 77 A.D., after the time of Nero. Therefore, 100 million *sesterce* was the equivalent of 7,366.5 kilograms of gold, and 75 million *sesterce* was equal to 5,524.875 kilograms of gold.

Edward Gibbon, *The Decline and Fall of the Roman Empire*, Vol. I, p. 56, states that the annual outflow of gold from the Roman Empire totalled 800,000 English pounds sterling (equal to 6,420.67 kilograms), half of which went to India. A. R. Burns, however (p. 412), makes the outflow to India 550 million *sesterce*. Since he makes the total Roman loss of silver to be one billion *sesterce*, the share of China and Arabia would have been 450 million *sesterce*, equal to 33,149.25 kilograms of gold.

In addition, Del Mar, in his *Money and Civilization* (London, 1886), states (in a footnote on p. 18) that the outflow to India (the note does not mention China, but merely says that Arabia is not included, which probably means that China is included) was 50 million *sesterce*, the equivalent of English £500,000 at nineteenth century values. The reason for such variations is that the Latin word *sestertium* represents different quantities in different contexts, making for a discrepancy of from

Arabia. This figure is not at all large. Some[46] say that this may refer to the Roman Empire's net trade deficit, and not to the total value of goods imported from China and Arabia.

We cannot, however, on the basis of such statements, claim that China had a positive balance of trade which brought in gold every year. The Roman historians probably surmised the direction toward which their gold was flowing on the basis of the sources of their imports, but not all of the money Chinese silks fetched on the Roman market returned to China. Much of it must have fallen into the hands of Bactrian merchants. These merchants paid a very small price for these silks in China, just as they bought inexpensive Western glass and artificial pearls to carry to China for sale at high prices.

In ancient times China once knew how to manufacture glass. It is not known if it was because knowledge of this technique had become lost by Han times, or for some other reason, but Occidental glass came to be treated as jade-glass, and it would fetch a very high price. Fan Hua says that they "made a profit of ten-fold."[47] The *Jin History* says it was a hundred-fold. Pliny claims the profit ranged from ten-fold to a hundred-fold.[48]

Actually, both China and Rome likely suffered outflows of gold. The high official of Emperor Huan's time, Liang Ji, sent men beyond the frontiers to make contact with foreign nations and seek widely for unusual goods.

The histories record few clear instances of outflows of gold during Eastern Han, but the decline in numbers of times gold turned over is well established. That gifts were rarely made in gold was one aspect of this decline, but was neither a cause nor a consequence of it.

The cause of this decline in the rate of turnover of gold was Wang Mang's policy of nationalizing the metal. In juzhe 6 (7 A.D.) Wang Mang issued the Gold-inlaid and Gold-chased knives with the aim of using them to buy up gold. That is why he simultaneously banned everyone from the rank of marquis on down from holding gold. Gold held by the people was all to be sold to the government. It is said that the standard price was not even paid, which amounted to confiscation.[49] Why did Wang Mang want

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to concentrate the gold in the national treasury? Was it because of his personal avarice? Or was it to prevent the outflow of gold? We have no way of telling.

During his decade or so in power, aside from several occasions when gifts were made for important political reasons,[50] and when he spent 30,000 catties upon taking an empress from the Shi clan,[51] government expenditures were probably rarely made in gold. Hence, at his death there was around 700,000 catties of gold in the palace.[52] This gold probably later fell into a few private hands. The younger brother of Emperor Guangwu's wife, Guo Kuang, had several hundred million in gold.[53] A portion of it could have been from that confiscated by Wang Mang.

This is one reason for the evident scarcity of gold on the market. During Western Han, generally speaking, the people and officials normally con-

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a thousand to a million-fold.

[46]Höck believes this is the figure for the city of Rome alone. Hirth believes it to be the net trade deficit. (F. Hirth, *China and the Roman Orient*, p. 225.)

[47]*Latter Han History*, 88, "Chronicle of the Western Frontier: Great Qin": "The state of Great Qin is also known by the name Lijian. . . It exchanges goods with Parthia and India across the seas at a profit of ten-fold. . . Its king often wished to send ambassadors to Han, but Parthia wished to sell Han silks to them in their markets, and so blocked them from going themselves."

[48]F. Hirth, *China and the Roman Orient*, p. 225.

[49]*Han History*, "Biography of Wang Mang," first part: "Year 2 . . . 5th month, money was again manufactured. The Gold-inlaid knife, of which one was worth 5,000, the Chased-knives worth 500, and the large coins worth 50 circulated together with the Five-grainers. The people illicitly minted them in large nubmers. Those of rank marquis on down were prohibited from taking possession of gold. It was to be paid in at the Office of the Imperial Wardrobe for its equivalent value in coin, but in the

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end, equivalent value was not given."

[50]A thousand catties were given to the Xiongnu's Shanyu, Xiao, and 500 catties to the Shanyu, Shun. Emperor Guangwu's elder brother was given 100,000 catties. (*Latter Han History*, "Biographies of the Four Princes and Three Marquises of the Imperial House": "Bosheng advanced to besiege Wan. He called himself Pillar of Heaven Generalissimo. When Wang Mang heard his name, he was greatly agitated, and gave to Bosheng a city of 50,000 households, 100,000 catties of gold, and the position of duke.")

[51]*Han History*, "Biography of Wang Mang," latter part.

[52]Cf. note 5 above.

[53]Wang Jia, *Record of Anecdotes Missed by History*, 6: "Guo Kuang was the younger brother of Emperor Guangwu's empress. He accumulated gold to the amount of several hundred million, had over four hundred servants, and used gold for his utensils. The sounds of his smelterers resounded in the capital suburbs." *Latter Han History*, "Annals of Empress Guo": "(Guo Kuang) was granted gold, coin, fine and ordinary silks in

tributed gold to the emperors, but each ruler sent it out again in the form of gifts. This was the route gold took through the economy. During Eastern Han, rulers rarely made gifts in gold, and subordinates probably also rarely presented tribute in gold, since even payments for remission of crimes were made in fine silk.[54]

We can here draw a comparison between the wealth in gold of the Chinese and Roman empires at the turn of the Christian era. At the time of Wang Mang's death, the government's store of gold is reckoned at seventy chests, or 700,000 catties, equal to 179,200 kilograms. This figure may be taken as representing the Chinese government's gold reserves in the first century A.D.

The Roman Empire's reserves have been estimated at around 10 billion gold marks.[55] Within this sum, the quantity of gold and silver was about the same, and so we can calculate that the gold reserves of the Roman Empire were 179,100 kilograms, about the same as those of China. This is an interesting coincidence.

I mention Rome here because first, research is enriched by comparisons. Though we are concerned with Chinese history, we ought to make comparisons with foreign countries, and only Rome can for that period be compared with China. Modern European capitalist scholars not only do not make comparisons with China, they instead make what is clearly Europe's history primary, and call it world history. This is an unscientific megalomania.

There are many similarities between Rome and China's Han Dynasty, and the two were approximately contemporaneous. They were the two centers of civilization in the world of that time, and militarily were the two strongest nations. The ruling classes of both adopted a policy of favoring agriculture over commerce, but both their monetary economies were especially well developed.

As a consequence of the search for money, the gap between rich and poor in society becomes ever more evident. There had never before in Chinese history been a period when gold received so much attention as during Western Han. Internal circulation of money was not, however, mainly in gold. The same was true of Rome.

The ruling classes of both nations did not hesitate to employ inflation to exploit their people. The treasuries of both countries at about the same time
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contained about the same quantities of gold, but this does not prove that the wealth of the two was the same, or that the same amount of money was circulating in both.

During the reign of Wang Mang, China had a relatively large portion of its specie concentrated in the national treasury, and relied mainly on copper cash for its money in circulation. Rome relied mainly on silver coins.

From Eastern Han on, demand for gold in objects of craftsmanship increased. That is to say, gold became dispersed among the people.[56] During and prior to Western Han, only ceremonial utensils were inlaid with gold. During Western Han, emperors and princes used gold to make some articles of adornment in such places as the "gold shops and jade establishments" of the Weiyang Palace.[57] Royalty was buried in suits of jade sewn with gold thread.[58] The masters of Shu, Guang and Han used 5 million annually to make gold and silver implements.[59] Life, however, was still simple then among the people, and Gong Yu considered it improper for

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incomparable abundance."

[54]Cf. subsection 2.1.1, note 33.

[55]Sang Bate's *Modern Capitalism*, chapter 1, part 2, section 4, subsection 31, quotes this figure from *Lexis*.

[56]Hu Zhusheng, "On Han Gold In Place of Bronze, and the Reasons for its Decline," *Literary History and Philosophy*, no. 12 (1957), states that the key to the decline of gold during Eastern Han is where the 700,000 catties in the national treasury went after Wang Mang's death. He says that this gold was lost during the several great battles in Chang'an. The second point could be true, but still not resolve his problem. Since the gold had been gathered in by Wang Mang, it obviously must have been dispersed to various places before his time, and then how could we explain the apparent abundance of gold during Western Han?

[57]*Yellow Diagram of the Three Supporting Capital Districts*. There are also such phrases as "gold for ring belts," and "all used gold, jade and pearls for screens and curtains."

[58]*Miscellaneous Notes on the Western Capital*, first part: "When the Han emperors were buried, they were surrounded with pearls in jade suits. The suits were shaped like armor scales joined with thread of gold. Upon Euperor Wu's suit were embroidered designs in the forms of dragons, phoenixes and tortoises, and it was called by contemporaries a dragon jade suit."

[59]*Han History*, "Biography of Gong Yu," records that upon the enthronement of Emperor Yuan, Gong Yu said: "Emperor Wen's clothing was of glossy thick silk, and his shoes of leather. His utensils were carved of jade, and ornamented with gold and silver. Later generations competed in lavishness with this . . . until now each of the three vestment officials of Qi has several thousand workmen, and annually expends several millions. The rulers of Shu, Guang and Han each use 5 million per year for gold and silver implements. The Three Workshops officials expend 50 million. . . I myself have served in the Eastern Palace and seen gifts of sets of goblets covered with gold and silver decorations, which ought not to have been used as gifts to sub-

even royalty to give goblets ornamented with gold and silver to officials.

These accounts are verified by objects excavated from tombs. There are very few Western Han tombs containing gold and silver articles of adornment. From Eastern Han on, the situation changes. Guo Kuang's household employed 400 servants to craft utensils of gold. By the end of Han gold ornaments became still more common. Cao Zijian described a woman as "wearing a broad gold ring on her wrist and a gold hairpin on her head."[60]

Eastern Han tombs sometimes have nothing but gold and silver objects of adornment, and such objects become more numerous over time. They became still more numerous during the Jin Dynasty. This virtually becomes a criterion for dating a tomb.

The prevalence of gold ornaments among the people was probably related to the reduced amount of gold on the market and to the rise in gold's price. Most people who love to be fashionable are controlled by vanity. Only when something is scarce and hence expensive do such people seek it out, and the more people seek such a good out, the higher its price becomes.

The scarcity of gold was also due to its use in burial goods. It is said that when Cao Cao led his soldiers into Xi'an, he discovered the tumulus of Prince Xiao of Liang. Upon breaking open the coffin, he got a treasure of several dozen thousand catties of gold.[61]

The price of gold during the two Han dynasties has always been believed by scholars to have been 10,000 cash per catty, as though it remained unchanged from beginning to end. This is hard to believe.

First of all, that the price of gold grows ever higher has been a universal phenomenon in both ancient and modern times, in China and elsewhere.

Second, the weight of coins was steadily decreased during the Han: From the Qin Half-ouncer there was a reduction to the Eight-grain Half-ouncer, and then to the Four-grain Half-ouncer, and the Three-grainer.

Finally, though the weight of the Five-grainer was an increase over the latter, during Eastern Han, even this coin was somewhat reduced in weight. During these several centuries it would have been impossible for the price of gold not to have risen.

During the Warring States Era gold probably had **[149]**
a price of 4,000 cash per catty, but was that 4,000 cash in the Qi knives, which weighed 40-50 grams. Or was it in the small spades weighing only several grams? It is hard to tell. The latter is somewhat more likely to have been the case.

During the Qin and early Han, the price rose to more than 6,000 cash.[62] This price may have been maintained until the Eight-grain Half-ouncer was put into circulation. Later there was the Four-grain Half-ouncer, and the price of gold in terms of it must have increased. Its market price could have jumped to 10,000 cash per catty,[63] but this might not have been recognized in official circles until 80 B.C.[64] That the price of gold in Wang Mang's time was 10,000 cash per catty is very clearly recorded in the history books. Later, when Wang Mang minted the Small-spring, the 10,000 cash per catty price was retained, but there must not have been any market at that price.

From Eastern Han on, the price of gold probably continued to rise. *Master Sun's Calculation Classic* mentions a gold price of one catty for 100,000 cash, which is ten times the Western Han price. This is not an Eastern Han price. It could not have gone up ten-fold in so short a time. Possibly it was a Three Kingdoms, Jin or still later price.[65]

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ordinate officials."

[60] *Literary Selections*, "Section on Beautiful Women."

[62] *Nine Chapter Calculating Techniques*, 6: "Now there is a man carrying 12 catties of gold beyond the frontier. The frontier tax is one part in ten. Now at the frontier two catties of gold are taken, and change of 5,000 cash is given in return. How many cash is one catty of gold worth? The answer is 6,250." Li Yan's *Historical Materials On Ancient Chinese Mathematics* (1956), p. 109, says that this refers to White Metal, and cites Emperor Wu's White Metal money as evidence for this. The nominal value of the White Metal money was 8 ounces for 3,000, but that nominal value did not embody the genuine price for silver. If the price of silver then was 6,250 per catty, and Emperor Wu set the price of half a catty at 3,000, how could the government have avoided losing money?

[63] *Nine Chapter Calculating Techniques*, 7: "Now there is a group buying gold. Some put out 400, with a surplus of 3,400; others put out 300, with a surplus of 100. The problem is, what is the number of men and the price of the gold? The answer is, 33 men, and the price of gold is 9,800." That this work gives two different prices for gold does not prove that its material on prices is unreliable. The two prices could be for two different times.

[64] *Han History*, "Treatise on Food and Money," latter part: "Tianfeng 1 [14 A.D.]. It was again stated that money of gold, silver, tortoise and cowry was to be somewhat increased in quantity and reduced in price."

[65] *Index to the Complete Works of the Four Treasuries*, 11, says that the *Master Sun's Calculation Classic* was the work of a man of Han or Wei times. The *New Tang History*, the *Old Tang History* and the *Universal Record* all agree that it was compiled by Zhen Luan who lived in Northern Zhou times.

From Eastern Han on, because gold was so frequently being manufactured into utensils and ornaments, and because its velocity of circulation slowed down, its monetary character was lessened, and it was mainly used as a store of value.

Though Han employed the Qin system for handling gold, the shapes gold took were influenced by the state of Chu. A cake shaped like a dried bean-curd was used. Statements like "one square inch of gold weighing one catty" could have been based on this square cake. The *Nine Chapter Calculation Techniques* mentions nine *mei*, or coins, of gold, and eleven *mei* of silver.[66] The square gold cakes of Han were not called *yuan*, but the influence on them of the state of Chu is evident from the words *ying-cheng* on ceramic sheet coins excavated from some Han tombs. Of greatest importance, however, is the word for "ounce" on the excavated ceramic sheet coins, because during Han gold was reckoned by the catty and ounce. There were sixteen "ounce" cakes on each ceramic sheet, just the number of ounces in a catty.

In Emperor Wu's taishi 2 [95 B.C.], a reform in the shape of gold was put into effect. Deer-hoof gold was minted. At the time this was called Deer-hoof Horse-girdle-hoof.[67] This name was of symbolic significance. The ingot was probably round and weighed one catty.[68] It may have been inscribed on four sides. Some were dug up by Song Dynasty peasants. They were then called Persimmon-gold[69] and Horse-hoof gold.[70]

During Han, silver gradually became a monetary metal. Though when he unified the monetary systems of the six states the First Emperor of Qin ruled that silver could only be used to make utensils and articles of adornment, and was not to be used to make coins, there is no record of silver being used for coins before his time. This was still the case at the beginning of Han. It was not until the White Metal of Emperor Wu's time that silver not only became a money but began to be made into coins.

This was a very sudden development. During this short period

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silver developed more utility for use as money than gold had. However, on this occasion silver was alloyed with tin and its face value was set too high, giving it the character of a credit money.

In Wang Mang's monetary system, silver and gold were given an equal position. Gold's unit was the "metal" *jin*; whereas silver's unit was the half-catty, each of which was called a *liu*.[h]

Silver would seem to have been given a definite shape, but the histories do not make clear what it was. Generally speaking, during Eastern Han silver is mentioned in the written sources comparatively frequently. Both for royal gifts[71] and in references

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[66]*Nine Chapter Calculation Techniques*, 7: "Now there are 9 *mei* of gold and 11 of silver. They are equal in weight. If one is exchanged of each, the gold is lighter by 13 ounces. The question is, how much does a single gold and a single silver *mei* weigh? The answer is, the gold weighs 2 catties 3 ounces 18 grains; the silver weighs 1 catty 13 ounces 6 grains."

[67]*Han History*, 6, "Annals of Emperor Wu": "(Taishi) 2, 3rd month, an edict stated: 'The responsible officials have advised us saying: In the past, during Imperial Sacrifices when audience was given for deceased emperors, an ascent has been made from the west to the top of the grave mound, and white deer have been obtained and offered up in the ancestral temple, dyed with marsh water. Heavenly horses of Mount Tai are issued, as well as gold. We ought to change the old name.' Now still more gold is made into Deer-hoof Horse-girdle-hoof to make for good fortune, and is awarded to the marquises and princes."

[68]Between May and August of 1961, in Taiyuan, Shanxi, five pieces of Horse-hoof gold were excavated. All were round, and had the shape of a deer or horse hoof. Their diameters ranged from 5 cm to 6.4 cm, and their weights from 13.43 to 15.6 grams. Their reverses bore such inscriptions as *ling*,[a] *zhi*,[b] *ji*,[c] *yu*,[d] and *gui*.[e] Evidently some of these must have been homonyms for the *linzhi*[f] that means "deer hoof." Cf. *Cultural Relics*, nos. 4 & 5 (1962).

In recent years ceramic cakes have been unearthed as part of the tomb furniture from tombs in the neighborhood of Hangchow. Some of them bear the inscription "*lingzhijin yijin*".[g] Others bear only the two characters meaning one catty, or the single character *ling*.[a] These inscriptions are also clearly abbreviated characters meaning Deer-hoof gold. Zhao Renjun, "The Inscriptions on Ceramic Deer-hoof Gold Funerary Money of the Han Dynasty," *Cultural Relics*, 7 (1960).

[69]Shen Gua, *Mountain Stream Dream Jottings*, 21: "Between Xiang and Sui, the old Baishui in Chunling, there have been dug up a number of Deer-hoof and Horse-girdle-hoof gold ingots. The Deer-hooves are hollow, with inscriptions on all four sides very artfully done. The Horse-girdle-hooves are like lumps of cake. All traces of a mold are gone from all sides. They are shaped like a flattened water drop, like our modern dried persimmons. The local people call them Persimmon-gold."

[70]During the Tang Dynasty, Horse-hoof gold was frequently excavated. Yan Shigu's notes to the *Han History*, "Annals of Emperor Wu": "Nowadays people frequently get Horse-hoof gold from the earth. The gold is extremely pure, and it is artfully shaped." Tang Pian's *Record of Conversations About Drama*, first part, "Yuan Xiangxue Exchanges Gold With the Prefect": "Li Pinggong subdued Fengxiang. There was excitement in the town ahead because in plowing a field a jar of Horse-hoof gold had turned up. The people of the hamlet forwarded it to the district, which passed it on up to the prefecture."

to treasure hoards, gold and silver are mentioned together. Dong Zhuo's property included 20-30,000 catties of gold and 80-90,000 catties of silver.[72]

The shapes assumed by silver must not have been very different from those of gold. The written sources refer only to gold cakes[73] and silver cakes.[74] Of course since a cake would be rounded off, it could have been the same shape as Emperor Wu's Deer-hoof gold or some variant thereof. In recent years gold cakes have been excavated from Eastern Han tombs in Hengyang and Changsha in Hunan. The Hengyang gold cake bears the inscription "King of the Pure Land" [*jingtuwang*,[i] and weighs 312.5 grams.[75] The one from Changsha has the engraved character *zhang*,[j] and weighs 234.5 grams.[76]

No silver cakes have yet turned up, but there have been several "Zhongyuan Second Year" [57 A.D.] silver ingots excavated. [Cf. Plate xxxv at end of this subsection] One is shaped like a boat; another like a narrow strip. The boat-shaped silver ingot has a flat bottom like a steelyard weight [].[k] The two ends protrude on top somewhat like the Original-treasure ingot of later times. In the middle there is a line of clerk script in intaglio which reads "Zhongyuan Second Year Manufactured By The Imperial Workshops" *zhongyuan er nian kaogongsuo zao*.[l] There are two of them in my collection, one large and one small. The large one weighs 205 grams. The small one weighs 125 grams. The quality of the silver is very good. When tried in the fire it comes out black in color. On the bottom is an air hole. The small one has been compressed out of shape.

To my knowledge there exist three of the strip-shaped silver ingots. One of them is intact. The other two are fragments. In addition, there are counterfeits. The intact one weighs 403 grams. The upper end bears in intaglio the inscription "Zhongyuan Second Year Manufactured By The Imperial Workshops," which is identical to the one on the boat-shaped silver ingot, and was obviously stamped with the same seal. Actually, there are two seals, one reading "Zhongyuan Second Year," and the other "Manufactured By the Imperial Workshops," separated by a small space. One of the fragmentary ingots bears only the words "Zhongyuan Second Year." The inscription on its reverse is unclear. These two objects have wound up in Japan. It is said that they were excavated in Qingzhou, Shandong.[77]

The other fragment is in my collection. The top end of this one is pushed down. The lower end has a hole through it. As with the others, the seal mark "Zhongyuan Second Year" is very clear. Above the first character is the seal mark for "Manufactured By The Imperial Workshops," but it was not stamped deeply, and the character for "Manufactured" is superimposed over the one for *"Zhong"* and is completely unreadable. It weighs around 120 grams. As the ingot is completely covered with verdigris, the quality of the silver is evidently not very good.

These silver ingots have, of course, aroused suspicion.[78] First of all, Han dynasty sources do not mention silver ingots or slips. These silver ingots all bear the same date and are stamped with the same
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[71] *Latter Han History*, 117, "Chronicle of the Western Qiang." (Emperor An's yongchu 5 [111 A.D.]): "That Autumn, a Hanyang man, Du Qi, and his younger brother, Jigong, along with the Prince of the Commandery, Xin, entered into a plot with the Qiang to join forces and enter Shanggui city. Qi called himself Pacifier of Han Generalissimo. Thereupon a proclamation was issued offering enfeoffment as a marquis for the one who would obtain Qi's head, and a gift of a million cash. The Qiang Tatars who beheaded Qi were given a hundred catties of gold and 200 catties of silver."

[72] *Latter Han History*, 102, "Biography of Dong Zhuo."

[73] *Latter Han History*, 114, "Yue Yang, His Son and Wife": "While travelling on the road, he found a lost cake of gold."

[74] *Record of the Three Kingdoms*, "Record of Wei." A proclamation of King Fang of Qi, jiaping 5 [253 A.D.], 8th month: "Formerly, the Palace Gentleman and Western Pacifier, Guo Xiu, was disciplined and accomplished and steadfast. . . His son will inherit his rank, and in addition is given rank as Chief Commandant Custodian of the Imperial Equipages, and awarded a thousand cakes of silver and a thousand rolls of silk."

[75] "Warring States and Eastern Han Tombs Discovered on Jiang Family Hill in Miaofu, Hengyang, Hunan," *Cultural Relics Reference Materials*, no. 4 (1954), p. 120. Cf. also no. 6, p. 53.

[76] "Final Summary Report on the Ancient Tomb in Wulipai, Changsha," *Cultural Relics*, no. 3 (1960).

[77] Katō Shigashi, *Studies of Gold and Silver Found in Tang and Song Times*, chapter 11, section 2. The intact one is stored in Japan's Imperial Household Museum. One of the fragments is in the collection of Naitō Torajirō. Katō Shigashi did not understand the four characters meaning "Manufactured By the Imperial Workshops." I have seen a counterfeit silver strip which has both verdigris and an inscription, but the verdigris is lacquered on, and it is easy to read through it. Probably the counterfeiter had seen the genuine article.

[78] Katō Shigashi suspects that the inscriptions were stamped by meddlers after the ingots were unearthed, and believes that the silver strips date from Song and Yuan or after, because the Han written sources do not mention silver ingots. Katō's strict attitude toward putatively ancient objects is admirable, but
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he is mainly a student of the written sources, and has had little personal contact with the actual objects.

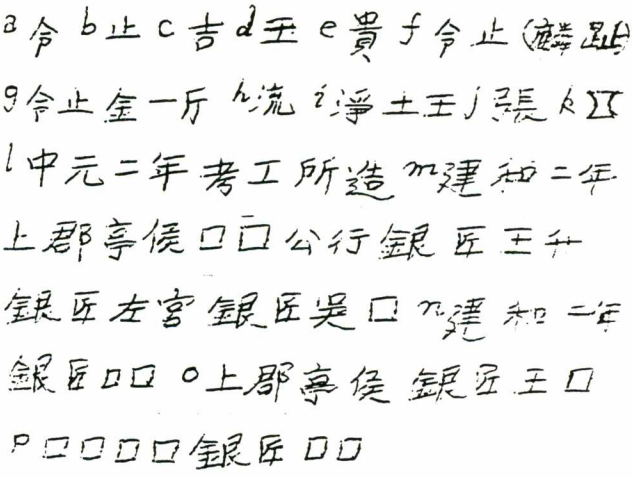
seal. Moreover, since this is obviously official silver, why is there no reference to it in the records?

But based on observation of the objects themselves, not only are the silver ingots clearly old, the seal marks do not seem to have been added later on. There actually was an Imperial Workshop Household during Han. It was a department engaged in the manufacture of utensils for the Privy Treasurer. During the reign of Emperor Wu it was was simply called the Examiner of Workmen (*Kaogong*), and these silver ingots bear those characters as part of their inscriptions.

There were two kinds of silver during Han: One was called Zhuti-silver (named after the mines at Zhuti), and was of good fineness. The other was ordinary silver, and it was of lesser purity. The boat-shaped silver ingot could be a variation on the shape of Deer-hoof gold. It is said that two additional boat-shaped silver ingots of Emperor Huan's jianhe 2 [148 A.D.] have been unearthed in Qingzhou.[79] It is exactly the same shape as the Zhongyuan 2 ingot. It weighs 356.25 grams. There are three lines of text on it. The first line reads "Jianhe Second Year Silversmith ? ?."[n] The second line is "Shangjun Marquis Ting Silversmith Wang ?."[o] The third line reads "? ? ? ? Silversmith ? ?."[p] Several characters are not readable.

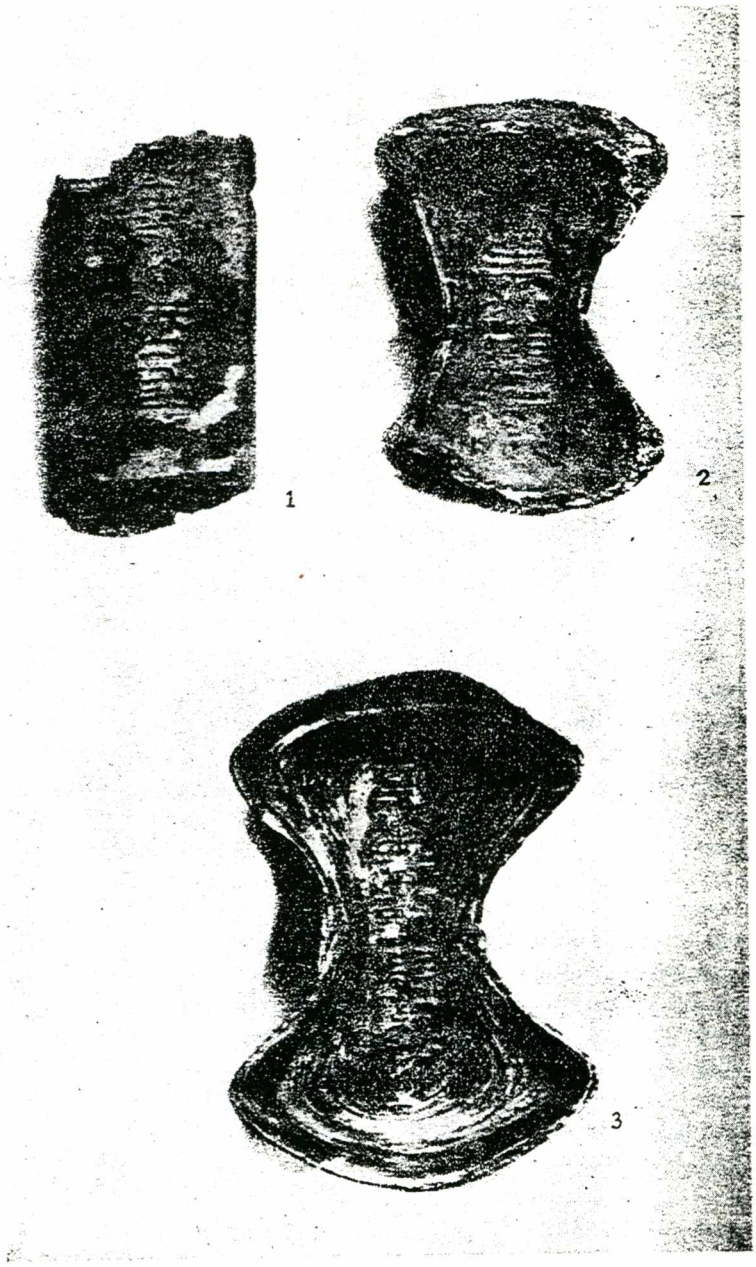
There is an historical account of one Sun Hao digging up a piece of silver "one inch long, one inch wide, and engraved with a year and month."[80] This must have been a small silver ingot. In the aftermath of Wang Mang, Emperor Guangwu may have recast the silver of Wang Mang's time into such silver ingots as these, but we cannot tell for sure. The histories have omitted mention of many things, of which Wang Mang's Spade-springs are just one example.

Collectors possess silver Five-grainers, made like a very fine Eastern Han Five-grainer. I suspect these were minted by some later person, perhaps in imitation of the Tang Dynasty silver Inaugural coin, and at the same time as that coin. In recent years two silver Five-grainers have been excavated from a Six Dynasties tomb in Nanking. These too resemble the form used during Eastern Han, but are very irregular, and could be Six Dynasties counterfeits.



[79]Okudaira Masahiro, *Record of East Asian Coins*, 8, p. 10. Another one is owned by a German. In addition, the Chinese magazine, *Coins*, no.32, p. 10 records a silver ingot bearing the inscription "Jianhe Second Year Marquis of Shangjun Ting [] [] Duke Xing Silversmith Wang Sheng Silversmith Left Palace Silversmith Wu []"[m] This has been sold to a foreigner at a high price. As I have not personally inspected it, I do not know if it is genuine.

[80]*Taiping Yulan*, 812, "Section on Pearls and Treasures," quotes the "Record of Wu."



圖版三十五　漢代銀鋌

1.條形銀鋌。 2—3.船形銀鋌。
三種銀鋌上都有"中元二年""考工所造"字樣。

PLATE XXXV. HAN DYNASTY SILVER INGOTS

1. Strip-shaped silver ingot. 2-3. Boat-shaped silver ingots. All three silver ingots bear the inscriptions "Zhongyuan Second Year" and "Manufactured By the Imperial Workshops."

2.2 Money's Purchasing Power

1. Weight Reduction of Coins Caused by the Chu-Han War

The purchasing power of money involves the relationship between money on the one side and commodities and labor on the other. Hence changes in money's purchasing power do not necessarily originate on the side of money. Commodities and labor can also influence money's purchasing power. So it would be inadequate to study the history of changes in Chinese money's purchasing power solely from the side of money. One must also study each period's productivity and the circumstances of its production, as well as the factors hindering the movement and consumption of commodities.

Prior to Warring States times, the quantity of money was not great, and the custom of using money was not widespread. Hence changes in money's purchasing power were small and unimportant in their effects. By late Warring States times, commodity production gradually developed, people had come to understand the convenience of using money, and were willing to exchange for money any goods they did not for the time being wish to consume themselves. At the same time, it was believed that so long as one had money at hand one could obtain consumption goods at any time or place. And so, the quantity of money gradually increased.

During Warring States times the states joined in committing mass slaughters,[1] and under the rule of the First Emperor of Qin the wastefulness of the tax in labor[2] caused a great diminution of production. In ancient times, land was plentiful and men were scarce. Production could only continue to increase if the people were able to reside in peace to practice their occupations. During the reign of the First Emperor, not only did a great many people die, of those who remained alive, if they were not building the Great Wall in the north, they were garrisoning the Five Mountain Ranges in the south. Most of the rest fled into the mountain forests and turned into bandits because they could not endure repressive taxes and severe punishments. A man's labor at the plow was not capable of providing food for the table, and a woman's weaving was incapable of providing enough clothing to wear.

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Both sides in the Chu-Han war to succeed to Qin's power raised large armies. During eight years they fought over seventy battles, and suffered several million casualties. Needless to say, production was as a consequence upset and diminished. The remaining small quantity of goods could not be suitably distributed. For example, food, which was of the greatest importance, became an ever more serious problem as each side tried to block the supply routes of the other. When Xiang Yu conquered Xianyang, the old Qin capital, there was a general slaughter, all goods of any value were carried away, and the palaces and offices were all consigned to the flames. Hence Liu Bang obtained only an empty city. No wonder "the Son of Heaven could not equip a thirty-catty team of four horses, generals and ministers rode in ox-carts, and the people had nothing in reserve."

Those in power then undoubtedly believed the nation's poverty was caused by a lack of coins with which to buy things. They treated money as a general form of wealth, and supposed that its purchasing power was unchanging. That is why they carried out a reduction in the weight of coins. They seem to have supposed then that simply minting coins amounted to producing goods. At the very least, they supposed, if one had coins, one could buy all sorts of consumption goods, as though the supply of goods was inexhaustible and could be drawn on indefinitely. If only the nation's domestic supply of money could be increased, they presumed, the nation and people could become enriched. The first large scale reduction in the weight of coins in Chinese history took place under these circumstances.

The early Han reduction in the weight of the coinage embraced both gold and copper cash. The size of one *jin* of gold was reduced from one *yi* to one catty, a reduction of twenty percent. Gold was not, however, the main object of the weight reduction, because it was not a universal medium for making purchases, nor was it the medium with which official salaries were paid.

The weight reduction mainly involved the bronze coins. They were reduced in weight, on the basis of the official standard, from the Qin Half-ouncer to

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[1] *Universal Record*, "Food and Money, 1, Population by Historical Period": "The conflicts of Warring States times slaughtered the people. The defeat at Yishuo led to the beheading of 240,000. . . When we examine the thesis of Su Zhang we find that when Qin had conquered all the Six States east of the mountains, more than five million people died. This left a population of some ten million. Of the aristocrats captured by Qin, one-third were killed. . ."

[2] *Ibid.* "Over 400,000 went north to build the Great Wall. Over 500,000 were sent south to guard the Five Mountain Ranges. The Afang Palace and Lishan Mausoleum used 700,000. During the course of thirty years the number of commoners who died would have covered the whole surface of the roads."

the Eight-grain Half-ouncer of Empress Lü's reign, a reduction of one-third. Half-ouncers minted privately, however, might not have been as heavy as eight grains. Some small Half-ouncers whose inscriptions and construction closely resemble the Qin Half-ouncer, weigh less than 1 gram, or around one grain. These could have been privately minted at the beginning of Han. If those are taken as the standard, then there was a reduction to one-twelfth. The histories state that the price of rice rose to 5,000 or 10,000 per picul, and the price of a horse to a hundred *jin*.[3]

The government placed the blame for the rise in prices on the merchants, saying that it was caused by the merchants' hoarding of goods and prevention of their distribution. The formal denigration of merchants in China began at this time. In actuality, holding back of goods by merchants could indeed have helped extend the rise in prices, but the fundamental causes were the shortage of goods and the lightening of the money. The merchants' engrossing of goods merely caused the rise in prices to be more rapid and severe.

In the end, how expensive was rice at a price of 10,000 cash per picul, or a horse at a price of 100 *jin*? We can only

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determine this on the basis of comparison with normal prices then. What was the normal price then for a picul of rice and one horse? There is no record of that. Of course we cannot use the price of grain given in the *Guan Zi*. Nor could the price of 30 per picul spoken of by Li Kui be taken as the early Han price. This price may, however, have been close, because the small spade of Wei and the Half-ouncer used during Qin and early Han were almost the same weight.

We can use the prices quoted in the *Nine Chapter Calculating Techniques* to draw some comparisons. Many of the prices in that work can be viewed as prices current during Qin and early Han, because its prices are generally lower than most of those for Western Han. The price of millet, for example, averaged 15 cash per *hu*.[4] According to the rate of exchange then, one *hu* of unpolished or coarse rice would have been 25 cash, and polished or refined rice would have been 28 cash.[5] If we take 28 cash per *hu* as the normal Qin-early Han rice price, then the result of the monetary depreciation and famine of the Chu-Han war was an increase of over 350 times in that price. On the basis of a price of 5,000 cash per picul, there was an increase of 170-180 fold.

The *Nine Chapter Calculating Techniques* contains a price of 5,454 *wen* and six-elevenths for a horse.[6] If the price of gold was 6,250 *wen* per catty,[7] this would be equal to–about 14 ounces for one horse. If it rose to 100 *jin* per horse, that would have been an increase of 115-fold. If we assume a gold price of 10,000 cash per catty, then a rise of 183-fold had occurred. That the price of horses did not go up quite as far as rice may be explained by the fact that rice was a necessity for daily use, the price of which would rise or fall most rapidly.

From beginning to end, this episode of weight reduction lasted some thirty years. The official depreciation seems to have fallen short of that of the private coiners, but the tendency toward depreciation is quite clear.

In Empress Lü's year 2 (186 B.C.), 7th month, the Eight-grainer was put into circulation. This Eight-grain Half-ouncer was probably heavier than the privately minted Half-ouncers in circulation then, and so in the view of the authorities, this appreciation of the coinage should have raised money's purchasing power, but this coin still represented a depreciation in terms of the Qin Half-ouncer. Moreover, the government was not yet se-

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[3] *Historical Records*, 30, "Treatise on the Balanced Standard," and *Han History*, 24, "Treatise on Food and Money."

[4] *Nine Chapter Calculating Techniques*, 6, gives ten prices for millet, ranging from 10 to 20 cash per *hu*. The average is 15 cash per *hu*.

[5] *Nine Chapter Calculating Techniques*, 2, gives the rate of exchange for various foods: "Millet polished is 50, unpolished rice is 30, polished rice is 27, ground rice is 24, imperial rice is 21, wheat is 12.5, barley 54, unpolished cooked rice is 75, polished cooked rice is 54, ground cooked rice is 48, imperial cooked rice is 42, beans, pulse and wheat are each 45, paddy-rice is 60, fermented beans are 63, an evening meal is 90, cooked beans are 103.5, yeast is 175." The expression millet is 50 and unpolished rice is 30, means that 50 *hu* of millet were equal in price to 30 *hu* of unpolished rice.

[6] *Op. cit.*, 8. This price is almost the same as the horse price in the Juyan bamboo slips of Han times, but the price given in these was in an area near where

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horses were bred, and must have been cheaper than elsewhere, and for this reason we cannot view the horse price in the *Nine Chapter Calculating Techniques* as representing the situation from Emperor Wu's time on. The horse prices given in both the *Historical Records* and *Han History* are very high.

[7] The *Nine Chapter Calculating Techniques* gives two gold prices. One is 6,250 per catty (chapter 6). The other is 9,800 per catty (chapter 7), which was probably 10,000 cash per catty. Perhaps the first price was the one during Qin and early Han, and the second price was from after the Half-ouncer had been reduced in weight.

cure at home, and from abroad the Xiongnu invasions were under way. Expenditures could not be reduced, and so the Five-*fen* coin was put into circulation just as the Xiongnu were attacking Ayang.

If by Five-*fen* is meant the small Half-ouncer weighing 2 grains and 4 *zi*, this was only one-fifth of the weight of the Qin Half-ouncer. If we pay no attention to the private minting going on then, this coin is hard to explain: Why, at a time when there was no great war going on, was so great a depreciation carried out within the space of four or five years? A reduction in weight from 8 grains to 2.4 grains may be said to be a large one.

This must mean that the privately minted coins weighed even less. Do not the histories state that in the time of Emperor Wen the Pod-cash became even more numerous and light in weight?[8] Among surviving Half-ouncers, the lightest

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are 0.17 grams and less, equal to one-fifth of a grain, and one-sixtieth of a Qin Half-ouncer's weight. This type of small Half-ouncer is relatively uniform in construction, not like those made at the beginning of Han, and so they must have been made between the end of Empress Lü's reign and the early years of Emperor Wen.

The phenomenon of reduction in the purity of the coins also occurred. At that time there would appear to have been a legal requirement to use copper and tin in minting coins. Privately minted coins were intentionally adulterated with lead and iron as well,[9] but we cannot treat all coins of good purity as official products and coins of low purity as privately coined. The key aspect of monetary depreciation in ancient China was reduction in weight. Lowering of purity was secondary.

Emperor Wen's method for stabilizing the value of money was two-fold:

The first was to increase production. For example, the nobles living in Chang'an were told to return to their fiefs to govern them personally, so as to encourage production. Simultaneously, new land was opened in the imperial domain, and the Emperor personally plowed some of it to encourage agriculture.

The second thing was to carry out a policy of contracting the supply of money in circulation, to avoid sending soldiers abroad, and at home to abstain from construction projects, and to always give relief in goods rather than in coin. Coins brought in by taxation were stored in the national treasury.

In addition, in year 5 [175 B.C.], the weight of the coins was increased. The Half-ouncer was raised from the level of the extremely light Pod-cash to a weight of four grains. Only after all this had been done was the value of the money stabilized.

When at that time Chao Cuo advocated deemphasizing gold, coins, pearls and jade, and putting emphasis on plowing, his aim was no less than to turn the people from private minting back to agriculture, and to thereby increase production. Jia Yi also lamented that "producers are so few, and consumers are so numerous."[10] He too advocated returning people to agriculture.

In stabilizing the value of the coinage, Emperor Wen put increased emphasis on the weight of the coins and yet simultaneously also permitted free coinage among the people.[11] This was hard for the quantity of money theorists of later times to understand, but at that time it was supposed that the fall in the value of money was the consequence of its reduction in weight, and if merely the weight of the coins was maintained, their price could not change. The Han politicians had come to understand that money had intrinsic value.

This doctrine was not limited to China, but was very widespread abroad as well. It flourished during the Middle Ages in Europe. One group of men then supposed that prices changed when bad practices arose in coin manufacture, and all that had to be done to restore the price level was to halt these bad practices. Therefore, the Western Han government was not concerned with the private coining of men like Pi, the Prince of Wu, or Deng Tong, because the coins they minted kept to the standard established by the central government.[12]

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[8] *Historical Records*, "Treatise on the Balanced Standard": "By the time of Emperor Wen, Pod-cash were increasingly numerous and light in weight."

[9] The *Han History* "Treatise on Food and Money" quotes Jia Yi: "The law requires that those publicly hired to do so use copper and tin to make coins. Those who dare to adulterate them with lead and iron for their illicit profit, should be punished by tatooing of the face." Seven Four-grain Half-ouncers have been assayed. Their copper content varied from 64.94 percent to 93.68 percent. The remainder is composed of such metals as lead and iron, and is mostly lead. Katō Shigashi, *Investigations of Chinese Economic History*, pp. 151, 154.

[10] *Han History*, "Treatise on Food and Money."

[11] *Historical Records*, "Treatise on the Balanced Standard": "By the time of Emperor Wen, Pod-cash had become increasingly numerous and light in weight, and so the Four-grainer was minted with the inscription Half-ouncer. It was ordered that the people be allowed to freely mint coins." *Han History*, 4, "Annals of Emperor Wen": "Year 5 . . . Summer, 4th month, the ban on illicit minting of coins law was abrogated, and more Four-grainer coins were manufactured."

[12] *Miscellaneous Record of the Western Capital*, first part:

There could have been another reason for the Western Han government's *laissez faire* policy toward minting coins. This is that minting of coins privately
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did not differ significantly in character from minting by the government. The government could draw in privately minted coins through taxation, and thereby reduce its own minting expenses.

In actuality, private minting could not altogether remain up to the government's standards, and as a consequence the coinage was not uniform. The coins of each locality differed, and as a consequence the phenomenon of discounts in exchange appeared, with light coins exchanging at a discount compared to heavy coins.[13]

In general, the great fall in money's value during Western Han caused by the reduction in the weight of the coins, was slowly reversed under Emperor Wen. Thereafter, Emperor Jing was quite capable of continuing the policy of Emperor Wen, and in year 6 of his reign [151 B.C.] he also banned private minting. This not only caused the money's value to be restored to its former level, but also tended to start a tendency for prices to decline. Millet fell to a little over 10 cash per picul.[14] The price of cereals ranged from several dozen cash[15] to 100 cash[16] per picul.

These prices do not seem low when compared to low prices at other times in Chinese history, but one must realize that the Four-grain Half-ouncer was in use then, and there were still large numbers of private coins. When we take these factors into account, we realize that prices then were really very low.

The era of good rule of Emperors Wen and Jing was built upon the foundation of these low prices. The result was,

> the local treasuries overflowed with wealth; coins in the capital districts piled up by the millions. Their strings rotted, and they could not even be counted. The cereal in the Grand Granary covered it from edge to edge, and overflowed to the outside. It could not all be eaten before it spoiled.[17]

This, of course, mainly shows that the ruling class was becoming wealthy, but because society was relatively tranquil, and there was no war, the people's lives were also somewhat improved. The historians say "the crowds in the streets and lanes had horses, and between the boundaries of the fields the crops grew thickly." They add, "those who guarded the gate posts ate grain and meat."[18] Evidently, conditions had changed since the beginning of Han.

"During the time of Emperor Wen, Deng Tong received as a gift a copper mountain in Shu, and was permitted to mint coins. Their inscriptions and proportions between hole and body of the coins were all the same as those of the coins of the Son of Heaven. Hence he became as rich as the ruler. At this time the Prince of Wu also had a copper mountain for minting coins. Therefore there were Wu coins of slight weight, but whose inscriptions and hole-coin proportions did not differ from those of Han coins."

[13]*Han History*, "Treatise on Food and Money": "Jia Yi remonstrated . . . The coins used by the people differ in each commandery and prefecture. Some use light coins, and for each hundred a certain number must be added. Some use heavy coins, and an equal weight is not received. If a standard legal coinage is not established, will the clerks stir themselves to make things uniform? Thus the great will cause vexation, and their strength will not be able to be overcome. Can one allow this without raising an outcry? Different practices from the market standard will be used, and the coinage will be thrown into great disorder. If it were not for such tricks, how could the rustics engage in such practices?"

[14]*Historical Records*, 25, "Treatise on the Laws": "Emperor Wen said . . . the Empire is very rich. Millet has reached a little more than 10 cash."

[15]*Master Huan's New Discourses*: "It was popularly said at the time that Emperor Wen of Han was personally frugal, and cultivated the Way of Virtue so as to give precedence to the Empire. The Empire was transformed, and so reached the fullness of wealth. Millet filled the marshes in abundance. Cereals reached a price of several dozen cash per picul. Above and below, all shared an abundance worthy of envy." Cf. *Taiping Yulan*, 35, "Contemporary Prefaces," 20, "Abundant Harvests."

[16]*Gazetteer of Customs*: "At the height of Emperor Wen's reign, cereal was one cash per *sheng*."

[17]*Historical Records*, "Treatise on the Balanced Standard."

[18]*Han History*, "Treatise on Food and Money."

2. *The Monetary Depreciation of Emperor Wu's Xiongnu Wars*

Relying on the accumulated stores of Emperors Wen and Jing, Emperor Wu embarked upon extensive building projects at home and far-flung campaigns abroad. These very quickly exhausted the national treasury, and impoverished the people.

The Xiongnu had been the enemy of the Chinese monarchy for generations. Ever since the Chinese monarchy had become aware of this people, relations between the two had been hostile. By the Qin to early Han period,
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this conflict had gone on for a millennium.

The power of the Xiongnu appears to have waxed greatest during the transition from Qin to Han. During the reign of the First Emperor the Xiongnu had been defeated by Meng Tian. After the First Emperor's death, there was internal disorder, and the borders were left undefended. The Xiongnu took advantage of this opportunity. Under the rule of their Shanyu, Maodun, their national power grew to an unprecedented level. They smashed the Eastern Hu, drove off the Yuezhi, and reduced the Qiang to subordination. Prince Han Xin surrendered to them and Liu Bang himself almost became their captive. Later, Empress Lü was humiliated by them, and could do nothing about it. Emperor Wen had no choice but to take a low posture before the Shanyu.

When Emperor Wu ascended the throne, the Xiongnu had just overthrown two Shanyu, and their strength had begun to decay. Though the Chinese still followed a policy of appeasement, the Xiongnu continued to raid along the frontiers. In yuanguang 2 (133 B.C.) Emperor Wu adopted the advice of Wang Hui and sent out an army of 300,000 to lead an attack against the dependencies of the Shanyu, and the Xiongnu thereupon abrogated the peace accord and formally declared war. Over the next ten years losses were very great on both sides.

The Xiongnu were a nomadic people whose culture and economy were very backward. They had no fixed wealth. Their homes were wherever there was water and grass. When victorious, they advanced. When defeated, they fled. Their livelihood remained unaffected.

China, however, was an agricultural nation, with a relatively highly developed economy and civilization. To maintain this level of development a stable economic foundation was necessary, and this economic foundation was easily broken by an extended period of warfare. This was just what happened during the reign of Emperor Wu.

The historians all praise the China of the age of Emperor Wu for its strength, but in my view it was not so strong as was its predecessor Qin or its successor Tang. At that time, it appeared powerful only because the Xiongnu were not at the peak of their power, and this was not the work of Emperor Wu and his generals, but rather was the result of the characteristic tendency of a nomadic people to weaken rather suddenly. Now, with the beginning of this weakening of the Xiongnu, Emperor Wu and his generals reconquered some territory, but paid a very high price for doing so.

The Three-grainer circulated after Emperor Wu took the throne represented a 25 percent weight reduction compared to Emperor Wen's Four-grain Half-ouncer, which probably continued to circulate. Since for a time the Three-grainer was in insufficient supply, the Half-ouncer could not be abolished. Hence after five years the Three-grainer was abolished, and production of the Half-ouncer was reestablished. In actuality, not many of the Three-grainers survive. Melting down of coins for their metal flourished then. This made coins still thinner and lighter, and prices rose still more.

After the formal break with the Xiongnu in yuanguang 2 [133 B.C.], the situation changed. Large scale military operations were mounted every year, and expenses were necessasrily very large, especially between 121 and 120 B.C., when Huo Qubing led his cavalry to Longxi, where he killed over 30,000 of the enemy and accepted the surrender of 40,000 more.

In 119 B.C. Zhang Tang requested the issue of White Metal and Hide Money to make up for the deficit. He said that because of the floods in the east **[166]**
725,000 impoverished refugees had been moved to the northwest. Of course this was an extraordinary expenditure, but it was not the only reason for the deficit. The war was also an important reason.

The tax on strings of cash was also first levied at this time, because that Summer Wei Qing and Huo Qubing each led 50,000 cavalry and several hundred thousand infantry in a long distance attack upon the Xiongnu. Hide Money was restricted to use by the nobility during imperial audiences. The quantity issued was probably not great, and it cannot be considered to have been true money. The monetary depreciation was mainly carried out by way of the White Metal.

Of the types of White Metal, the Dragon-coin weighed 8 ounces, and had a face value of 3,000, each ounce being equated with 375 cash. This was too high, because at most the price of silver then was 125 per ounce.[1]

This was not the only shortcoming of White Metal. White Metal was an alloy of silver and tin, and there was then no fixed standard of purity for it. Hence the proportion of tin could be varied at will, and this was a very great temptation for illicit coiners.

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[1]Under Wang Mang's Treasure-money system, 8 ounces of ordinary silver was priced at a thousand cash, so that one ounce was 125 cash. At that time, however, the cash was a one-grain Small-cash, whereas during this portion of Emperor Wu's reign the cash was a Four-grainer. If we assume no change in the copper price of silver, then the price per ounce of silver under Emperor Wu could only have been 31 cash. The purity of silver was, however, very low during Han, and the real price of silver must be based on Zhuti-silver. In Wang Mang's time an ounce

This was similar to the electrum coins (an alloy of gold and silver) issued by Lydia several hundred years before Emperor Wu's time. Coincidentally, the Lydians also called their money white metal,[2] and there were no fixed standards for its purity either. It averaged 75 percent gold, with the remainder silver, but some coins are only 5 percent gold. At first people thought electrum was a separate metal, and so there was little illicit coining of it. Later, when it was discovered to be an alloy, it was depreciated through human intervention.

Everyone knew that Emperor Wu's White Metal was an alloy, and since its face value was so high, naturally further depreciation was inevitable.

After the White Metal was circulated, large-scale illicit coining appeared. The *Han History*, "Treatise on Food and Money" states:

> During the five years after the introduction of the White Metal and Five-grainer, the number of officials and commoners pardoned at the five annual remissions from the death penalty for illegal coining was several tens of thousands. Countless others were not made known and so were killed. Over a million were pardoned for passing them out themselves, but this was less than half of those doing so. All over the Empire, people were minting the Metal and cash without a care.

The *Debates on Salt and Iron* adds: "After this, there was a partial return to the old coins, but the White Metal, Tortoise and Dragon-coins were still circulated, and many people counterfeited the new coins." Within the country, those who did not go off to fight as soldiers, got hold of copper to mint coins, or fled to lead the lives of bandits. There was no other way to earn a livelihood.

The Five-grainer began to be produced the year after the White Metal. Since the deficit was to be made up by the White Metal, the copper cash could be transformed from the Four-grain Half-ouncer to the Five-grainer.

Prices then might have been expressed either in terms of copper cash or White Metal. In 118 B.C. the price of a horse was 200,000.[3] People were unwilling to engage in production, and instead carried on speculation.[4]

This episode of monetary depreciation was also partially the result of theoretical considerations. Many of the courtiers of that time, men like Jia Shan and Chao

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Cuo were Legalists. The Legalist monetary theory was very close to that of the national determination theory of later ages. These people denied that money had any intrinsic value, and supposed that its value was bestowed by the monarch, the government, or by statute, or came about through custom, and that it was unchanging. The Chinese Nominalists of that time, however, opposed private coining, and thought that the authority to issue coins ought to be centralized in the the hands of the government. They opposed the early Han doctrine of free coinage.

The White Metal was only issued and in use for less than two years. In 117 B.C. it was abolished.[5] Hide Money was not a full money anyway. Therefore, even though the histories do not state clearly whether it too was abolished then, this is not very important.

After the abolition of White Metal, only the Five-grainer remained in use. This would seem to have been an arrangement which would have stabilized the value of the coinage. What may have enabled the government to adopt this measure then

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was equal to 200 Small-cash.

[2]Lydia's white metal is called electrum by the Europeans, a term which means white metal or white gold, because its silver content causes it to take on a white or light yellow color.These coins were circulated in seventh century B.C. Lydia.

[3]*Han History*, "Annals of Emperor Wu": "(Yuanshou) 5 . . . There were few horses in the Empire. An ordinary stallion was 200,000."

[4]*Ibid.* "Yuanshou 6, 6th month, an edict stated that officials were constantly saying that the lightness of the coinage was causing many abuses. Agriculture was being harmed, and the secondary occupations becoming crowded."

[5]*Western Han Abstract of Laws*, 53: "In yuanding 2 [115 B.C.] the White Metal was abolished." *Han History*, "Treatise on Food and Money" states: "After the manufacture of the White Metal and Five Grainer,

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during the next five annual pardons, several hundred thousand officials and commoners were pardoned from the death penalty for illicit coining." This would seem to suggest that the White Metal circulated for five years, but actually this five years included the period when the Five-grainer was put into circulation as well.

The text goes on to say: "The White Metal was cheap, and the people did not use it as a store of value. Because the district officials were forbidden to do so they did not increase it. Not long after the end of the year it was abolished and no longer circulated. This year Tang died." Evidently the White Metal was abolished the year Zhang Tang died. According to the *Former Han History*, "Annals of Emperor Wu," Zhang Tang committed suicide in yuanding 2 [115 B.C.], which corresponds to the statement in the *Western Han Abstract of Laws*, but according to the *Han History*, "Table of Officials," Zhang Tang died in yuanshou 6 [117 B.C.]. Thus the White Metal only circulated for one or two years.

was the putting into effect of the Salt and Iron Monopoly policy, which increased treasury receipts, so that the issue of White Metal was no longer required.

The circulation of money was not entirely stabilized. The focus of depreciation was merely shifted to the copper cash. It is said that private coining rendered the weight of Five-grainers insufficient,[6] and so in 115 B.C. a value-5 Red-edged coin was minted. This constituted a depreciation, since the face value was several times the actual value, and had the perverse effect of stimulating still more private coining.[7] Finally, there was no choice but to abolish the value-5 Red-edged coinage, and to forbid the commanderies and fiefs from making coins. Standard Five-grainers were minted centrally by the government.[8]

The reason why there was no great jump in prices during Emperor Wu's time was probably because of his taxation policies and other measures. His many strategems for raising tax rates and setting up new taxes siphoned excess money back into the treasury.

The reckoned-contribution tax was increased, the head-field tax and horse-head-cash tax were created by him. The head-field tax was a per capita tax levied annually on children from ages three to fourteen, with each such individual being liable for 20 cash.

The horse-head-cash tax was a surtax on the head tax. It was used to meet the expenses of using cart horses. This was part of the cost of war. It was 3 cash per person.

The reckoned-land tax was a head tax on adults. Though not created by Emperor Wu, he raised the rate, but by how much is not recorded. During Emperor Wen's reign it was 40 cash per reckoning. Under Emperor Xuan it was 190 cash, and he had reduced it, so a larger increase must have occurred under Emperor Wu. If we assume that the rate was 190 under Emperor Wu,[9] that the population was 60 million,[10] and the number of those paying the tax was 50 million, 10 million of whom were children and 40 million were adults, this would have brought in annual revenues of 7,830,000,000 cash. Some people had to pay more than one reckoning. Merchants, for example, and slaves were each subject to two reckonings. Women living alone were subject to five reckonings.

This tax policy

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caused Western Han's monetary economy to advance somewhat, since it required all to use coins. It also, however, caused a contraction of the money supply in the market. There was also a reckoned-string-cash tax, which also had the effect of contracting the money supply. In yuanfeng 1 (110 B.C.) Sang Hongyang's Office of Price Equalization Through Transportation was established. This was an attempt to stabilize prices by engrossing large quantities of goods.

In his later years, Emperor Wu emphasized agriculture, and adopted the Equivalent Field Law and improved agricultural tools so as to raise productivity. This was also extremely important for stabilizing the purchasing power of money. In another development, after the great war of 119 B.C., the Xiongnu Shanyu, Yinzhixie, led his people away from China, and before long the Xiongnu rapidly plunged into decadence, which greatly lightened China's burden of military expenses.

During the reign of Emperor Zhao (86-74 B.C.), peasants who had run away earlier gradually returned to their homes, much new land was opened

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[6] *Han History*, "Treatise on Food and Money": "The commanderies and fiefs minted coins. Many of the people illicitly minted, and most of their coins were light. And so the Ducal Offices requested that the Capital Districts mint official Red-edged coins, with a face value equivalent to five normal coins, and that none but these be allowed to circulate for payment of taxes and official use."

[7] *Ibid.* "Two years after this, the Red-edged coin had cheapened, and the people had ingenious methods for using it, so that it became inconvenient, and it too was abolished."

[8] *Ibid.* "Thereupon the commanderies and fiefs were forbidden to mint coins. The Three Offices of the Upper Grove Park alone were to mint coins. As coins were too numerous, orders went out to the Empire that none but the coins of the Three Offices were to be circulated. All of the coins minted by the commanderies and fiefs were to be melted down, and the copper they contained forwarded to the Three Offices. Those among the people minting coins became few, since the expense of doing so exceeded their face value. Only true artisans, great villains or thieves made them."

[9] Historians have always supposed that the Han reckoned-contribution tax was 120 cash per reckoning from the beginning, and that all increases and decreases were from this base. This is incorrect. We may consult the research of Katō Shigashi. He supposes the 120 cash per reckoning rate was the rate after the reform of Emperor Cheng's jianshi 2 [31 B.C.], which brought the rate down to 40 cash. Before that, in Emperor Xuan's ganlu 2 [52 B.C.], it was 30 cash less. So before that time, each reckoning must have been 190 cash. (Cf. Katō's *Investigations of Chinese Economic History*, 1, 5, "An Inquiry into the Reckoned-contribution tax.)

[10] We have Han population figures only for Emperor Ping's yuanshi 2 [2 A.D.]. The total is 59,594,978. Cf. *Han History*, "Treatise on Geography." At the high point of Emperor Wu's reign it was probably about the same.

and production increased.[11] In 75 B.C. there was even concern expressed over the cheapness of grain.[12] In Emperor Xuan's yuankang 4 (62 B.C.), grain sold for only 5 cash per picul.[13] Even Ban Gu later wrote: "The peasants occasionally profited." Prices then were reckoned in Five-grainer coins, and the Five-grainers of Emperor Xuan's reign are rather uniformly fine.

The rise in money's purchasing power and the simultaneous widening of the sphere of its circulation made it necessary to mint small Five-grainers. Food prices during Emperor Xuan's reign seem to have been lower than those of the times of Emperors Wen and Jing. A price of 100 cash per picul was considered cheap back in that earlier time, and the lowest price was several dozen cash per picul. In addition to good harvests, there was also the factor of the weight of the coins.

During Emperor Wen's reign, there were still a number of Pod-cash in circulation, and even standard coins only weighed four grains. During Emperor Xuan's time, the Five-grainer was in use, and so with equally good harvests, prices during Emperor Wen's reign would at the very least have been 2.5 times higher than those of Emperor Xuan. The country was at peace then, expenditures had been reduced, and a large portion of the coins had been concentrated within the national treasury. By the time of Emperor Yuan's ascent of the throne, there is evidence that the treasury had accumulated over eight billion cash.[14] It was perhaps because of the increased holdings of cash in the treasury that in 59 B.C. the salaries of low-ranking officials were raised fifty percent,[15] and in 55 and 52 B.C. the capitation tax[16] and popular-reckoning[17] were reduced. In 54 B.C. the number of soldiers was reduced by twenty percent.

At the beginning of Emperor Yuan's reign, the treasury held a large surplus. In addition to the reduction in expenditures, the main reason for this was probably the large number of coins which had been minted.

The Five-grainers of Emperor Xuan are the most numerous of surviving Western Han Five-grainers. The coin molds most commonly unearthed also are of his time. There are coin molds extant for nearly all the year periods of his reign.

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Rice prices were three or four times higher during Emperor Yuan's reign than during Emperor Xuan's time. We can deduce this from the rate of discount of official salaries then when converted from grain to cash. Western Han official salaries were expressed in terms of piculs of grain, but at times a portion or even the entire amount would be paid in coin at the going price for grain. Under Emperor Xuan, a 100-picul minor official would receive 600 per month.[18] If we assume such an official received 16 *hu* of grain per month, then a *hu* was worth 37-38 cash. Under Emperor Yuan, an 800-picul official's salary would be commuted to 9,200, and later a 2,000-picul functionary would get 12,000 per month.[19] This would make a *hu* equal to 118 cash.

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[11] *Han History*, "Treatise on Food and Money," first part.

[12] *Han History*, 7, "Annals of Emperor Zhao": "Yuanfeng 6 . . . an edict stated: The cheapness of grain is harming agriculture. Now the grain of the Three Capital Districts and of the Grand Minister of Ceremonies has become reduced in price. It was ordered that the Imperial Uncles' grain serve as this year's field tax."

[13] *Han History*, "Annals of Emperor Xuan": "Yuankang 4 . . . successive good harvests. Grain was 5 cash per picul." The "Biography of Zhao Chongguo" adds: "[During 61-58 B.C.] in Jincheng and Niezhong, grain was 8 cash per *hu*.

[14] *Han History*, 86, "Biography of Wang Jia": "When Emperor Yuan undertook his great tasks, life was mild and gentle, and desires were few. The Treasurer had four billion cash. The Chief Commandant of Water and Parks had 2.5 billion cash. The Privy Treasurer had 1.8 billion cash."

[15] *Han History*, "Annals of Emperor Xuan": "Shenjue 3 . . . an edict stated . . . clerks with 100 piculs or less are to receive an increase in salary of fifty percent."

[16] *Ibid.* "Wufeng 3 . . . reduction in the capitation cash."

[17] *Ibid.* "Ganlu 2 . . . an edict stated . . . reduce the popular reckoning by thirty."

[18] *Ibid.* has a note quoting the words of Ru Chun [a Three Kingdoms period commentator. EHK]: "By law a 100-picul official monthly received 600." According to the jianwu year-period [25-56 A.D.] salary schedule, a 100-picul official should receive 16 *hu* of grain per month.

[19] *Han History*, 72, "Biography of Gong Yu": ". . . appointed as Grandee Remonstrant, which was an 800-picul post, and received 9,200 cash per month. . . then appointed Imperial Court Grandee, which was a 2,000-picul post, and received 12,000 cash per month." There is no 800-picul entry in the jianwu salary schedule. According to the *Western Han Abstract of Laws*, a Grandee Remonstrant, which was comparable to an 800-picul position in that it was ranked at 600-piculs, earned 70 *hu* of grain per month, making a *hu* equal to 131 cash. If we assume that an 800-picul post got 75 *hu* per month, since that would be the mean between the 1,000-picul and 600-picul positions, then a *hu* of grain was 122 cash. An Imperial Court Grandee, according to the *Western Han Astract of Laws*, was comparable to a 2,000-picul position. This, according to the jianwu salary schedule, broke down into 100 *hu* per month, and each *hu* was the equivalent

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We lack reliable material on cereal prices in general during Emperor Yuan's time. If we convert Gong Yu's official salary into cash, each *hu* would seem to be worth around 100 cash, because when he served as Grandee Remonstrant, ranked at 800 piculs, he received 9,200 in cash. What an 800-picul[20] official received in grain per month is not recorded. There is no 800-picul ranking in the Eastern Han jianwu year-period salary schedule, there is only a 600-picul rank. A 600-picul official got 60 *hu* per month. Western Han high officials' salaries were higher than Eastern Han, and so an 800-picul salary shoud have been no less than 85 *hu* per month, and that would make each *hu* the equivalent of 108 cash. Later, when he served as Imperial Court Grandee, he was ranked at 2,000-piculs, and received 12,000 cash. A 2,000-picul official would get 120 *hu* per month in grain, and so each *hu* would be worth 100 cash.

Some people say that a Chancellor, a Grand Minister of War, and a Grand General each received 60,000 cash per month, and that a Grandee Secretary got 40,000.[21] This was probably the situation during the reign of Emperor Cheng or Emperor Ai. During Emperor Chen's time, He Wu requested the establishment of the Office of the Three Ducal Ministers. This was done during the reign of Emperor Ai, and the Chancellor, Grand Minister of War and the Grand Minister of Works became the Three Ducal Offices. These were 10,000-picul posts, and must have had between 400 and 500 *hu* per month, which would make each *hu* worth 130-140 cash. The Grandee Secretary was a Supreme Minister, and must have received 300-350 *hu* each month, making a *hu* worth 120-130 cash.

3. The Monetary Depreciation During the Time of Wang Mang

The stability of the Western Han monetary system gradually decayed after the time of Emperor Wu. Though the treasury still held a surplus of over eight billion[1] when Emperor Yuan ascended the throne, there was already a tendency for the price of food to rise. In chuyuan 2 (47 B.C.) on one occasion the price of grain rose to over 300 cash per picul. In yongguang 2 (42 B.C.) it rose to over 200. On the frontiers and near the capital it even sold for as much as 400-500.[2] In the last years of the reign there were military campaigns against the Western Qiang, and it was only because the treasury was still full that there was no crisis.[3] Nevertheless, the price of grain in normal years had risen to more than 100 cash per picul, which was much higher than during the reigns of Emperors Zhao and Xuan.

During the reign of Emperor Cheng (32-7 B.C.), though there was a tax reduction,[4] there were floods and droughts, the good order of society gradually deteriorated, and prices may have risen. Under Emperor Ai (6-1 B.C.), the normal grain price was probably 170 cash per picul.[5] Upon Emperor Ping

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of 120 cash. For a 2,000-picul post, the monthly wage would be 20 *hu*, and each *hu* would be worth 100 cash. If we average all of the above discounted equivalents to calculate the average price of grain during Emperor Yuan's time, a *hu* was 118 cash.

[20]For Gong Yu's words cf. *Han History*, 72, "Biography of Gong Yu": These words were spoken during the reign of Emperor Yuan. Though the official salary system of Western Han cannot be verified, the official rank hierarchy is to some extent ascertainable. The *Han History* "Biographies of Imperial In-Laws" tells us that in Emperor Yuan's time, the hierarchy of palace ladies ran parallel to that of the official ranks. Above the middle 2,000-picul ranks were the two ranks of Chancellor and Supreme Minister. Below there were the True 2,000-picul, 2,000-picul, 1,000-picul and 800-picul ranks.

[21]*Han History*, 10, "Annals of Emperor Cheng" contains a note quoting the words of Ru Chun.

[1]*Han History*, 86, "Biography of Wang Jia." Cf. subsection 2.2.2 above, note 14.

[2]*Han History*, 24, "Treatise on Food and Money": "When Emperor Yuan ascended the throne, there were great floods in the empire. They were particularly severe in eleven commanderies in the east. In year 2, there was famine in the lands of Qi, and a picul of grain went for over 300. Many people died of starvation." *Op. cit.*, 79, "Biography of Feng Fengshi": "Yongguang 2 . . . the harvest was comparatively low. In the Capital Districts grain sold for more than 200 per picul. It was 400 in the border commanderies and 500 in the east."

[3]*Op. cit.*, 86, "Biography of Wang Jia": "Although there were bad years and famines during the chuyuan and yongguang eras [48-39 B.C.], and there was in addition the revolt of the Western Qiang requiring external moves of the army and the internal unsettling of the impoverished, in the end there was no crisis, because the the treasuries were full."

[4]*Op. cit.*, 10, "Annals of Emperor Cheng": "Jianshi 2 [31 B.C.] . . . an edict stated . . . reduce the Empire's Reckoned-contribution by forty."

[5]*Ibid.*, note quoting Ru Chun: "By law a Chancellor, Grand Minister of War, or a Grand General received a salary of 60,000 cash per month, and a Grandee Secretary received 40,000." According to the jianwu salary schedule, a 10,000-picul post got 350 *hu* of grain per month, which would make each *hu* worth 170 cash. A Grandee Secretary was the equivalent of a middle-2,000-picul rating, and would get 180 *hu* per month, and so a *hu* would be worth 222 cash. Although Ru Chun's words appear in

coming to the throne (1 A.D.), the sovereign power fell into the hands of Wang Mang.

Before taking up the discussion of the monetary depreciation carried out by Wang Mang, we can sum up the circumstances of money's circulation during the last years of Western Han.

The histories state that during the 120 years from 118 B.C. to 1-6 A.D., over 28 billion Five-grainers were minted.[6] On the average, over 230 million coins were produced each year. During the last years of Western Han there were undoubtedly also a number of privately minted coins and Half-ouncers still in circulation. Even if we exclude the private coins and Half-ouncers, or treat them as coins kept in hoards, there was money in circulation equivalent in value to 2.8 million catties, or 716,800 kilograms of gold. In addition, 700,000 catties of gold, equal to 180,000 kilograms, were present, and had some of the functions of money.

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These are huge figures which fully make clear the dimensions of the monetary economy then.

Wang Mang's domestic aim was to establish his own dynasty. Abroad, he wanted to expand to make China into a large empire. To realize so great an ambition would require a very large sum of capital.

To establish his own dynasty he had to capture men's loyalties. During the reign of Emperor Ping he had established a retirement fund system for high ranking officials, he had encouraged education, and supported scholars. Naturally, these activities increased government expenditures. He even made contributions from his own landed property, but since sovereignty was in his hands, his own contributions did not go for his personal use, and so he could thereby stimulate other officials into contributing their own property. Of course, such contributions were insufficient, and so he went on to plunder the people at large. This is the background to his first reform of the monetary system in 7 A.D.

In this monetary reform Wang Mang issued three new coins. The first was the Large-spring-fifty; the second was the Inscribed-knife-five-hundred; the third was the One-knife-equals-five-thousand, generally called the Inlaid-knife or Gold-inlaid-knife. The Large-spring weighed 12 grains, which made it 2.4 times the size of the Five-grainer of those times, but since it bore a face value fifty times that of a Five-grainer, this amounted to a depreciation to less than 5 percent of the previous level. This coin had the effect of cheating small producers of their capital and labor. The inscribed knife weighed around 16 or 17 grams, and was equated with 500 Five-grainers. This was a depreciation to less than 0.8 percent. The inlaid knife, including the minuscule amount of gold inlay, weighed around 28-29 grams, and each was equated with 5,000 Five-grainers. This amounted to a depreciation to less than 0.1 percent of the former level (not counting the gold).

The function of these two coins was to fleece those of middling property and the rich. They were mainly used to sop up gold from all over the country. Since the price of gold then was 10,000 cash per catty, two Inlaid-knives or twenty Inscribed-knives could be exchanged for a catty of gold.

Simultaneously, Wang Mang banned private possession of gold. This was in fact to proclaim the nationalization of gold. Later, not even an exchange price was given for gold. Hence not very many of these two knife-coins have survived. After Wang Mang's death, there was 6-700,000 catties of gold in the palace.[7] I suspect that most of it was sucked in during this first monetary reform.

There was resistance among the people to this exploitation. They resisted using the new coins, and continued to use the Five-grainer. The Five-grainer was still legal at that time. Wang Mang had not yet thought of banning it, but he very quickly got the idea, and after he formally usurped power (9 A.D.), he carried out his second monetary

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reform which abolished the Five-grainer and the

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a note to the "Annals of Emperor Cheng," he must have been speaking of the situation during Emperor Ai's reign, because under Emperor Cheng the Chancellor was subordinated to and made one of the Three Ducal Offices, and it was not until Emperor Ai's time that the Chancellor, Grand Minister of War and Grand Minister of Works became the Three Ducal Ministries. They jointly achieved prime ministerial status in yuanxi 2 [1 B.C.]. That was when the Grandee Secretary's title was changed to Grand Minister of Works, and he became one of the Three Ducal Ministers.

So the law Ru Chun speaks of must have been a law of Emperor Ai's time. According to the *Western Han Abstract of Laws*, the Three Ducal Ministers and the Grandee Secretary both held rank at the 10,000-picul level. By the terms of the jianwu salary schedule, that rank received 350 *hu* of grain per month. During Western Han, the Three Ducal Ministers and the Grandee Secretary were different, the former holding the rank of Chancellor, and the latter holding the Supreme Minister rank. The *Han History* "Biographies of Imperial In-laws" remarks that the offficial ranks of Emperor Yuan's time numbered thirteen, from Chancellor down to the lowest rank, called Eaters of Quarts, but it does not attach salary figures to those ranks.

[6] *Han History*, 24, "Treatise on Food and Money."

[7] *Op. cit.*, "Biography of Wang Mang."

knife-coins in favor of the Large and Small-spring coins.

The Small-spring was a new issue. It weighed one grain, and was to replace the Five-grainer. He simultaneously banned the private holding of copper and charcoal so as to prevent private minting.

This second monetary reform can only be viewed as a continuation of or supplement to the first reform. The knife-coins were probably abolished because their aims had been accomplished: The country's gold had been concentrated in the national treasury. Nevertheless, the people continued to resist. They would not accept the Large and Small-spring coins, and kept on using the Five-grainer for purposes of exchange.[8] Word also spread that the Large-spring would quickly be abolished.

Wang Mang thereupon determined on a strict course of punishments: Anyone who used the Five-grainer was to be exiled to the frontier. The result of this was "agriculture and commerce went bankrupt, and food and commodities were both lost. The people wept in the markets and on the roads." Countless persons, ranking from nobles and high officials down to commoners, were punished for private coining.[9] Since the people had no way to maintain a stable coinage on their own, they had no choice but to carry on private coining to earn a living. So sharp a struggle between the people and ruling class over the monetary system was rarely seen in Chinese history.

In the second year after Wang Mang proclaimed himself Emperor (10 A.D.), he carried out a third monetary reform, instituting the extremely complex Treasure-money system. This reform also effected a depreciation of the coinage, but not so severe a one as did the first reform. It did however, proceed a step further in depreciation than the second reform.

The heart of the depreciation lay in the creation of Spade-money, because the Spring-money's face value was the same as that of the previous Large and Small-spring, except that several denominations were inserted between the two. The Spade-money's face value was raised. If we use the Small-spring as our base, then the Small-spade weighed fifteen times more than the Small-spring, but had a face value a hundred times that of the Small-spring. The Large-spade weighed twenty-four times more than the Small-spring, but had a face value a thousand times higher. The copper from 24 Small-springs could make one Large-spade which was equal in face value to a thousand Small-springs, and so the seignorage (i.e. the profit to the mint) was more than forty-fold. This was ten times more than the seignorage from the second reform.

That is to say, this third monetary reform yielded a depreciation ten times that of the second reform. The exploitation of the people was ten times greater after this third reform than it was after the second one. Therefore, of the ten kinds of Spade-money, more of the Large-spade were minted than of any other. The other nine are scarce. There are even fewer of them than of the Gold-inlaid knives.

Why did Wang Mang wish to carry out this new act of exploitation? It was not to gather in gold, because all the gold had already been drawn in. It was not to carry on a war, because at that time there was no important war going on.

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We can only conclude that this reform was carried out to make provision for some future foreign war. The year before Wang Mang had set up his own dynasty, he had already collected from the chiefs of the various tribes the seals of authority issued by the Han authorities, and passed out instead the seals of his own New Dynasty. He had also lowered the ranks of these chieftains, and compensated them for this with some of the gold he had confiscated from the people. The Xiongnu, however, had embarked on a path of resistance.

Wang Mang had probably carried out this monetary reform to extort still more of the property of the people within China so as to prepare for imminent foreign war. The year after this reform (11 A.D.), he mobilized 300,000 soldiers and 300 days provisions, and sent them out along ten routes to attack the Xiongnu. The histories' statements that "he taxed away half the wealth of the people" testify to the extremity of his extortions.

The people continued to resist this assault. Wang

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[8] *Op. cit.*, middle section: "In shijianguo 1 [9 A.D.] . . . he made the small coins with a diameter of 0.6 inches. They weighed one grain, and bore the inscription Small Cash Value One. They were circulated along with the previously issued Large Cash Fifty. It was desired to hinder illicit coining among the people, and so they were forbidden to hold copper and charcoal. . . At this time the common people rested content with the Han Five-grainer coin. Because Mang's large and small coins were hard to distinguish when in circulation, and there was no faith that their number would not change, everyone privately used the Five-grainer for purchases in the market, and word was spread that the Large coin ought to be abolished.

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No one was willing to hold it. Mang was troubled by this, and repeatedly issued statements to rebut those who held on to the Five-grainer and said the Large coin ought to be abolished. He argued that this would be contrary to the well-field system, and so he exiled them. Thereupon both agriculture and commerce went bankrupt, and food and commodities were both lost."

[9] *Ibid.*

Mang then adopted a coldblooded form of punishment: If one family minted coins, five families were linked to it in guilt. He continued to promote the Spade-money. Wherever the people went, they had to carry Spade-money with them, if they were to be allowed to proceed. If they did not, they "would have nowhere to eat or stay, and would be annoyed and delayed at the passes and ferries."[10] Even the highest officials coming to the palace, had to carry Spade-coins before they could get through. But though the circulation of Spade-money was encouraged by force, prices could not be kept from rising. The histories say that even the normal price of grain was high. Government expenditures increased without limit, and as a consequence so-called bandits arose.

In 14 A.D. a fourth monetary reform was instituted. The Monetary-spring and Monetary-spade were minted. The Monetary-spring weighed five grains, and was valued at one unit. The Monetary-spade weighed 25 grains, and was valued at 25 units. This reform seems to have enjoyed some success, because the Monetary-spring weighed the same as the Five-grainer, and was virtually a restoration of the Five-grainer. The Monetary-spade involved only a relatively minor degree of depreciation. Hence the goal of this reform was to stabilize the coinage, and recover the people's loyalties.

In fact, this is considered the most successful of Wang Mang's coinages. These coins circulated for the longest time, and more of them have survived than the others. But because people's loyalties had been lost in other respects, and because a few years later there was another Xiongnu invasion, and because of a rebellion of serfs and slaves, the country fell into disorder.

"From the aristocrats down to the petty clerks, no one received their salaries. . . . The rich could not preserve their wealth. The poor had no way to preserve their existence."[11] The price of rice ranged from 2,000 per picul[12] to 10,000.[13] There were even times when gold was used as a medium of exchange, with one catty of gold buying one *hu* of millet,[14] or one *dou*,[15] or two *sheng*.[16] Even if we discount these according to the official exchange rate, a picul of millet was worth from 10,000 to several hundred thousand cash.

That, however, was not a matter caused by depreciation of the money, but rather by a dearth of goods, because by then the people

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must no longer have been using the large denomination coins of Wang Mang,–but rather had gone back to the old Five-grainers and Wang Mang's Monetary-spring coins. The latter may well have suffered from lightening, but compared to the large denomination coins, they did not endure a severe depreciation.

In 24 A.D. Liu Xuan issued a Five-grainer. The victorious restorer of Han, Liu Xiu, did not, however, use a Five-grainer, but rather the Monetary-spring.

After Wang Mang's death, circulation of money was probably very chaotic, with a number of places using Spade-springs, gold and grain intermixed. Sichuan's Gongsun Shu abolished copper cash in favor of iron coins, which was a depreciation of the coinage. It was probably popular dissatisfaction with this coin that evoked the nursery rhyme that reads "Yellow ox's belly's white; Restored Five-grainer'd make things right." This originally was a political satire produced then by Gongsun Shu's opponents.

4. *The Value of Eastern Han's Money*

For no period in Chinese history since Han are materials on the purchasing power of money as scarce as they are for Eastern Han. Nevertheless, we can make the general statement that except for one

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[10] *Ibid.* Some say that the Spade-money referred to here were Spade-spring round coins, and not the key-shaped Spade-money.

[11] *Han History*, "Treatise on Food and Money," latter part.

[12] *Han History*, "Biography of Wang Mang," latter part: "From Luoyang east, rice was 2,000 per picul." "Treatise on Food and Money": "At the time, rice was 2,000 per picul."

[13] *Eastern Monastery Han Record*, 18, "Chronicle of the Fifth Principle": "At the end of Wang Mang's reign, when bandits arose, a picul of rice went for 10,000 cash, and cannibalism was practiced."

[14] *Latter Han History*, 1, "Annals of Emperor Guangwu": "At first, at the end of Wang Mang's time, the Empire suffered from drought and locusts. One catty of gold exchanged for one *hu* of millet."

[15] *Eastern Monastery Han Record*: "From the end of Wang Mang's time the Empire endured drought and frost, and for successive years the grain crops did not mature. By the beginning of year 1, there were few to plow, and the people were starving. A catty of gold exchanged for a *hu* of millet."

[16] *Sixteen Kingdoms Annals*: "In the various prefectures, from jianwu 1 [25 A.D.] 1st month on, there was no rain or snow. By the 12th month, 8th day, the price of grain had soared. A catty of gold was worth two *sheng* of rice."

occasion under Dong Zhuo at the end of Han, no large scale depreciation was carried out.

The thirty-odd years of the Guangwu reign was a period of stability in money's value. This stability was not on the side of money, but on the side of goods. Because people resisted using Wang Mang's large denomination coins, and turned instead to the small ordinary coins, there were no problems on the money side. It was only because the many years of war had impoverished the people and exhausted their wealth, that even those with coins could not find goods to buy, and so prices became very high. To stabilize the value of money it was necessary to be frugal in consumption, and to set to work increasing production.

Emperor Guangwu's authority had some effect on the side of production.

First, in some places the officials promoted use of progressive methods of production and tools, such as iron plows and use of oxen for plowing.

Second, he lightened some of the burdens on the peasantry. These were necessary preconditions for the peasantry to restore the foundations for production. Though the annual land tax come to over four billion cash,[1] no small amount, it probably represented a much lighter burden than during Wang Mang's time. Because of their heavy burdens under the Wang Mang regime, the peasants then could not preserve themselves without abandoning their fields and launching rebellions.

Third, he set up Garrison Fields colonies, used pardoned criminals to settle the frontiers, and sent peasants who had fled back to their native places.

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were all measures designed to increase production. In addition, he practiced strict economy, and took on no new campaigns on the frontiers. This reduced some wasteful expenditures. His measures all helped stabilize the value of money.

We can judge their efficacy during the reign of Emperor Ming. Five years after he ascended the throne (62 A.D.), the price of millet was only 20 cash per picul.[2] This was as low as the level during the times of Emperors Wen and Jing. In yongping 10 and 12 [67 and 69 A.D.], it was only 30 cash.[3] An historian writes that "the masses were rich," and "cattle and sheep covered the uncultivated land."[4] This was the result of successive good harvests, but good harvests are inseparable from the people laboring to produce them.

In 73 A.D. an army was sent off against the Xiongnu. Two years later a Xiongnu attack defeated the Han army on the western frontier. This became a threat to the monetary system.

During Emperor Zhang's reign [76-89 A.D.], prices were unstable. Zhang Lin blamed this on an excess quantity of money, and advocated bottling up the money supply. Clearly, the military deployments near the end of the reign both consumed much real wealth and had required a large increase in the money supply. Though there were no large wars then, Ban Zhao's activities on the western frontier had been supported by Emperor Zhang's government, and so it was hard to avoid increasing expenditures.

After Emperor He assumed the throne (yongyuan 1, 89 A.D.), soldiers were several times dispatched to attack the Northern Xiongnu. The latter suffered a major defeat, and moved west. Thereafter, the Xiongnu were no longer so powerful an opponent as before, but because of successive years of foreign war, expenditures had increased, and fiscal policy must have grown more difficult. This caused a further weakening in the economic foundations for money's stability. According to the official salary schedule of the yanping era [106 A.D.], the price of millet then was 150 cash per picul.

The nation's fiscal situation further deteriorated after Emperor An took the throne. This was mainly because of the war with the Western Qiang. The histories say that "tax collection never ceased; the floods did not ease; the strength of the land was not restored." It was also said that "the labor of the peasantry was expended on transportation; the wellsprings of capital were exhausted by taxation; fields were not opened to cultivation, and the grain was not harvested." Hence in yongchu 2 (108 A.D.), the

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[1]The *Taiping Yulan*, quoting *Huan Dan's New Doctrine*.

[2]*Jin History*, 26, "Treatise on Food and Money": "When Xianzong ascended the throne, the Empire was at peace, and the people were not burdened with labor service. Good harvests succeeded each other. In yongping 5 [62 A.D.] an Ever-normal Granary was built, and a grain market set up in the eastern part of the city. One *hu* of millet was priced at 20 cash. Hay accumulated in great bales. Cattle and sheep spread as far as the eye could see. Taxes in kind were especially light, and official granaries still overflowed, though illicit practices were not employed."

[3]*Eastern Monastery Han Record*, 2: "In yongping 10 [67 A.D.] there was a record harvest. The masses were rich. Millet was 30 per *hu*. Cattle and sheep covered the uncultivated land." *Latter Han History*, "Annals of Emperor Ming": "Yongping . . . 12 . . . This year the Empire was at peace. There was no labor service. There was a record harvest. The masses were rich. Millet was 30 per *hu*. Cattle and sheep covered the uncultivated land."

[4]*Jin History*, 26, "Treatise on Food and Money."

price of rice and other grains leapt up.[5]

Two years later the price of grain shot up to over 10,000 cash per picul. Probabably the treasury was empty, and so the government borrowed several billion cash.[6] This, however, was only the beginning, since the war with the Western Qiang stretched on for fourteen years. War expenses totalled more than 24 billion, almost equal to the total production of coins during 130 years of Western Han. Annually this came to 1.7 billion. Since the population then was 56 million, this was 30 cash per capita. The light and thin Eastern Han Five-grainers probably were minted at this time. What is hard for us to explain is why they did not mint large coins.

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From Emperor Sun's yonghe 5 (140 A.D.) until the time of Emperor Chong (145 A.D.), there was another six or seven years of war which cost over 8 billion.[7] In Emperor Huan's kangyuan 1 (167 A.D.), Duan Gong mentions a military budget of 5.4 billion as required to guarantee the pacification of the Western Qiang within two and a half years.[8] In the end, 4.4 billion were used up in the pacification of the Western Qiang, and this dealt a serious blow to the economic foundations of Eastern Han.

Some people then advocated minting large coins, but because of Liu Tao's opposition this was not done.[9] It may be, however, that iron coins were minted, to be exchanged two for one with copper cash.[10] Though large coins were not minted, they did work out the Reduced-hundred system.

The so-called Reduced-hundred or Reduced-cash involved 100-coin units of cash which were only one hundred cash nominally. Somewhat less was actually paid out. There is a lead seal contract of Emperor Ling's guanghe 7 [184 A.D.] in which Fan Li's family buys land for "a thousand cash lacking fifty." A similar contract of zhongping 5 [188 A.D.] has Fang Tao buy land with the same formula. This phenomenon was evidently connected with a shortage of bronze cash caused by the rise in prices.

In Emperor Ling's guanghe 1 [178 A.D.], a sale of offices was carried out, with a dukedom going for 10 million, and a ministership for 5 million.[11] In 181 there was a requisition of horses, at 2 million cash per horse.[12] During the zhongping era (184-189), there were successive years of famine, and the price of a *hu* of grain was 6-700 cash.[13] This led to a number of localized peasant uprisings, most notably that of the Yellow Turbans, in which 300-400,000 people arose simultaneously. This pushed the domestic situation into chaos. Given this situation, the Four-corner Five-grainer issued by Emperor Ling may not have been intended to be a single unit value coin.

Eastern Han prices were definitely much higher than those of Western Han. We can infer this from the constricted sphere of circulation of Eastern Han money and the increased quantity of coins in circulation. I have already ascribed the narrowing sphere of the circulation of coins to the partial monetization of cloth. We can infer the increased quantity of coins in circulation then from the number of Eastern Han Five-grainers still in existence, and also from the fiscal expenditure figures cited above. Most of the more than 28 billion Five-grainers minted during Western Han must have still been in circulation during Eastern Han, to which must be added the Five-grainers minted during Eastern Han. These must also have been very numerous.

The sixty-odd-year struggle against the Western Qiang from the reign of Emperor An [107-126 A.D.] on must have involved great material loss. Though tax receipts could also have increased, since the late Han head tax was so severe as to prevent the people from raising children,[14] and so a number of

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[5] *Latter Han History*, "Biography of Ma Rong."

[6] *Op. cit.*, 41, "Biography of Pang Can": "Year 4 [110 A.D.], the Western Qiang raids became numerous. Military expenses daily widened, and there were successive bad harvests. Grain was more than 10,000 per picul. Can's memorial, recorded by Deng Zhi, said: In recent years the Qiang raids have been particularly severe. In Longyou, the land tax and labor service are growing more onerous because of the damage. The officials have burdened the people to the amount of several billions and more. . . Transported provisions are dispersed into a wilderness. Cattle and horses perish in the mountains and marshes. The district officials do not have enough, and they borrow from the people, who are already impoverished. From whom shall they seek aid?"

[7] *Latter Han History*, 55, "Biography of Duan Gong."

[8] *Latter Han History*, 55, "Biography of Duan Gong."

[9] *Universal Statutes* and *Universal Record* both link this matter to the name of Emperor He. My statement here is based on the *Latter Han History*, "Biography of Liu Tao," and the *Investigation of Literary Remains*, "Investigation of Coins, 1." During the reign of Emperor Ling, Liu Tao was still serving as Governor of the Capital.

[10] Cf. subsection 2.1.1, note 37.

[11] *Investigation of Literary Remains*, "Investigation of State Requirements, 1."

[12] *Latter Han History*, 8, "Annals of Emperor Ling," guanghe 4, Spring, 1st month.

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[13] *Palace Gentleman Cai's Collected Works*, 7, "Petition on Long-standing Deficiencies By the Inspectors of Youzhou and Jizhou": "Recently, there have been successive years of scarcity, and the price of grain has reached 6-700 per *hu*."

people would have taken up private coining. It is hard to imagine how price increases could not have occurred.

The one severe reduction in the weight of the coins occurred during the reign of Emperor Xian. In 190 A.D. Yuan Shu and Cao Cao rebelled, and Dong Zhuo carried Emperor Xian into Chang'an, where he melted down Five-grainers and reminted them into the Small-

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cash. The histories do not record the weight or quantity of the Small-cash, nor has numismatics been able to identify which coins are Dong Zhuo's Small-cash.

If we assume a reduction to one-fifth the former weight, this would have permitted a several-fold increase in the quantity of money just on the basis of reminting Five-grainers. We cannot tell the specific quantity. By the end of Western Han a total of 28 billion Five-grainers had been minted, not including privately minted coins. An additional number had been minted during Eastern Han. If, at the time of Dong Zhuo, the total quantity of coins in circulation was 30 billion, and of these one-fiftieth were melted down by Dong Zhuo, 3 billion Small-cash could have been minted.

In addition, the bronze statues of Luoyang, bells, roof-brackets and bronze horses were all used to mint these coins.[15]

Of these, the twelve metal human figures of the First Emperor of Qin could have made 500 million to one billion coins, since each of them was said to hold a thousand piculs and to weigh 240,000 catties.[16] Some say Dong Zhuo only used ten of these statues to make coins. Others say it was nine.[17] Even if we assume nine of these statues were used to mint coins, they would have yielded 3-400 million to 7-800 million cash. If we add in the other bronze utensils, there could have been 4-5 billion new coins.

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[14] *Water Classic*, "Notes on the Xiang River," quoting *Biographies of Previious Worthies of the Lingling*, says: ". . . there were many activities during late Han, and there was not enough for the state's needs. When a child reached the age of one year, capitation cash had to begin to be paid on it. Many people did not raise children."

[15] *Latter Han History*, 72, "Biography of Dong Zhuo." The *Three Capital Districts Yellow Diagram*, 1: "The weapons of the Empire had been gathered in Xianyang, and melted down to make bells three yards high. The smallest of them would hold a thousand piculs. Weapons had been melted down to make twelve human figures of bronze, so as to enfeeble the people of the Empire. They were erected at the gates of the palace, and were three *zhang* tall seated. . . Dong Zhuo confiscated all of the bronze statues and bronze platform to make them into Small-cash."

Cheng Dachang of Song times, in his *Harmonious Record*, states: "In addition to the metal statues of men, there was a platform three *zhang* tall, which Dong Zhuo also melted down to make coins." In addition, "the *Temple Record* says that Emperor Wu of Han established rules for making a Spirit Illumination Platform. On it was a dew collection bowl, a bronze immortal holding a bronze bowl and a jade goblet to receive the dew emanating from the clouds, and layers of jade covering it to seek out the immortals." According to the *Stories of the Three Capital Districts*, the bowl was twenty *zhang* high.

The *Record of Gao An* says: "The immortal held seven rings in his palm, made of copper." Also, "In addition to the statue made by Emperor Wu, there was more than one other image. In the Upper Grove Park there was a Flying Eave Monastery and Flying Eave Miraculous Birds. The Dazhang had a Phoenix Tower. On this were roof corner tile ridge metal ornaments. The Dragon Pavilion Gate had a bronze dragon. The Golden Horse Gate had a bronze horse. The Cypress Beam Terrace had a bronze pillar. All of these things were cast from bronze."

The *Yellow Diagram* states that "in Emperor Ming's yongping 5 [62 A.D.], Emperor Ming went to Chang'an and took the Flying Eaves and Bronze Horse and set them up at the West Gate to provide a pleasing prospect. Dong Zhuo melted all of them down to make coins."

[16] According to the *Historical Records*, "Basic Annals of the First Emperor," each of the metal human figures cast by the First Emperor held a thousand piculs. According to the *Three Capital Districts Yellow Diagram* each weighed 240,000 catties.

[17] *Rectification of the Historical Records*, quotes the "Record of Wei," "Biography of Dong Zhuo" as stating that ten of the bronze figures along with the bells were melted down to make the Small-cash.

The *Colophon to the Paintings of Canton and Sichuan* says that Dong Zhuo used nine of the twelve Qin bronze human figures to make coins. Shi Hu believed the three remaining ones were placed in the Ye Palace [in Luoyang], from where they were taken by Fu Jian and put back in Chang'an. Two of them were made into coins, and the third sent to Shan, where rebels threw it into a river.

The account in the *Record of the Natural Sciences Continued* is the same. In addition, the *Water Classic*, "Notes on the Rivers," 4, states: "In the First Emperor's year 26 [221 B.C.] the twelve tall Di were seen in Linyao. Over five *zhang* long, they were believed to be auspicious. Twelve human images were cast. Each weighed 240,000 catties. . . The Han moved them from the Afang Palace to the front of the Weiyang Palace. They were popularly known as the Younger Venerables. . . Later Dong Zhuo destroyed nine of them to make coins, leaving three in existence." *Op. cit.*, 16, "Notes on the Gu River," states: "Jin Zhuo said, the Flying Eaves was frightening. The head was like a sparrow with horns. A snake-like tail was leopard-spotted. Dong Zhuo melted it down for its metal."

Their sphere of circulation was limited to just the Chang'an-Luoyang region. The rest of the country continued to use Five-grainers. Therefore, while the territory controlled by Dong Zhuo was carrying on a reduction in the weight of the coinage, in Youzhou, occupied by Liu Yu, a picul of grain was only 30 cash.[18] Monetary depreciation could also have occurred elsewhere, as for example, by making large coins. Prices would have gone up in such places.

If the money issued could have served the function of being a store of value, then the increased amount issued would not have been so important, because the portion not required for circulation could have been withdrawn from circulation and preserved in hoards. Then prices would not have been so severely affected.

The Small-cash minted by Dong Zhuo were not, however, in accord with the normal standard for coins. Not only were they too light, their rims were not uniform, their inscriptions were unclear, and they may not even have had inscriptions. The people understood that they could not circulate for long, and so who would have been willing to hoard them? Therefore when the government went all-out in minting them and using them to draw in goods and services from the people, the people must in turn have spent them as quickly as possible to buy commodities so as to avoid losing value. This in itself would have caused a jump in prices to some extent, and this derived inflation could well have exceeded the effect of the reduction in weight.

Different accounts vary as to the prices caused by this depreciation. The *Latter Han History* says that a picul of grain was worth several tens of thousands of cash.[19] The *Record of the Three Kingdoms* says a *hu* of grain was worth several hundred thousands.[20] The *Jin History* states that the price of grain jumped to several million per *hu*.[21] Rather than make an investigation to determine which of these is correct, it would be better to acknowledge that they are all correct. They reflect the situations of different times and places. Because of the sharp decline in production, even gold's

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purchasing power had fallen. There was a Luoyang nursery rhyme that went:

> To have a thousand in gold is not as good as my peck of grain.
> A peck of grain can fill one's gut,
> From a thousand in gold what can one gain?

There was another nursery rhyme from the south:

> Great hills like marts, men die like groves;
> Take gold, for grain more dear than gold proves.[22]

Because the situation then was the combined result of monetary depreciation and scarcity of goods, it cannot be solely explained in terms of the monetary factor.

The grain prices given in the written sources, whether several tens of thousands or several million per *hu*, are hard to believe when reckoned in copper. If we assume one Small-cash weighed 1 grain, several tens of thousands of them would have amounted to more than a hundred catties. Though this is in Eastern Han catties, the *hu* is also the Han *hu*. If converted into hectoliters and kilograms, and with a *hu* of ordinary grain equated with half a *hu* of rice, then a hectoliter would have been worth 336 kilograms of bronze, a weight of metal greater by many times than the commodity being purchased. If we consider that purchases then were not made by the *hu*, translate these into smaller quantities, and note that the highest prices are merely particular instances, we will see that they were mainly caused by shortages of food.

Chen Shou seems to believe that after the rise in prices evoked by Dong Zhuo's issue of the Small-cash, money no longer circulated.[23] After the death of Dong Zhuo, however, the ladies of Chang'an "sold their pearls and jade jewelry. Those who sold wine and meat were jubilant, and filled the streets and lanes."[24] This happened in chuping 3-4 (192-193). Is this not clear evidence for the use of coins?

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[18] *Latter Han History*, Biographies 63, "Biography of Liu Yu": "In chuping 1 [190 A.D.] . . . each locality was isolated from the others. The seasonal taxes did not arrive. Yu's responsibility was to take charge of deposits. He encouraged the establishment of farming settlements. . . The people were pleased and the harvest abundant. Grain was 30 a picul."

[19] *Latter Han History*, Biographies 72, "Biography of Dong Zhuo": ". . . Thus money was cheap and goods expensive. A picul of grain was several tens of thousands."

[20] *Record of the Three Kingdoms*, "Record of Wei," "Biography of Dong Zhuo": "Thereupon money became light and goods expensive. A *hu* of grain reached several hundred thousand. Thenceforth coins no longer circulated."

[21] *Jin History*, "Treatise on Food and Money": "In Emperor Xian's chuping year period [190-193], Dong Zhuo minted the Small-cash. This caused money to be light and goods expensive. A *hu* of grain reached several millions of cash."

[22] For the two nursery rhymes, cf. *Record of Narratives of the Unusual*.

[23] *Record of the Three Kingdoms*, "Record of Wei," "Biography of Dong Zhuo."

[24] *Latter Han History*, 102, "Biography of Dong Zhuo."

The histories also record that when in 194 Li [?][a] and Guo Si fought in Chang'an, within the city the price of grain was 500,000 per *hu*, and beans and wheat were 200,000.[25] This is additional evidence that the Small-cash remained in circulation. In 197, the price of rice inside the capital reached 20,000 per *hu*.[26] Obviously, coins were still being used. Moreover, the Small-cash was likely still in use, because so long as it had not been formally abolished, the people could not employ the Five-grainer at par with it. Otherwise the Five-grainer would have had to become an independent standard for price setting.

Hence, after Cao Cao became Chancellor, he had to abolish the Small-cash so as to restore the Five-grainer.[27] That change occurred during the Summer of 208 (jian'an 13). Some historians say that the Five-grainer was only restored by Cao Bei. In any event, its restoration was being advocated during Cao Cao's time. Xun Yue was one of those advocating its restoration.

There seem to have been a variety of contradictory positions on money then. One group opposed restoring the Five-grainer. Some of these people were Objectivists. Others opposed doing so because there were not many Five-grainers available in Chang'an, so there would be practical difficulties in that coin's restoration. Yet others called for collecting the Five-grainers being hoarded among the people and transporting them to the Capital Region before restoring the coin. Still another groups called for turning out a Four-grainer.

Xun Yue opposed all of these schemes.[28]

By that time, most of the Five-grainers of the Chang'an-Luoyang region had been melted down by Dong Zhuo. Unless his

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Small-cash could be reminted, there would be genuine difficulties in restoring the Five-grainer. This was the reason offered for opposition to doing so. Opponents argued that such a restoration would certainly enable people from the outer areas to use coins to buy up the Capital Region's commodities. Xun Yue supposed that the government could make up for shortages of the Five-grainer through supplementary minting.

Actually, at that time Cao Cao not only held Henan, he had taken from Yuan Shao the four Hebei prefectures of Yizhou, Bingzhou, Youzhou and Qingzhou. All that was needed was to proclaim the coin's restoration for Five-grainers to spontaneously flow from other places into the the Capital Districts. Reminting the Small-cash would also have helped. Xun Yue's position was reasonable in that context. In principle, Cao Cao could have adopted his recommendation. There is, however, no way to know if more Five-grainers were minted.

However, even after Cao Cao restored the Five-grainer, their quantity wouuld not have been large because it had been so long since they were last minted. Hence the price of grain fell steadily.[29] The problem of Dong Zhuo's Small-cash had now been resolved. Sima Zhi said that during the jian'an era [196-220], the granaries of the Empire were full, and the masses amply supplied.[30] This provided a stable foundation for the monetary system of Cao Cao's Wei state.

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5. *Summary: Han Prices*

Most of the grain prices given in Han written sources are of special or unusual prices rather than normal prices. There are only three reliable sources for everyday Han prices. The first is the *Nine Chapter Calculating Techniques*. The second are the Juyan Han bamboo slips. The third are the figures for discounting official salaries in grain into cash.

The *Nine Chapter Calculating Techniques* was likely edited by Zhang Cang,[1] but additional material could have been added later. Generally speaking, the prices it mentions pertain to the time from Qin through beginning of the Han, but are not those of the period of the depreciation of the currency dur-

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[25] *Investigation of Literary Remains*, "Investigation of State Requirements, 1." *Latter Han History*, 9, "Basic Annals of Emperor Xian": "In yuping 1 [194 A.D.] . . .At this time grain was 500,000 per *hu*."

[26] *Taiping Yulan*, 35, quoting Wang Can's *Records of Bravery*.

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[27] *Jin History*, "Treatise on Food and Money," and *Universal Statutes*, "Food and Money, 8."

[28] *Explanations and Observations*, 2.

[29] *Universal Statutes*, "Food and Money, 8."

[30] *Record of the Three Kingdoms*, "Record of Wei, 12," "Biography of Sima Zhi."

[1] The abstract in the *Collected Works* volume, based on the use of the name Shanglin [Upper Grove] in Chang'an, dates the work to after the middle of Western Han. Actually, the name Shanglin was already in use by Qin times, and the ranks mentioned in the work are those of the Qin system.

ing that time. Rather they are the normal prices of Qin and early Han. That is, these prices are in terms of the Qin Half-ouncer or at least of the Eight-grain Half-ouncer. That is why they are relatively low. This is particularly the case for food prices. A *hu* of millet ranges from 10 to 20 cash. A *hu* of hemp runs to 70 cash. Wheat is 40 cash per *hu*. Legumes (large beans) are 30 cash per *hu*. Pulse (small beans) are 50 cash per *hu*. Gluttinous millet is 60 cash per *hu*.

I suspect these are mostly prices of pre-unification Qin, because the grain price cited is even lower than the one mentioned by Li Kui, and is as low as the price of from 10 to 20 cash per picul mentioned in the *Guan Zi*. Li Kui's millet price was probably in terms of small spades, while this price was expressed in terms of Qin Half-ouncers, which are heavier than small spades. Even the larger Eight-grain Half-ouncers weigh over 8 grams, and contain more copper than the small spades, so prices expressed in terms of the Qin Half-ouncer or Eight-grain Half-ouncer should be lower.

There are two prices given for gold in the *Nine Chapter Calculating Techniques*. One is 6,250 cash per catty. The other is 9,800 cash per catty. The former was probably the Qin price, or was calculated in terms of the Eight-grain Half-ouncer. If we take this price as our base, then the price of a hectoliter of wheat[2] was 3.6 grams of gold.[3] If the gold:silver price ratio was 1:5, then the price would be 18 grams of silver. The price of wheat in Rome at that time was 50 grams of silver, or 4.2 grams of gold per hectoliter.[4] Hence, calculated in gold, the Chinese and Roman wheat prices were fairly close. In silver, the Chinese price was much lower than Rome's. At that

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time China made more use of gold than silver, while Rome mainly used silver.

Livestock prices in the *Nine Chapter Calculating Techniques* are also relatively low. A horse cost 4,400-4,500 cash; an oxen from 1,200 to 3,700-3,800; a sheep from 150 to 500; a pig 300; a dog 100-120, and a chicken from 23 to 70 cash. The price ranges of several fold for oxen, sheep and fowl might reflect differences in size and also price differences at successive times.

The price of fine silk during Western Han was around 400 cash per bolt.[5] Light silk was double this, or 800 per bolt. The *Nine Chapter Calculating Techniques* prices for the two types of silk are very close to this. Prices of over 118 cash and 128 cash are given for one yard of fine silk. One bolt contained four yards, and would have cost 500 cash. A bold of plain silk was 625 cash. A bolt of hempen cloth ran from 125 to 245 cash. A catty of silk thread ran from 60-70 to 200-300 cash. These prices seem to belong to a somewhat later time than the abovementioned food prices, were probably reckoned in Four-grain Half-ouncer or Five-grainer coins, and were contemporaneous with the 10,000 cash per catty gold price.

The period encompassed by the Juyan Han bamboo slips runs from the time of Emperor Wu to the beginning of Eastern Han. Most important is the material from the times of Emperors Zhao and Xuan. The monetary unit was generally the same, but prices varied over time. Millet ranged from 85 to 195 cash per picul. Unhusked grain was 35 cash per picul. Barley was 110, wheat 90, gluttinous millet 150. These represent a clear rise in prices over those in the *Nine Chapter Calculating Techniques*.

This was not necessarily a decline in money's purchasing power, but could instead have been a result of regional differences. Juyan [in Gansu] was far from the Central Plain of the north, and the price of food there was probably higher. Gold must have been 10,000 cash per catty, so that wheat would have been 8 grams of gold or 40 grams of silver per hectoliter. The price of wheat in Rome had not changed, but the monetary unit had been reduced in weight. Hence, reckoned in gold, the price of wheat in China was higher than in Rome. In silver, it was close to the Roman price.

Livestock prices were lower. A horse cost from 4,000 to 5,500; an ox from 2,500 to 3,000; a sheep from 900 to 1,000. Aside from the sheep price, which was higher, the prices of horses and oxen

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[2]During Western Han one picul was equal to 0.3425 hectoliters. Cf. Wu Chengluo, *History of Chinese Weights and Measures*.

[3]During Western Han one ounce was equal to 19.2 grams.

[4]Theodor Mommsen, in his *The History of Rome* (trans. William P. Dickson), Volume III, chapter 7, states that at around the turn of the Christian era, the normal price of wheat in Rome was "one *denarius* for one Roman *modius*." One hectoliter equals eleven *modii*, and one *denarius* (taking it as one-sixth of a Roman ounce) equals 4.55 grams of silver or 0.382 grams of gold. (In 157 B.C., according to Mommsen, the gold:silver price ratio was 1:11.91.)

[5]The *Taiping Yulan* section on feathers and textiles quotes Fan Zi and Ji Ran: "For white plain cloth in the Three Capital Districts one pays out 800 per bolt." Three Capital Districts is a Han period term. *Debates on Salt and Iron*, "Disperse What is Not," states: "Fine and light white silk's price is double that of fine silk." Thus, the price of fine silk during Western Han must have been 400 cash per bolt. Cf. *Posthumous Work of Mr. Jingan, Prince of Huaining*, 26, "Explanations of Money," latter part.

were almost completely identical to those in the *Nine Chapter Calculating Techniques*. This too involved regional factors.

The prices of material for clothing were probably close to the normal level for Han. A bolt of white plain cloth cost from 800 to 1,000. A bolt of silk was 325 to 800. A bolt of eight-shuttle hemp ran from 220 to 290. These were

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very close to those in the *Nine Chapter Calculating Techniques*. Evidently the price of heavy silk had been stabilized because it was being exported.

As for agricultural land, the *Nine Chapter Calculating Techniques* gives a price of around 70 cash per *mu* for poor land, and 300 cash per *mu* for good land.[6] During Emperor Wu's time, a *mu* went for 1,500 cash.[7] On the Juyan bamboo slips a *mu* cost 100. These three prices show a tendency for land prices to have risen, but in the isolated northwest, land prices remained low.

Basically, we must discover food prices for Han on the basis of discounts into cash of official salaries in grain. Han official salaries were defined in terms of amounts of grain for each rank. During Western Han, a portion or the whole sum was paid out in cash. During Eastern Han the rule was for half to be given in cash and half in unhusked grain, or half in cash and half in millet. If we know the quantity of grain received, and the number of coins that was discounted into, then we would know the price of food then. Unfortunately, we do not have such material, particularly for Western Han. We do not even know the offical salary rates.

The notes on salaries in the *Former Han History*, "Table of Ordinary and High Official Ranks" by Yan Shigu [8] are probably based on the salary system which was revised in Eastern Han's jianwu 26 (50 A.D.).[9] The Western Han salary system underwent several revisions, but for the most part the ranks above 1,000-piculs must have been higher than under the jianwu system, and those from 600-piculs on down must have been lower than under the jianwu system.[10] Perhaps, based on this principle, we can infer the Western Han salary scale, or at least the one in use around the time of Emperor Yuan.

The "Biographies of Consort Families" in the *Former Han History* gives the ranks of the palace ladies of that time, and compares them with contemporary official ranks. If we compare these with those enumerated by Yan Shigu, most of them are comparable to Imperial Chancellors, Supreme Ministers and 800-picul ranks.

There is also some material on official salaries on the Han bamboo slips, mainly on the salaries of

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[6] *Nine Chapter Calculating Techniques*, 7: "Now we have a *mu* of good crop land, at a price of 300, and 7 *mu* of bad land at a price of 500."

[7] *Han History*, "Biography of Li Guang," has 3 *qing* selling for more than 400,000.

[8] *Han History*, 19, notes by Yan Shigu to the "Table of Ordinary and High Official Ranks": "The Han system was for the Three Ducal Offices to be called 10,000-picul officials. Each month one of them would receive 350 *hu* of grain. Those called Middle-2,000-picul officials would get 180 *hu* per month. 2,000-picul officials would get 120 *hu*. Those with brevit 2,000-picul rank got 100 *hu*; 1,000-picul officials got 90 *hu*; brevit 1,000-picul officials got 80 *hu*; 600-picul officials got 70 *hu*; brevit 600-picul officials got 60 *hu*; 400-picul officials got 50 *hu*; brevit 400-picul officials got 45 *hu*; 300-picul officials got 40 *hu*; brevit 300-picul officials got 37 *hu*; 200-picul officials got 30 *hu*; brevit 200-picul officials got 27 *hu*; 100-picul officials got 16 *hu*."

[9] *Latter Han History*, 1, "Annals of Emperor Guangwu": "Jianwu 26, 1st month. An edict ordered official salary increases." Liu Zhao's note quoting the *Han Record Continued* agrees with the figures quoted by Yan Shigu, except that a 1,000-picul official gets 80 *hu*, and a brevit 600-picul rank gets 55 *hu*, and he adds an Eater of Quarts rank which gets 11 *hu*, and an Accessory Clerk who received 8 *hu*.

Wang Mingsheng's *Commercial Taxes in the Seventeen Histories*, 34, "Official Salaries": ". . .as for examples of official salaries in the Western Capital, they are not to be found in earlier works, but Yan Shigu's notes, placed below the ''Table of Ordinary and High Officials,' summarizes the system in detail. Now, Li Xian's extracts from the *Record of Literary Remains Continued* supplements it. Yan states that the brevit 600-picul rank got 60 *hu*. Li Xian makes it 55 *hu*. This is a small discrepancy, and all the other figures are generally the same. Yan Shigu's narrative pertains to Former Han. Li Xian is citing the Latter Han system. There is no reason why the two should have been identical.

"Moreover, the 'Annals of Emperor Guangwu,' after mentioning the increase in official salaries, goes on to say that from the 1,000-picul rank on up, salaries were to be lowered to the old Western Capital standard, and those from 600-piculs on down were to be increased to the former rate. If we now correct Yan's notes, then those above the 1,000-picul level were not increased at all during the jianwu era, and of those from the 600-picul level on down, only the brevit 600-picul level differed. As Yan states, during jian-

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wu they were brought down by 5 *hu* to the Western Capital level. How then can one say they were increased? This must have been caused by Yan Shigu omitting to mention that they were increased during jianwu, and simply taking the data from the *Han Record Continued* for his notes to the 'Table of Officials,' which would have substituted the Latter Han for the Former Han system. . ."

[10] *Latter Han History*, "Annals of Emperor Guangwu." Cf.

low ranking officials, but these are not altogether self-consistent, probably because they belong to different periods, and because money received for salary was adjusted to match the prices of foodstuffs. One bamboo slip states that in Emperor Zhao's yuanfeng 3 (78 B.C.), a 100-picul rank salary was commuted to 720 cash per month. During Eastern Han, a 100-picul rank received 16 *hu* per month. If we assume 14 *hu* for Western Han, then a *hu* of grain was 51 cash, and a hectoliter of rice was 248 cash. This would have been the price during Emperor Zhao's reign [86-73 B.C.].

In addition, an Eater of Quarts would get 9,000 cash per month, and several Chief Clerks had 600, 670, and 903, so that a Chief Clerk must have held the rank of Eater of Quarts.[11] According to the Eastern Han jianwu system, an Eater of Quarts received 11 *hu* per month. If we calculate in terms of 10 *hu* for Western Han, then a *hu* of grain ran from 60 to 90 cash, and a hectoliter of rice from 342 to 422 cash. There is also mentioned a 200-picul ranked Barrier Commandant, who received 2,000 cash per ponth. During Eastern Han a 200-picul

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ranked official received 30 *hu* per month. If we calculate on the basis of 27 *hu* for Western Han, then a *hu* was worth 74 cash, and a hectoliter of rice was worth 259 cash. This too may be taken as the price of rice during Emperor Zhao's reign. The price of rice then was probably 200-300 cash per hectoliter. The price was 300-400 cash during Emperor Xuan's time [73-48 B.C.].

During Emperor Yuan's reign [48-32 B.C.], Gong Yu served as a Grandee Remonstrant, an 800-picul rank. The cash salary he actually received each month was 9,200. If this was commuted from 85 *hu* of grain, then a *hu* of grain was worth 108 cash. Later on he rose to the 2,000-picul rank of Imperial Court Grandee, and received 12,000 cash per month. The 2,000-picul rank during Western Han must have been about on a par with the brevet version of that rank during Eastern Han, but the salary level must have been higher than the Eastern Han brevit 2,000-picul level. If we assume a monthly income of 120 *hu* of grain, then a *hu* was worth 100 cash. That would be the price of grain during Emperor Yuan's time.

This grain was not, one suspects, rice, but rather millet, which was the staple food of Han times. If we calculate on the basis that one *hu* of millet had a value equivalent to 6 *dou* of rice, then a hectoliter of rice was worth 487 cash. In addition, Ru Chun states that a Chancellor, Grand Minister of War and Grand General received 60,000 cash per month, and that a Grandee Secretary got 40,000.[12] The Chancellor must have held 10,000-picul rank. During Eastern Han this brought 350 *hu*. This would have been somewhat higher during Western Han, probably from 400 to 500 *hu*. Each *hu* would have been worth 120 to 150. The Grandee Secretary was a Deputy Chancellor or Supreme Minister, and probably received 300 to 350 *hu* per month, with each *hu* being worth from 114 to 133 cash. These may be taken as grain prices during the reigns of Emperors Cheng and Ai. Commuted to rice, a hectoliter was equal to 600-700 cash.

The price of food during Eastern Han may also be inferred from the official salary schedule of the yanping year period [106-107 A.D.]. The yanping system involved payment half in cash and half in cereal.[13] This cereal was probably millet, and a *hu* of it was equivalent to five or six *dou* of unhusked rice.[14] The salary figure gives us the quantity of cash, and so it is very easy to calculate the price of rice. This price averages 150 cash per picul.[15]

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previous note.

[11]Wang Guowei states that a Chief Clerk held the rank of an Eater of Quarts. *Observation Hall Collected Grove*, 14, "Afterword on the Bamboo Slips of Liushaling."

[12]*Han History*, 10, "Annals of Emperor Cheng," note quoting Ru Chun: "By law, a Chancellor, Grand Minister of War and a Grand General each received 60,000 cash per month, and a Grandee Secretary got 40,000."

According to the *Western Han Abstract of Laws*, the Three Ducal Offices and the Grandee Secretary were all of the 10,000-picul rank. According to the jianwu salary schedule, this rank received 350 *hu* of grain per month. During Western Han the Three Ducal Lords and Grandee Secretary could not have been treated the same, but because data are lacking, we will calculate on the basis of 350 *hu* for each of these official titles. This would make a *hu* worth from 114 to 171 cash, with an average of 143 cash.

[13]The *Précis of Collectanea of Books*, 45, quotes Cui Shi's *On Government*.

[14]According to the *Nine Chapter Calculating Techniques*, 2, the exchange rate of millet was one *hu* to six *dou* of coarse rice, or one *hu* two *dou* of unhusked rice. The latter figure was probably equivalent to six *dou* of husked rice.

[15]The Eastern Han yanping official salary schedule was half in cash and half in grain. Cf. Liu Zhao, *Han Record Continued*, 28, quoting Xun Chuojin's notes to the "Table of Officials." The salary fegures and discounted values are as follows:

Middle	2,000-picul	grain	72.0 hu	cash	9,000	125 cash per hu
True	2,000-picul	"	36.0 "	"	6,500	181"
Brevit	2,000-picul	"	34.0 "	"	5,000	147"
	1,000-picul	"	30.0 "	"	4,000	133"

Because, however, the Eastern Han picul was smaller than the Western Han one, to make a comparison between the two periods a discount must be made. During Eastern Han a picul of grain was 150 cash, or 760 cash per hectoliter. This was about the same as in the last years of Western Han.

On the basis of the above prices, we can compare official incomes during Eastern and Western Han, except that under the Eastern Han yanping schedule there was no 10,000-picul rank, and so we can only compare incomes from the middle 2,000-picul rank on down.

This comparison shows that of the three periods, the level was highest during Western Han. The Eastern Han jianwu schedule was the lowest, and the yanping schedule was somewhat higher. Both Western and Eastern Han had the 10,000-picul rank. An official of that rank during Western Han could get up to 90 hectoliters of grain per month. An official of the same rank during Eastern Han's jianwu year period could only get 40 hectoliters per month, and

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during Western Han there were routine rewards and gifts, so that total official incomes exceeded the formal salary rate. Otherwise, the Eaters of Quarts and 100-picul minor officials' incomes could not have matched that of a laborer.

Comparison of Han Officials' Monthly Salaries[16]

Real Income (in hectoliters of grain)					
Official Rank	W.Han		E.Han		E.Han yanping
600-picul	"	21.0	"	"	3,500 167"
400-picul	"	15.0	"	"	2,500 167"
300-picul	"	12.0	"	"	2,000 167"
200-picul	"	9.0	"	"	1,000 111"
100-picul	"	4.8	"	"	800 167"
					Average 150 cash per hu

[16]During the reign of Emperor Yuan, a middle 2,000-picul rank got 200 *hu* per month; the 1,000-picul got 100 *hu*; 600-picul got 70 *hu*; 400-picul got 45 *hu*; 300-picul got 36 *hu*, 200-picul got 27 *hu*; 100-picul got 14 *hu*; and Eater of Quarts got 10 *hu*. One picul of grain made 5 *dou* of rice. The jianwu schedule of Eastern Han is the same, but under the yanping schedule grain was commuted to cash at the rate of 150 cash per *hu* and then added to the salary in kind. During Eastern Han a picul was 0.1981 hectoliters.

	EmpYuan	E.Jianwu	system
Middle			
2,000-picul	41.10	21.39	26.15
1,000-picul	20.55	10.70	11.23
600-picul	14.38	8.32	8.78
400-picul	9.25	5.94	6.27
300-picul	7.40	4.76	5.02
200-picul	5.55	3.56	3.10
100-picul	2.88	1.90	2.01
Eater of Quarts	2.05	1.31	

Material is also scarce on the incomes of laborers during Han. According to Chao Cuo, during the reigns of Emperors Wen and Jing, a peasant household with five members had an annual income of 100 piculs of millet.[17] This was the return on the labor of two persons, and from it must be deducted various taxes. If the field tax was one-thirtieth, and the reckoned contribution and head taxes for the entire family was assessed on three adults and two children, the total tax would be 400 cash. If we assume a millet price of 50 cash per picul, then the household's annual net income would only be 88 piculs 6 *dou* 8 *sheng* of millet. This was equal to 30 hectoliters. Apportioned among two persons, each would only get 15 hectoliters, or a little over 1.2 hectoliters per month. This was for those cultivating their own land. If cultivating another's land, half or more would go to the landlord, and monthly per capita return would be less than 0.5 hectoliters of millet.

Non-agricultural laborers' income varied by occupation. The *Nine Chapter Calculating Techniques* mentions two wages: One was a wage of from one to ten cash for hiring someone by the day, with the average being 5 cash per day,[18] or 150 cash

[17]*Han History*, 24, "Treatise on Food and Money": "Chao Cuo again spoke to the Ruler, saying . . . 'Now a peasant with a household of five has no fewer than two people subject to the labor service tax. He can plow no more than 100 *mu*, which can yield no more than 100 piculs. He plows in the Spring; he weeds in the Summer; he harvests in the Autumn; he stores up food, cuts firewood, serves in the government's office and gives labor service in the Winter. . .'" The 100 piculs here probably means 100 piculs of millet. In Li Kui's time, a *mu* produced 1.5 piculs of millet, but because the picul of Warring States times was smaller, the price of millet may be reckoned at sixty percent of that of rice.

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[18]*Nine Chapter Calculating Classic*, 6.

for a month. The other wage was an annual wage of 2,500,[19] which was equal to 208 cash per month. If we convert this into millet at a rate of 15 cash per *hu*, then such a laborer's monthly real income would range from 10 to 14

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hu, or 3.4 to 4.7 hectoliters. If we use the exchange rate given in the book for converting this into rice and wheat, then it would be the equivalent of from 2.0 to 2.8 hectoliters of husked rice or 3.0 to 4.2 hectoliters of wheat. At a wheat price of 40 cash per *hu*, monthly income would be from 1.28 to 1.44 hectoliters of wheat.

In addition, Ru Chun mentions a monthly wage of 2,000 for a substitute soldier's hire.[20] It is also said that the average merchant earned 2,000 cash per month.[21] In Emperor Ping's yuanshi 4 (4 A.D.), the payment in cash in lieu of labor service by an exiled female laborer was 300 per month.[22] The Han bamboo slips also contain a reference to 300 per month hiring cash. Hired frontier matching cash approximated the cost of a soldier's maintenance. If we calculate on the basis of the price of millet during Emperor Yuan's reign, this comes to 20 *hu*, or 6.8 hectoliters, per month. Converted to husked rice, this is 4.04 hectoliters. If we assume a rice:wheat price ratio of 1:1.5, this was equal to 6.12 hectoliters of wheat. There are, however, many assumptions built into this figure. A wage of 300 cash per month could buy 1 hectoliter of rice during Emperor Xuan's reign.

During the reign of Emperor Huan of Eastern Han, a retainer's monthly income was 1,000 cash over and above his meals, which equalled 3 *hu* of millet,[23] worth 500 cash, making his total montly income around 1,500 cash, or 9 *hu* of millet, equal to 1.78 hectoliters.

The incomes of laboring people in the Occident were not as high as they were then in China. During the first and second centuries B.C., the wages of Roman freemen ranged from 0.75 to 1.0 *denarius* per day. One *denarius* could buy one Roman *modius* of wheat. This adds up to 2 to 3.5 hectoliters of wheat per month, which was a good wage then. A soldier's provisions were only 1.2 hectoliters per month. The Egyptian wage, reckoned in money, was only one-fourth to one-third of the Roman laborer's wage.[24]

During Western Han, wealth calculated in money for people outside of the ruling class was considered to be 100,000 cash for a family of middling status.[25] A family with capital of less than this amount would be considered a lower than middling household, and could sometimes receive tax-exempt status.[26] Those with less than 1,000 cash were considered impoverished, and were the objects of charity.[27]

There were no limits on rich families. Possession of one million earned the label rich household. So did ten million. These figures, however, probably refer to monetary wealth, and do not include other forms of property. After Gong Yu was raised to the status of Imperial Court Grandee, he said that previously he was impoverished, his family wealth being less than 10,000 cash. He sold 100 *mu* of farm fields to buy a chariot and horses. One hundred *mu* of agricultural land was worth more than 10,000 cash, and from the tone of his remark, he was not

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[19] *Op. cit.*, 3: "Now we take on a guard for a year at a price of 2,500 cash. . ."

[20] *Han History*, 7, "Annals of Emperor Zhao": "Three years before, he had evaded the frontier service exemption tax. . ." The note states: "Ru Chun says there were three classes of frontier service: service as a soldier, appointed service and substitute service. In ancient times, being a soldier was not a normal occupation and all had to serve in rotation. There was a one month tour. This was service as a soldier. Poor people wanted to be hired to perform this service, and the well-off would hire them for that purpose at a rate of 2,000 per month. This was appointed service."

[21] *Op. cit.*, note to "Treatise on Ditches and Channels."

[22] *Universal Statutes*, 4, "Food and Money": "Yuanshi 4. An edict on females of the Empire who had been transported allowed them to return to their homes for payment in cash of 300 per month." The note states: "Females who had been transported refers to those whose guilt had been determined. They were to be allowed to return home and not personally perform labor service, but they were ordered to pay out 300 cash each month to hire substitutes."

[23] Cui Shi, *On Government*: "A senior clerk supervising a hundred hamlets . . . had a monthly salary of 20 *hu* of millet (the *Record* makes it 12 *hu*), and 2,000 cash. Though a senior clerk might wish to honor his agreement, he still had to have one subordinate. Even if he had no authority, he had also to take in a retainer, whose wage was 1,000 per month, plus 500 for forage and good meat, and another 500 for firewood, salt and vegetables. The two men would together consume a *hu*."

[24] *An Economic Survey of Ancient Rome*, Vol. I, p. 188.

[25] *Han History*, 4, "Annals of Emperor Wen": "One-hundred in gold, is the property of a middle level set of ten families." That would make ten in gold the property of one family. One in gold was 10,000 cash.

[26] *Han History*, 11, "Annals of Emperor Ai": "All commoners with capital of less than 100,000 are exempt from this year's land tax."

[27] *Han History*, 9, "Annals of Emperor Yuan": "Chuyuan 1 . . . those with capital of less than 1,000 cash will be lent seeds and food."

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the landlord of just 100 *mu*.

When Ban Gu mentions the flourishing condition of the national treasury at the time of Emperor Yuan, the number of imperial consort families with capital of ten million was still small. That is why coins accumulated in the national treasury. Obviously the term "family capital" refers to money. If we speak of a family's entire property, then Dong Xian's family wealth amounted to 4.3 billion.

6. Monetary Depreciation During the Three Kingdoms Era

The purchasing power of money during the Three Kingdoms Era must have been exceedingly volatile, but as statistics on prices have not survived, we can only draw inferences from the depreciation in the value of money at that time.

Of the Three Kingdoms, the economy of the Cao family's Wei was the most stable, but even it was not without its monetary problems. In jian'an 13 (208 A.D.), when Cao Cao succeeded to the Chancellorship, he inherited a deteriorating situation in the aftermath of Dong Zhuo's revolt. The monetary system had disintegrated, production had had to become constricted, and the people had gone over to the life of a natural economy, using grain and cloth as media of exchange, at least in the region of the two capitals.

The previous year, during the northern expedition against the Wuwan, he had concluded that a natural economy was inconvenient, and that coins were needed. This year he was planning to lead a large army south against Liu Biao and Sun Quan, and money was even more necessary to prepare for that. As a consequence he restored the Five-grainer to use. In the battle of Chibi he employed an army of 830,000.

It was not just Cao Cao under whom monetary depreciation did not occur, we do not hear of any monetary arrangements by Sun Quan or Liu Bei. Probably during that great battle, both sides were limited to the expenditure of goods actually at hand, and the war was not very
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prolonged.

Later, the minting of the Value-hundred Five-grainer by Liu Bei does not seem to have had any influence on the economy subject to the control of Cao Cao, but in Emperor Wen's huangchu 2 (221 A.D.), the first year of Liu Bei's reign, the Shu-Han coinage was reduced in weight. In the 10th month of that year Cao Bei again halted use of the Five-grainer. The histories state that this was because the price of grain had become dear. And yet, though there are many instances in history of grain becoming dear, this was rarely the occasion for abolishing the use of money. The situation must not have been that simple.

Viewed from Wei's domestic perspective, the quantity of money must not have been great, aside from some privately minted small coins, so the high price of grain must have been due to natural disasters. From an external perspective, Shu-Han was then not only using a coin with a face value of 100, this coin had also probably been reduced in weight. If communications had been convenient between Wei and Shu, according to the rule for money's flow, the Wei Five-grainers would have flowed toward Shu [where they would be hoarded. EHK], causing the Wei money supply to shrink still faster, and prices to fall. But economic relations between the two states might not have been close then, and each might have had its own independent structure of prices, so that their moneys might not have influenced each other.

The reason for Cao-Wei's halt in the use of money was probably that natural disasters had caused a shortage of food and a rise in its price. And since in addition the quantity of money was insufficient, they returned to a barter economy. Six years passed in this way. During this time Shu-Han's money continued to depreciate.

In Emperor Ming's taihe 1 (227), the Five-grainer was again minted. It is said that the reason for Wei's returning to use of coins was false dealing among the people: Grain was being dampened to increase its weight. Silk cloth was being woven more thinly so as to increase its area. This shows that even when grain and cloth become media of exchange, depreciation can still occur. Some also say that during the long period when it did not use coins, Wei amassed millions of them, and so eventually put them back in use.[1]

But return to minting of the Five-grainer was in accord with the policies of Cao Rui. Of the several generations of Caos, historians consider Cao Rui to have been the most profligate. Even a feudal ruler could not have led such a profligate life under the constraints of a natural economy. He would require the aid of money to do so. Renewed minting of the Five-grainer did not amount to depreciation, so it

[1] *Jin History*, "Treatise on Food and Money."

might not have been influenced by Wu or Shu. Probably it was because Shu-Han was isolated by mountains, as was Wu, that they could make no monetary démarche toward Wei. Later, as Wu's and Shu's coinages continued to depreciate, we see no measures taken to compensate for this by Wei.

In fact, the histories state that from the time Wei Emperor Ming went back to the Five-grainer, that coin continued in use until the coming of the Jin Dynasty. The Wei monetary system was relatively stable because of its economic foundations --the Garrison Fields and grain collection laws. Cao Cao understood that "Qin focused on agriculture to unify the Empire; Emperor Wu used the Garrison Fields to control the western frontier." Therefore he strenuously promoted the Garrison Fields system. After the Yellow Turbans were defeated, millions of *hu* of grain were obtained from the Garrison Fields.

After the Battle of Chibi, Cao Cao retreated back north, and never again lightly took military risks. Cao Bei and Cao Rui were for the most part able to continue this policy. During Cao Fang's time, the

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plan of Deng Ai to dig canals was adopted, and an annual hydraulic profit of 5 million *hu* was envisaged. For that reason the coinage was not disturbed.

Moreover, though use of money had been restored, the natural economy still bulked quite large, with income from the land tax and expenditures for relief both being in grain. When Cao Fang ascended the throne, he had some 150 gold and silver objects from the palace, weighing over 1,800 catties, melted down to meet military expenses.[2] He did not use coins for this purpose. Coins were merely viewed as gifts.

The situations in Shu and Wu differed. At the end of Han, when Sichuan broke away, it probably used Liu Zhang's Five-grainer, and the Large-spring-fifty or Taiping-hundred-cash could still have been in use. Hence Zhuge Liang said: "The people of Yizhou are many and their state rich, and yet they do not know pity."

After the battle of Chibi, when Liu Bei took Jingzhou and later took over Ba and Shu, he found himself in fiscal difficulties. Some say that when Liu Bei was in Jingzhou, millet and gold were the same price.[3] When he was attacking Liu Zhang, he feared he would not even be able to come up with provisions for his army, and so he could only promise his officers and men that when the city fell, the the money in its treasury would be divided up among them. When, in jian'an 19 (214) he fought his way into Chengdu, the officers and men threw down their weapons and took the money. This was no help to Liu Bei's political ambitions.

It was because of this that Liu Ba advised minting a value-hundred coin, which was probably the Value-hundred Five-grainer. The weight of this coin was only three times that of the Shu Five-grainer, while its face value was one hundred times that of the Five-grainer. This signified that Liu Bei was going to exchange the same quantity of bronze for thirty or forty times the previous amount of goods and labor from the people. Hence even curtain hooks were gathered in to be minted into coins.[4] It is no wonder that the histories say "within a few months, the prefectural treasury was overflowing."[5]

Liu Ba's advice might not have been original with him. If in Hanzhong there were already people minting the Taiping-hundred-cash, then all he had to do was exhort Liu Bei to follow their example. When Jianwei was taken the following year, large scale minting of coins began there as well.

By this time Shu-Han had been engaged in war for years. In jian'an 24 [219] it had taken Hanzhong from Cao Cao. Jingzhou was then obtained by Sun Quan. In zhangwu 2 (222), Shu-Han fought Sun's state of Wu in Yiling. Across a battle line of five to six hundred *li*, naval and infantry forces were used to the utmost.[6]

After Liu Bei's death, his successor, Houzhu, proved to be profligate.[7] In jianxing 3 (225) a treaty was made with Wu, and Zhuge Liang crossed the Lu River on a campaign into the south. By 227 he had advanced on Hanzhong. Coming up to the six passes of Qishan, he entered upon several years of battle with Sima Yi.

How could an Yizhou suffering from a dearth of coins undertake all this? Sichuan did not produce copper. Hence the Value-hundred Five-grainer's weight was steadily reduced, from 8 grams to 6

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[2]*Record of the Three Kingdoms*, "Record of Wei," 4, "Biography of Cao Fang."

[3]Zu Chongzhi, *Record of Narratives of the Unusual*.

[4]Dan Wei, *Strange Things From the Northern and Southern History*.

[5]"Biographies of Former Worthies of Lingling." (Note to *Record of the Three Kingdoms*, "Record of Shu.")

[6]*Record of the Three Kingdoms*, "Record of Wu," 13, "Biography of Lu Sun."

[7]*Taiping Yulan*, 173, quoting the "Record of Wu": "Houzhu year 2, 6th month. A new palace was begun in taichu's Winter. Its plan was very

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spacious. . . A drain was also opened north of the wall to bring the waters of the rear lake into the palace. The new palace hall was ingeniously made, and the labor for its erection ran into the tens of thousands."

grams, and finally to less than 3 grams. The supply of coins seems to have depended on Jianwei, since when one carefully examines the Value-hundred Five-grainers, the variants from Jianwei are the most numerous. This explains why later on the coin reverses were no longer minted with

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characters on them. This was because coins minted in Jianwei were no longer limited to circulation within their home area. The Jianwei region was famous for its mines, which probably included copper mines.

Around jianxing 12 or 13 [234 or 235] a monetary reform was carried out, and a 2 gram Value-hundred-cash was minted. Zhuge Liang may still have been alive, and he may not have approved this change, but if it took place before his death, it was at a time when he was worn down from his labors in trying to take the Central Plain in the north. It is more plausible to date this change to the year of his death, jianxing 13. By then Liu Chan had become still more fixed in his profligacy, and was no longer influenced by men like Jiang Wan. In any event, this change must have taken place before jianxing 14, because in that year Wu issued the Large-spring-five-hundred. The larger Value-hundred-cash was less than one-fifth the weight of the larger Large-spring-five-hundred.

In terms of the purely monetary aspects of the struggle, the latter should have appeared first, and the Value-hundred afterward, but more of the large Value-hundreds are extant, and the first to be minted Large-spring-five-hundreds are rarely seen. Evidently the Value-hundred must have been minted for a longer time. Otherwise, given the scarcity of copper in Shu, once it had been noticed that the Wu coin had been reduced in weight, the Shu coin would have immediately been lightened as well, and there would have been fewer of the first-minted Value-hundreds than of the first-minted Large-spring-five-hundred coins. Of course the scarcity of the latter is also the consequence of their being melted down and flowing abroad.

By then the economic foundations of Shu-Han were crumbling. Cao Huan put it well: "Shu was too small a state; its territory narrow, and its people sparse." He also said: "It wasted the strength of its commoners; it stripped them, and taxed their labor until the people could no longer endure their fate." Obviously, production was harmed, and taxes could be increased no further. So there was no choice but to carry out further depreciation.

The 2 gram Value-hundred-cash was probably not maintained long before it too was reduced in weight, even though there were not any important wars during those years. After yanxi 12 (249), Qiang Wei went on the attack several times, and war expenditures must have been very large. The Value-hundred was reduced from 2 grams to 1.4 grams, then to 1 gram, to 0.5 or 0.6 grams, and finally to 0.4 grams. If we begin with the Value-hundred Five-grainer, this was a weight reduction to one-twentieth of the original level. If we begin with the Shu Five-grainer, it was a reduction to one-five-hundredth of the original weight. Probably the Shu-Han monetary system fell into dissolution in parallel with the dynasty's decline in political power.

The unit of value used by Shu-Han requires discussion. Before Liu Bei had conquered Chengdu, or for a certain period of time before he took the place, there is no doubt that the Five-grainer was the unit. Later, when the Value-hundred Five-grainer had been adopted, one Value-hundred was made the equivalent of a hundred cash, but we cannot tell for how long this was maintained.

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As the Value-hundred became lighter and prices shot up, it must have come to be felt that the unit of value was too small to be convenient, and prices came to be expressed in terms of numbers of coins. This change perhaps occurred during the last period of Shu-Han, particularly when the Value-one small coin was being minted. Perhaps this explains why the Value-one was minted in the first place, but that could also have happened after the fall of Shu-Han.

During Liu Zhang's time, Zhuge Liang still called Yizhou the land of the Heavenly Prefecture, whose people were numerous and government rich. Pang Tong said: "Precious goods were not sought abroad." When Liu Bei took Chengdu, its grain and cloth could be expended for two years.[8]

Wei supposedly had a number of civil officials concerned with the people's livelihood, and Shu-Han had a number of generals. Zhuge Liang was described by the phrase, "civil, military, his talents are complete," and so we cannot say he was not concerned with domestic policy, but most of his time and energy were expended on the military aspects.

The real causes for Shu's fall were economic. Of the thirteen prefectures of Han, Wei occupied nearly nine, Wu occupied three, and Shu-Han only one. How could it compete with Wei and Wu relying on the land of only one prefecture? It had no choice but to undergo a monetary depreciation which exploited the people so severely that a point was reached where the people "were labored without rest until they could no longer endure their fate."[9]

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[8] *Record of the Three Kingdoms*, "Record of Shu," 1, "Biography of Liu Zhang."

[9] *Record of the Three Kingdoms*, "Record of Shu," 3,

If the Taiping Hundred-cash and Dingping-one-hundred were Three Kingdoms Era coins, and if the coins' weights exactly reflect their purchasing power, then the purchasing power of these two coins also steadily fell. The Taiping Hundred-cash with stars and curved lines on their reverses each weigh up to around 7 grams. Some are as light as 3 grams. The weight reduction of the blank reverse versions was more severe. The heaviest of them are upwards of 4 grams. They were gradually reduced to less than 3 grams. The smallest is less than 1 gram. They became so cmall that the character for coin --*qian*-- had to be abbreviated to "metal" --*jin*-- so that their inscriptions read Taiping Hundred-metal. This coin was further lightened until each weighed only around 0.4 grams.

A reduction from 17 to 0.4 grams must have pushed up prices seventeen or eighteen fold. Though the Dingping-one-hundred's lightening was not so severe, that was because it was not big to begin with. It only began to be minted after the lightening of the coinage had been under way for some time. Hence the largest of them are only something over 1 gram, and the smallest of them are the same as the small Value-hundreds and Taiping Hundred-metal.

Wu's situation was a little better than Shu-Han's. It was able to mint coins well before the battle of Chibi. In jian'an 7 (202 A.D.), when Cao Cao demanded that Sun Quan send his son to Wei as a hostage, Zhou Yu said that Wu could mine the mountains for copper and boil the seas for salt."[10] The coin minted then could have been a Five-grainer, but it could also have been the Large-spring-fifty,

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each of which weighed around 4 grams. In jian'an 24 [219], when Lü Meng conquered Jingzhou, he got hold of the coins amassed in the Jingzhou treasury. In addition to the Value-hundred Five-grainers, these could have included the Taiping-hundred-cash.

The 100 million cash that Sun Quan gave to Lü Meng would naturally have been from the supply of face-value 100 coins taken from the Jingzhou treasury. That is why the history says, "since the coins were too expensive, their possession was illusory."[11] Later generations of numismatists believed this referred to the Large-spring-five-hundred.[12] That, however, was an anachronism. The Large-spring-five-hundred was not yet being minted then.

A gift of 100 million would not have been unusual during Western Han, when gifts of several billion at a time occurred, but the states' financial power during Three Kingdoms times could not be compared to that of Western Han. After Wu acquired the 100-cash coins of Jingzhou, they had both 50-cash and 100-cash large denomination coins. The contemporary Value-hundred Five-grainer and Taiping-hundred-cash of Shu-Han–were about the same weight, 6 or 7 grams.

After Shu-Han had carried out its monetary reform, Wu minted the Large-spring-five-hundred in jiahe 5 (236). Two years later it also minted the Large-spring-equals-thousand. Though the Large-spring-five-hundred weighed 12 grains, it still represented an enormous devaluation compared to the Large-spring-fifty. All other things being equal, prices would have increased three-fold. The 1,000-cash coin involved a still greater devaluation.

At this point Wu went on the offensive against Wei. In jiahe 1 [232] Sun Quan besieged Hefei with 100,000 men for three or four months. Before long the two large coins continued to be reduced in weight. The Large-spring-five-hundred was lightened to 8 grams, and the Large-spring-equals-thousand to 12 grams.

Wu's territory was broad and prosperous. Its mines produced copper and iron which was profitable to smelt, but because war expenditures were large, it still could not maintain itself. In chiwu 4 (241) the Wu army besieged Fancheng and Xiangzhong, and so there was no avoiding another monetary depreciation. This depreciation also might have been to match Shu-Han's as part of an economic competition in devaluation between the two.

Wu and Shu were then in communication, and if Wu had not carried out such a lightening of its coinage, most of its coins would have flowed into Shu-Han territory. Later, Shu-Han's Value-hundred-cash was lightened to 1 gram and then 0.5 grams. Wu then minted a 12 grain weight Large-spring-two-thousand. Next, the Large-spring-equals-thousand was lightened to 4 grams, The Large-spring-five-hundred had been taken out of production earlier. Finally, a Large-spring-five-thousand was minted. These events probably occurred during chiwu 8 or 9 (245, 246).

Before long, this external monetary war probably ruined the internal economic life of the people of Wu, and so in 246 the government had no choice but to halt minting of large coins. Those already minted were transformed into commodities. Those already issued could be turned in and the government would give what accorded with their value in exchange.[13]

"Biography of Liu Chan," quoting Cao Huan in the *Notes on Shu*.

[10] *Record of the Three Kingdoms*, "Record of Wu," 9, "Biography of Zhou Yu," note quoting the "Biography of Jiang Biao."

[11] *Jin History*, "Treatise on Food and Money."

[12] Dai Xi, *Collected Words on Ancient Money*.

Nevertheless, Wu lasted another 34 years after 246. Were there any coins in circulation during that time? Some districts may have reverted to a barter economy, calculating prices in bolts of silk,[14] but in the country as a whole,

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coins must have remained in circulation. The histories tell us that when Sun Hao built a new palace, it was marvelously elaborate, and the cost of labor for it amounted to billions.[15] This figure must be in coins. In tianji 4 (280), the annual giving of 500,000 in coin was still going on.[16] Evidently money had not been abolished.

Some say that the Large-spring-two-thousand and the Large-spring-five-thousand were minted toward the end of Wu's tenure, but in fact this was probably not the case. These two coins were minted before the order was issued halting coins' use. It was because of the appearance of these two coins in the market that prices made a quantum leap up, causing popular panic. It was only then that the government realized it had no choice but to issue the order halting their use, and calling back in those already issued. Perhaps the recall order of 246 was limited to these two coins alone. The histories state "their value was calculated so that none would be aggrieved."

In exchange for what were they recalled? In terms of what was their value calculated? Surely this could not have been done in terms of commodities. If they were exchanged for money, it must have been in the old coins, including Han Five-grainers, Large-spring-fifties, Value-hundred Five-grainers, and Taiping-hundred-cash.

Because the Large-spring-two-thousand and five-thousand had only just been issued, probably nearly all of them were returned to the government. Those remaining in the hands of the people would have been exported or melted down and reminted, so that posterity would rarely encounter them. Even if the object of the recall were the Large-spring-five-hundred and Large-spring-equals-thousand, surely not all of them were turned in, and so those remaining continued to circulate alongside the old coins. This situation would have continued right up through Eastern Jin.–

At the time of Wu's most severe coin lightening, the extent of the depreciation of Wu coins was not less than that of coins of Shu-Han. It is just that it lasted for a shorter time. The histories say that prices soared.[17] How much they rose, we cannot tell. During the decade or two before the abolition of the use of large coins, prices could not have been very low. Because of Lü Dai's long-range military campaign, women and children were starving,[18] and so one may imagine the standard of living of other people. Hence solely from the perspective of the coinage, the unification of the Three Kingdoms by Wei and then by Jin was not fortuitous.

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[13] *Record of the Three Kingdoms*, "Record of Wu," 2, "Biography of Sun Quan," note quoting "Biography of Jiang Biao."

[14] *Record of the Three Kingdoms*, "record of wu," 3, "biography of sun xiu," note quoting the *Xiangyang Record*.in this work it is mentioned that for each mandarin orange tree there had to be paid one bolt of light silk per annum. In the "Biography of Sun Hao," under fenghuang 1, there is a quotation from the "Biography of Jiang Biao," which states that "a dog was worth up to a thousand bolts; a guard dog with complete equipage was worth 10,000 in coin."

[15] *Record of the Three Kingdoms*, "Record of Wu," 3, "Biography of Sun Hao," note quoting "Biography of Jiang Biao."

[16] *Record of the Three Kingdoms*, "Record of Wu," 3, "Biography of Sun Hao."

[17] Hao Jing's *Latter Han History Continued*, 89, "Treatise on Food and Money," says: "In chiwu 1 [238] a large coin with a face value of 1,000 was minted. No one found it convenient. Prices soared. Criminal behavior abounded which punishments could not halt. Great resentments were engendered. The *Jiankang Veritable Record*, 2, under chiwu 9, 9th month, states: "At this time large coins were used, prices were high, and the masses were inconvenienced."

[18] *Record of the Three Kingdoms*, "Record of Wu," 15, "Biography of Lü Dai."

2.3 Monetary Studies

1. Monetary Theory

After the Qin-Han unification, those who discussed money concentrated on the privilege of coining money. During Warring States times, coins were mostly manufactured locally. Qin and Han were centralized governments under which coinage could have been unified under government control, but in fact such laws could not be implemented, and local government minting was probably tolerated.

In other countries the minting of coins was also transformed from dispersed local manufacture to a royal or government monopoly. In such places, however, mainly gold and silver coins were involved. Royalty had not much interest in bronze coins, and most often allowed local government to produce them. Both Persia and Macedon considered bronze coins to be a secondary money not worth minting by the central government, and delegated most of the responsibility for them to local government. This was not the case for Rome, because like China, Rome had all along used bronze **[199]**
coins, and their minting had always been a national prerogative.

During Han, the debate over the right to mint coins involved a clash between the Confucians and the Legalists. Emperor Wen's policy of non-interference shows that the Confucian policy had the upper hand then. We can discern this by quoting a passage from the *Debates on Salt and Iron*. In this work, the Literati Faction may be taken as representing the Confucian philosophy.

> The Literati said. . . If there were proper laws about coining bad money, the goodness or badness of coins would neither help nor harm government, but if coins are discriminated against, then goods will stagnate, and the employment of men will be especially harmed.
>
> The *Spring and Autumn Annals* says that it will not do to not take the barbarians into account. Hence outside the true king does not restrict the use of the seas and marshes for the sake of the people; and within he does not ban the knife coins, so as to confer benefit upon the people. [Cf. a somewhat different translation in E.M. Gale (tr.), *Discourses on Salt and Iron* (Leiden: Brill, 1931-34), p. 29.]

The meaning of this passage is not entirely clear. Superficially, the Literati are acknowledging the government's prohibition of privately minted coins. They merely do not approve of discriminating against such coins, as they consider that the badness or goodness of coins is of no concern. This is close to a Nominalist position. However, their avowal of a policy of not prohibiting knife coins in fact represents opposition to a government monopoly.

There were a great many people who advanced a Legalist point of view. For example, Jia Yi (200-168 B.C.), Jia Shan, Chao Cuo, and Sang Hongyang. They all opposed tolerance of free coinage.

When Emperor Wen rescinded the edict against illegal coinage, Jia Yi's opposition was most vehement. He said:

> The law allows people of the Empire to hire labor and pay a tax to be allowed to cast copper and tin into coins. Those who dare to adulterate these coins with lead and iron are to be punished by having their faces tatooed. Nevertheless, the circumstances of the minting trade are such that if such debasement is not carried out, there is no advantage, and even a slight debasement yields a generous profit. . .
>
> Furthermore, coins which the people are using vary by province and county. Some use coins so light that a certain number must be added to each hundred, or use coins so heavy that they can not be balanced against the standard coins.
>
> Laws about coins have not been upheld. Should officers hastily improvise such standards? That will greatly vex the people, and they will lack the strength to overcome such obstacles. Should the officials be lenient and not reproach men for such offenses? If that is done, the markets will all use different coins, and monetary units will fall into great confusion. If proper methods are not used, to where can one turn for a solution?
>
> Now agriculture is being abandoned, and those who gather copper are multiplying by the day. They have dropped their plows and hoes; they smelt, make coin-molds and blow upon charcoal. Counterfeit coins increase daily, while the Five Grains do not. (*Han History*, "Treatise on Food and Money.") [Translation adapted from Swann, *Food and Money in Ancient China*, pp. 233-236.]

He advocated making copper a state monopoly, and put forward seven advantages for doing so, the so-called "seven blessings":

> If the throne collects copper, prohibiting its dissemination, then the people will no longer cast coins, and face-tatooing penalties will not accumulate. This is the first.
>
> False coins will not multiply, and the poeple will no longer be suspicious of each other. This is the second.
>
> Those gathering copper to cast coins will return to plowing the fields. This is the third.
>
> If all the copper reverts to the throne, the throne will regulate the accumulation of copper with the aim of controlling the light and the heavy. When coins are light, then techniques should aim at gathering them in; when they are heavy, then techniques should aim at dispersing them. Goods
>
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will then be stabilized. This is the fourth.

Let it be used for weapons, for distinguished ministers, with quantities regulated so that the noble and the base are differentiated. This is the fifth.

By this means the myriad of goods will be allocated so that fullness and emptiness are compensated, unusual excesses are collected to make up for deficiencies, and so officials may be rendered solid, and people in the secondary occupations will be straitened. This is the sixth.

This will restore our abandoned wealth, and allow us to contest for their people with the Xiongnu, so that our enemies are ruined. This is the seventh. (*Han History*, "Treatise on Food and Money.") [Translation adapted from Swann, pp. 238-239.]

This 519-character "Memorial Admonishing Against Letting the People Have Private Coinage" by Jia Yi may be said to have been China's --and perhaps the world's-- earliest monograph on monetary problems. Before this scholars had only displayed an oblique interest in such problems. The Greek, Aristotle, speaks of money only briefly in his *Politics*. The Roman Paulus's statement on money's origins cannot be treated as a monographic essay.

Jia Yi's memorial is, however, merely an essay on government policy, without a strong theoretical component, and so is not comparable even to the fragmentary discussions in the *Guan Zi*. The fourth of Jia's seven blessings: "When coins are light, then techniques should aim at gathering them in; when they are heavy, then techniques should aim at dispersing them," assumes the viewpoint of the quantity theory of money in the form first put forward by the *Guan Zi*.

The Lord Grand Secretary's faction in the *Debates on Salt and Iron* represents the opinions of Sang Hongyang and his followers:

The Lord Grand Secretary said: In the time of Emperor Wen, the people were permitted to cast coins, smelt iron and evaporate salt. But the Prince of Wu [the founder's nephew] monopolized the sea and marshes, and [the courtier] Deng Tong monopolized the Western Mountain, whereupon all the rogues from east of the mountains congregated in Wu and Qin, Yong, Han and Shu came to depend on Deng. The coins of Wu and Deng spread through the Empire.

Hence the laws against coining. With these, dishonesty will cease. When dishonesty has ceased,then the people will no longer hope for wrongful gain, and each will devote himself to his proper task. If this is not a return to fundamental principles, then what is it?

Therefore,if the coinage is unified, the people will not resort to double dealing. If the coinage proceeds from above, then those below will not be in doubt. ("Discordant Currencies,"number 4.) [Translation slightly changed from Gale, pp. 28-29.]

This faction advocated strengthening the nation's power to regulate and monopolize: "If the hills and marshes are not put under control, then ruler and ministers will both aim at profit; if knife coins are not prohibited, then both counterfeit and genuine will circulate." [Translation adapted from Gale, p. 27.]

The so-called free coinage of ancient China differed from what is now called free coinage. In ancient China, free coinage meant free illicit minting. The people not only used their own metal, they employed their own facilities and techniques, and even their own standards of weight and purity of metal.

Unification of the coinage was needed, and theories and measures for fulfilling this need should be considered progressive. Without unification of the coinage, the circulation of commodities and the livelihood of the people would be very hard to improve. Viewed from this perspective, the Literati faction's opposition to the government monopoly over coinage and their approval of popular free coinage were not in accord with that age's

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needs. However, what they were expounding was not a theory of free coinage. Instead, they were blaming the lack of unification of the coinage on the government's rapid changes in policy, which made for variations in the thickness and weight of coins and stimulated speculation by the merchants. They said:

In former times there were many coins, wealth circulated, and the people were happy. But afterwards, as the old coins were gradually replaced, and the Tortoise and Dragon White Metal were circulated, many of the people encountered new coins. As changes in the coinage multiplied, the people became increasingly suspicious.

Then, all the coins of the Empire were abolished, and sole authority to issue them was lodged inthe Three Ducal Offices of the Shuiheng. Officials and commoners competed to make a profit, and coins did not meet the standard. Hence there are variations in thickness and weight.

The peasants are not experienced in making comparisons among such things. They have faith in the old and suspect the new. They do not know the false from the genuine. The merchants barter the bad for the good; for half make an exchange for double the amount. If he buys, the peasant loses value; if he sells, then he loses his good principles. Suspicion spreads widely. [Adapted from Gale, p.29.]

From this debate on the authority to mint coins, one may discern something of the attitude of the ancients toward money as such. In this respect, China's Legalists were very close to the position of

the modern national sovereignty school.

In opposing Emperor Wen's lifting of the prohibition on illicit coining in 175 B.C., Jia Shan said:

> Money is a useless commodity, but it may be exchanged for items of great value. These items of great value are that over which the ruler exercises authority. To allow the people to make coins is to have the ruler share his authority with them. This cannot be done for long. (*Han History*, "Biography of Jia Shan.")

This passage may be divided into two parts. The latter part deals with the impropriety of free coinage. The first sentence, which states that money is of no value in itself, and only has value in exchange, corresponds almost exactly to the words of Adam Smith, founder of the English classical school of later times. The modern Nominalists also make a special point of denying the value of money. [Nb. The Austrian School, however, insists that historically money's value in exchange always originally grows out of some aboriginal money's value as a commodity. EHK]

Chao Cuo's (? -154 B.C.) position was still closer to the national sovereignty theory. In Emperor Wen's year 12, he said to the Emperor:

> Now pearls, jade, gold and silver can neither be eaten when one is famished nor worn when cold. Nevertheless, there are those among the masses for whom they are precious because they are used by the superior. (*Han History*, "Treatise on Food and Money.") [Adapted from Swann, p. 161.]

By superior, he means the monarch. He supposes that people consider money important because the monarch uses it. The meaning of this is the same as the passage in the *Guan Zi* which reads "if you take hold of it, there is nothing there to warm you; if you eat it, there is nothing there to fill you up."

Somewhat before this, when Carthage's Hannibal was attacking Rome, Rome established the *Lex Flaminia*, which treated money as a kind of notation. This practice was based on Nominalism. The national sovereignty theorists who further developed this idea in later times supposed that money was created by the nation through fiat. If the government **[202]**
accepted it at the given price, its face value could be preserved.

Hence the Chinese Legalists' monetary theory was a nominalist monetary theory. Chao Cuo was in part a nominalist, but he also was something of an objectivist. He said that an enlightened ruler would value the five grains and despise gold and jade. His aim was to use an economy of barter to restrain the peasantry from leaving their native places and crossing frontiers. Money, however, was something the ruler could not control. Money would enable the bureaucracy to oppose its masters, and allow the peasants and slaves to go far and fly high. He said:

> They (meaning pearls, jade, gold and silver) are light and small articles, easily hidden. Having them in his grasp, a person can travel everywhere within the peripheral seas without suffering from hunger or cold. This causes ministers to despise their ruler, and the commoners to easily leave their native townships. [Translation adapted from Swann, p.161.]

He was absolutely sure that money's convenience was derived solely from its political origins, and that is why he opposed it. This is a reactionary point of view.

There is, however, a slight difference between China's ancient nominalists and the German Nominalists of later centuries. The modern Nominalists say that money has no intrinsic value because they separate the concept of money from the actual goods, like gold and silver, which represent money. That is why they can say money is an abstraction.

China's ancient nominalists were more direct. They said that the actual goods standing for money were themselves of no value. By value, they did not merely mean value in use, but simply the goods' use for eating or wearing. In fact, they might not have denied that gold and silver had use value as materials for the manufacture of objects of art, but they merely considered that such use value was not as high as would be gained by employing these materials as money.

What was the view of the Legalists' opponents, the Confucians, on the nature of money? This is not at all clear. They opposed a government monopoly over the right to mint coins, and advocated free coinage. Evidently they did not hold to the quantity theory. Were they bullionists? Apparently not, because they did not believe it made any difference if coins were good or bad. This is not congruent with bullionism, but rather is a form of nominalism. They differed from the Legalists only over the right to mint coins. [One might also argue that these Han Confucians were at least implicitly closer to the subjective value theory of the modern Austrian School than to either the ancient or modern forms of nominalism. EHK]

Han Dynasty Legalists' monetary theory had a positive effect at that time, because their aim was the unification of the coinage and centralization of the right to mint coins, and this caused China to move from being a decentralized feudal society to becoming a centralized feudal nation.

At another level, however, this doctrine merely

camouflaged the debasement of the currency. There were drastic changes in the value of coins during Han. Nominalists blamed these on private coining, but did not expose the government's practice of lightening its coins. At the very least they must accept a certain amount of responsibility for the lightening of the coinage during Emperor Wu's reign.

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The Legalists expressed no direct opinions on the origins of money, but somewhat ambiguously conceived of it as having been formed by law or government or the by monarchs, as in Chao Cuo's statement "because they are used by the superior." Sima Qian (145-? B.C.) evidently disagreed with this position. He wrote:

> Paths of exchange between farmers, craftsmen and merchants opened, and such moneys as tortoise, cowry, gold, coins, knives and spades arose. (*Historical Records*, "Treatise on the Balanced Standard.")

He linked money's origins to the exchange of commodities.

Because the two depreciations of the means of exchange during Western Han had a bad effect on the people's livelihood, some people became suspicious of a money economy, and thought of reverting to a natural economy. During the reign of Emperor Yuan, Gong Yu (123-44 B.C.) held this position. He wrote:

> In ancient times, metal coins were not used as money. Attention was paid solely to agriculture. Hence if a man did not plow, he would certainly starve. . . .
>
> Since the appearance of the Five-grainer coin, it has been over seventy years. There have been many people found guilty of illicit coining and punished. The rich hoard housefuls of coins, and yet they are never satisfied that they have enough. The hearts of the people are restless and vacillating. The merchants seek profit. To all points of the compass, each uses his knowledge and guile to obtain good clothing and fine food. In a year there is a profit of twelvefold. . . .
>
> Though you give land to poor people, they must still sell cheaply to the merchant, and become impoverished, causing them to take to the life of bandits.
>
> Why is this? It is the deepening pursuit of the secondary occupations and the coveting of money. That is why evil cannot be banned. It arises entirely from money. (*Han History*, "Biography of Gong Yu.") [Translation slightly changed from Swann, p. 322.]

This represents one aspect of the landlords' viewpoint. Landlords have grain and cloth, but not ready cash. When they sell grain and cloth for cash, it is hard for them to avoid being fleeced by merchants. Hence he advocates the abolition of money in favor of grain and cloth. He states:

> Those who are anxious about the secondary are cut off from the fundamental. The offices in charge of gathering pearls and jade, gold and silver, and of casting coins ought to be abolished. Let these no longer be regarded as money. Nor should they be sold any longer in the markets. Repeal the taxes levied in units of money. All taxes on land and contributions should be in rolls of cloth and in grain. This will cause the commoners to return to agriculture. (*Han History*, "Biography of Gong Yu.") [Translation slightly changed from Swann, pp. 322-323.]

But by that time the monetary economy was very well developed, and the power of the merchants was not inconsiderable. The merchants and their spokesmen believed that money was genuinely necessary for the exchange of goods. If cloth were to be used, differences in lengths would cause great inconvenience. And so Gong Yu's advice was not taken.

Objectivists of this sort frequently appeared within China's feudal or semi-feudal society. Shi Dan, of the time of Emperor Ai, is another example of the type. Someone sent up a petition then stating that in ancient times tortoise shell and cowry had been used, but that now coins were being used instead, and this was impoverishing the people. The writer advocated abolishing coins.

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Emperor Ai asked Shi Dan about this, and the latter agreed with the proposal. In the end there was opposition, and the proposal failed of adoption.[1]

Ban Gu (32-92 A.D.) expressed an opinion on the function of money:

> Metals, knives, tortoise shells and cowry are used for the division of wealth and the distribution of benefits, so that people may exchange that which they have for that which they lack. (*Han History*, "Treatise on Food and Money.") [Translation adapted from Swann, p. 110.]

In modern terms, division of wealth and distribution of benefits would seem to refer to money's function as a measure of value, but I suspect that Ban Gu intended to go further and was alluding to money's use as an instrument for redistributing wealth.

That idea was overtly present then. Jia Shan's statements that "it [money] may be exchanged for items of great value" and "items of great value are those over which the ruler exercises authority" also have this meaning. Ban Gu's phrase "may exchange that which they have for that which they lack" refers

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[1] *Han History*, "Biography of Shi Dan."

to an instrument for circulation or an intermediary of exchange.

Aside from Jia Yi, very few people during Western Han brought up the quantity theory of money. It was not until Eastern Han that people raised the issue of the link betwee the value of money and prices. During the reign of Emperor Zhang (76-89), the price of grain rose, and government revenues were insufficient to cover expenses.

On the basis of the quantity theory of money, Zhang Lin considered the quantity of money in circulation to be too large, and wanted to withdraw some of it from circulation:

> Nowadays, not only is grain expensive, but so too are all kinds of goods. This is because of the cheapness of money. It ought to be ordered that the land tax be entirely paid in cloth; that purchases in the market be entirely in cloth, and that coins be entirely blocked from issue. If this is done, then money will be reduced in quantity, and goods will all become cheap. (*Jin History*, "Treatise on Food and Money.")

Zhang advocated return to a barter economy, not just reduction in the quantity of money. At the same time he advocated sale of salt by the government as another method for constricting the money supply.

During the reign of Emperor Huan [147-168], government finances were in disarray because of the years of war with the Western Qiang. Some wished to carry out a debasement of the coinage. Using the pretext that the problems were caused by a light and thin coinage, they advocated minting a large coin.

This evoked the opposition of Liu Tao. He argued that the problem then was a lack of goods, and not the weight or thickness of the coins.

> In my humble view, for successive years the good young shoots have all entered the mouths of locusts and caterpillars. The looms are empty in the face of public and private needs. What is urgent is the provision of meals morning and evening. What causes suffering is waste and sloth. How can one speak of the thickness of coins or of their weight?
>
> Even if we now transmute sand and gravel into southern gold, change tiles and stone into jade, if the masses thirst, they will still have nothing to drink, if they hunger, they will have nothing to eat.
>
> Though there be a ruler with the pure virtue of a Fuxi or the wisdom of a Tang, he will still be unable to preserve life within the walls. The people can go a century without money, but may not endure starvation for a single morning. Hence food is of the greatest urgency. (*Latter Han History*, 87, "Biography of Liu Tao.")

This is a self-evident statement, needing no explanation or paraphrase. We do not know the nature of the large coin recoinage of that time. If it involved a large denomination coin, there is some reason behind Liu Tao's words.

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If it involved an increase in the weight of the coins, then Liu Tao ought not to have opposed it. A scarcity of goods can, of course, cause prices to increase, but if a depreciation of the circulatory medium also takes place, the price increases will be still more severe. If on this occasion the weight of the coins was increased, it should have moderated the inflation of prices.

Xun Yue (148-209), of the last years of Eastern Han, expressed his opinions on money. Unlike other Han writers he opposed the theory that money was useless and also the objectivist view. He held the title Attendant Gentleman at the Yellow Gate during the reign of Emperor Xian, just after Dong Zhuo abolished the Five-grainer to remint it into the Small-cash, and when political power was gradually falling into the hands of Cao Cao.

Regularization of the coinage was becoming an urgent question. Xun advocated restoration of the Five-grainer. Some said that the Five-grainers had been dispersed to the four corners of the Empire, leaving few of them in the Capital Districts. If the Five-grainers were to be restored, this would merely cause other places to employ useless coins to come up and buy useful goods. Would not that cause shortages nearby and abundance at a distance? Xun replied:

> What the officials are in urgent need of is grain. The limitations of oxen and horses prevent them from going out further than a hundred *li*. As for other goods, one uses coins to obtain them on the left, and then one uses them on the right. Goods are exchanged and transported to supply deficiencies from surpluses. In their use and transport, all within the seas constitute one family. Of what harm is this? (*Expositions and Observations*, 2.)

Though he does not explicitly state that money is a useful object, he clearly acknowledges money's importance in the exchange of goods. He stresses money's function as a medium of exchange, but since a large part of the supply of Five-grainers had been melted down by Dong Zhuo, there might not be a sufficient quantity of money after that coin's restoration. He deemed it appropriate for the government then to mint more coins to supplement the supply. He also opposed collecting coins from among the people for use in the capital, believing that would cause much confusion.

Because Xun Yue believed money's value lay in supplying deficiencies of one area from the surplus

of another, naturally he opposed objectivism and the abolition of coins:

> Coins are a true convenience in life. The people are happy to circulate them, and to ban them would be difficult. If we now take on such a difficult task and ban something so convenient and pleasing to the people, it would not be a cause for prosperity. (*Expositions and Observations*, 2.)

Cao Cao's restoration of the Five-grainer may have been done under the influence of Xun Yue.

Sima Zhi of the time of Emperor Ming of Wei [227-240] also seems to have expressed some ideas about money. The histories say that during the time of Emperor Ming coins had long since been abolished in favor of grain, but severe punishments could not stop the expedients of dampening grain and thinning out silk which existed among the people. Sima Zhi strongly advised the court that "use of coins will not only enrich the state, it can also reduce the need for punishments."[2]

Most people suppose
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these were Sima Zhi's words. Actually, the reference to reducing punishments resembles his style, but the statement about enriching the state does not much resemble what he says elsewhere, since he normally put his emphasis on agriculture and on the repression of merchants:

"The requirements of the state are solely grain and cloth." He also says: "What merchants seek, though they double their profit in gaining it . . . is not as good as the return from opening an additional *mu* of land," and "we ought not to return to the chaos of commerce, but solely use agriculture to make plans for what is convenient for the state."[3]

Such a man would seem to have been very much of an objectivist. For him to have advocated the use of coins, and to have said that the minting of coins could enrich the state, would really be hard to explain. Perhaps on that occasion he was merely approving of minting coins for the limited purpose of reducing crime, and the statement about minting coins enriching the state was probably made by some other bullionist.

[2] *Jin History*, "Treatise on Food and Money."

[3] *Record of the Three Kingdoms*, "Record of Wei," 12, "Biography of Sima Zhi."

2. *Monetary History*

Each era has its own standards and principles for writing its history. In ancient times, all records of events which had already occurred fell within the realm of history. There were even people who supposed the Six Classics were all historical. To define it succinctly, however, history is mainly the clear statement of the facts, as distinguished from philosophy's discussion of principles. Of course the facts of history must be discussed in conformity with principles, and principles can be generalized out of the historical facts, but history's most fundamental characteristic is its narrative of events.

The sprouts of monetary history already existed in pre-Qin writings, as in this passage from the "Power to Regulate the Mountains" in the *Guan Zi*:

> Under Tang [the first king of the Shang Dynasty, traditionally 1766 B.C.] the country suffered a seven-year drought. Yu [Yu the Great, of the Xia Dynasty, traditionally 2205 B.C.] suffered five years of floods. The people had no food and some were forced to sell their children. Tang made use of the metal of Zhuang Mountain to cast coins and redeem the children who had been sold for lack of food.
>
> Yu made use of the metal of Li Mountain to cast coins to redeem the children who had been sold for lack of food. [Translation slightly modified from Lewis Maverick, *et al*, *Economic Dialogues in Ancient China: Selections from the Kuan Tzu* (Carbondale, Ill., 1954),p. 127.]

This passage not only cannot be taken seriously as history, it cannot even be considered as an historical source, because its truth is suspect, and we can be all but absolutely certain that it is not true. Nevertheless, in form it is written as
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an historical narrative. It goes on to say:

> Jade was secured from the distant mountains of the herder clans; gold from the muck on the right side of the Ru and Han Rivers; pearls from the edge of the wilds of Chi. Each of these places was 7,800 *li* from Zhou. The journey was long, and it was difficult to reach these places. Hence the ancient kings made use of the heavy demand for them.
>
> Pearls and jade were the superior money, gold was the medial money, and knives and spades the lower money. (*Guan Zi*, "Productivity of the Earth.") [Translation modified from Maverick, p. 147.]

For the most part, this corresponds to the facts.

In addition to this, there is the casting of large coins by King Jing of Zhou spoken of in the *Dialogues of the States*. Though this account cannot be confirmed, it is also cast in the form of an historical narrative. Both of these are, however, merely short

fragments, at most only records of isolated events, and cannot be said to constitute monetary history.

Sima Qian's "Treatise on the Balanced Standard" in his *Historical Records* must be considered the earliest piece of writing to be concerned with monetary history. The "Treatise on the Balanced Standard" is not purely monetary history, because it does not solely deal with money. Less than a fifth of it deals directly with money. The rest of it is concerned with fiscal policy, agriculture, transportation and even warfare. Though these are topics with which monetary history ought to be linked, they are not so linked in the "Treatise," and so they cannot be said to have been parts of the monetary history section.

The "Treatise on the Balanced Standard" only narrates the monetary history of Western Han, and so it is a history of a single period. For the pre-Han period there are only a few general statements in the concluding section under the rubric "The Grand Historian Says." He states that money originated before the time of Emperor Gaoxin [traditionally 2435-2365 B.C.], and that in the money of Xia there were three grades of gold or metal. That was probably a Warring States Era tradition, and of course no evidence for it was given. Sima Qian himself says "records are lacking." In this concluding section he also discusses the coinage after the First Emperor of Qin's unification of China as the earliest for which records exist.

His account of Western Han's money is for the most part well attested, but it is somewhat sketchy, because the "Treatise" is only around five thousand characters long altogether, of which less than a thousand deal directly with money. It contains nothing at all about exactly what coins were minted at the beginning of Han, and simply does not mention Empress Lü's Eight-grainer. Nor does it clearly handle Emperor Wu's Three-grainer. So it would not be correct to say that Sima Qien was a monetary historian. He was merely a historian who recognized the importance of monetary questions.

The next piece of writing after Sima Qian to deal with monetary history was the "Treatise on Food and Money" in the *Han History*. It was not solely concerned with monetary history either. The word "food" in its title referred to farmers' planting of edible grains, and "money" [*huo*] might well be translated as "commodities" since it referred to

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hemp and silk for clothing, as well as gold, knives, tortoise shell and cowry used to distribute wealth, give profit, and provide for lacks from surpluses. Only the latter of these --gold, knives, tortoise shell and cowry-- were money. Evidently money was only one of the three problems with which the "Treatise on Food and Money" was concerned.

The "Treatise" is divided into two parts. The first part discusses only the cultivation of edible grains. It is a history of the agricultural economy. Only the latter part resembles Sima Qian's "Treatise on the Balanced Standard" in being a history of the monetary economy. In that section money occupies a larger part and is infused more deeply into the narrative. The *Han History* is itself a history of one period, but its section on money is a universal history. This is the opposite of what was the case with the *Historical Records*.

Of course Ban Gu was not a specialist in monetary history. He was merely a compiler of historical materials. Concerning events prior to Xia and Shang, in the tradition of empirical verification, he honestly acknowledges that "the details are not recorded," but then goes on to commit a number of errors himself.

The first error concerns the matter of Duke Tai setting up the Nine Offices Round System for Zhou. Obviously he was copying out another writer's narrative, but this passage has been accepted as true history by historians of later ages.

The second was the story about the minting of large coins by King Jing of Zhou. This was copied from the *Dialogues of the States*, but though that work did not state which coin this large coin was, Ban Gu says that "its inscription read 'treasure money.'" One presumes that this sentence was not copied out from some other document, but was fabricated by Ban Gu. Perhaps he had seen or heard about the *yihuo* coin, and read the character *yi* for the somewhat similar character *bao*, meaning treasure.

The third was his statement that "when Han arose, because Qin's coins were heavy and hard to use, they had the people cast Pod-cash." The Pod-cash were the result of lightening of coins, and their name arose among the people. The government would never have told the people to mint Pod-cash. The "Treatise on the Balanced Standard" merely states that the people were ordered to cast coins, which is rather more accurate. There are numerous other errors.

The "Treatise on Food and Money" is also too sketchy in its history of Western Han's coinage. It does not mention the Eight-grainer, nor does it handle the Three-grainer clearly. It also contains internal inconsistencies. Nevertheless it is full of historical material for the period from Emperor Wu on down, especially on the various schemes adopted by Wang Mang. These several extraordinarily complex monetary reforms occurred close to to the author's time. Otherwise he would not have been able to handle them so clearly. Nevertheless he does not

handle Wang Mang's Spade-spring clearly, nor does he specify just how the Spade-spring was issued.

The "Treatise on Food and Money" represented an advance on the "Treatise on the Balanced Standard" in its tendency toward the division of labor and greater specialization through its separation of monetary history from agricultural economic history.

Whatever the virtues of the two treatises, they did not collect in one place all the knowledge about money and the materials which had been gathered by their authors. These two treatises by themselves could not provide enough material for later students of money. It has also been necessary to consult the Basic Annals and Biographies sections as well as the other Monographs and the Chronological Tables, which is very inconvenient.

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Despite these limitations, Sima Qian and Ban Gu established monetary history as an important part of historiography, and included within monetary history commodity production and circulation as well as such other factors influencing money's purchasing power as fiscal policy, natural disasters and warfare. This created a fine tradition within Chinese historiography.

Previous historians have mostly classified the authors of these two works as having been within the tradition of the Agrarians, since clothing and food both depend on agriculture, and concentrating on these fits the point of view of the school which emphasized agriculture. Agriculture, however, is merely one portion of the economy, and the study of money is a synthesizing discipline.

Though the Legalists said that money cannot feed you if you are hungry or clothe you when you are cold, it nevertheless has a value in its own right. It is value's crystalization. With it you can obtain any commodity, and so for a society based on a commodity economy, money inevitably becomes the heart in the center of the economy.

In fact, in both Treatises, money is the thread linking together the other subjects. From a scholar's point of view, commodities must in the end be consumed. Unless there are detailed records, the circumstances of commodity production down through the ages are not very easily studied. Money is always either kept in circulation, or is buried in the ground. Since this money is for the most part a reflection of the circulation of commodities, the implication is that the study of money's circulation is easier to use to explain the production and circulation of commodities over time than is the study of these commodities themselves.

2.4 Credit

With the unification of China by Qin and Han, both domestic and foreign trade began to develop. Foreign nations with which trade relations appeared included India, the states of Central Asia, Rome and Parthia.[1] The developent of domestic commerce[2] may be judged from the development of the markets of the capital and the rules for petty merchants. There were nine markets in Chang'an, each four *li* apart, and 266 paces square. There was an office which specialized in the overseeing of merchants, money, and the buying, selling and trading of goods.[3] The rules for petty commerce also reflected the expansion in the power of the merchant class. The high profits of the merchants[4] caused distinctions between wealth and poverty to grow ever greater among the people.

Naturally, the making of loans also became more frequent. Not only was mercantile capital then running wild, usury capital was also on the rise, since not merely ordinary merchants were making loans,[5] but so too were specialized
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firms of lenders.

Chang'an had only one loan market. At the time of the Revolt of the Seven Feudatories, when the commanders of the military in Chang'an were about to go on the offensive, they went to this market to float a loan. Because victory in the east had not yet been won, the lenders were unwilling to accommodate them. A man named Wu Jian took a chance on lending a thousand *jin* for a return of ten-fold. By the 3rd month the rebellion in the south had been put down, and a year's interest allowed Wu Jian to become one of the richest men in the area surrounding the capital.[6]

What is worth noting here is not just that there was a loan market in Chang'an, but that the participants in this market for the most part did not operate from the government's point of view. It was not a matter of right or wrong. Lenders merely sought security for their capital and to make money. At the same time, the borrowers were not all necessarily poor commoners. There were also some men of high position who lived off borrowed money.[7] Of course, their situation was different. From Han times on in Chinese society, mercantile capital and usury capital have been very well-developed, and for the past two thousand years there has been no change in this respect.

The ruling class of every epoch has, from time to time, made government relief loans so as to meliorate the class struggle. In 117 B.C. Emperor Wu sent six high officials on a tour of inspection of the Empire during which they could extend credit to sick widowers and widows, and to people unable to earn their livelihoods.[8] In 40 B.C. Emperor Yuan issued an edict "forgiving those poor people in the Empire who had borrowed money from having to pay back their debts."[9]

Interest rates in China seem to have been higher than those in foreign countries since antiquity. The government must have regulated interest rates during Han, since the histories often mention the taking of interest in excess of the legal rate.[10] I have,

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[1]Cf. subsection 2.1.3, "Gold and Silver."

[2]The *Yellow Diagram of the Three Capital Districts*: "In yuanshi 4 [4 A.D.] a Hall of Enlightenment for the doctoral examinations was erected. Thirty sections were made assembly markets. Several hundred locust trees were set out in rows. The students faced north assembled in these markets. Each carried goods and classical books produced in his commandery, and they bought and sold these among themselves. Each courteously yielded place to the others as they debated amiably and gently beneath the locust trees."

[3]*Yellow Diagram of the Three Capital Districts.*

[4]*Han History*, 91, "Biographers of the Moneymakers": "For a poor man to seek wealth, agriculture is not as good as artisanship, and artisanship is not as good as commerce. Embroidery is not as good as sitting at the gate of the market."

[5]*Historical Records*, 129, "Biographies of the Moneymakers": "Capital of 1,000 strings of cash, prudently managed, can by an avaricious merchant be tripled, and by an incorrupt merchant be quintupled."

[6]*Han History*, 91, "Biographies of the Moneymakers."

[7]*Han History*, 80, "Biographies of the Six Princes of Emperors Xuan and Yuan": "When Emperor Yuan ascended the throne . . . the Prince of Xian had three brothers of his maternal grandmother, including one Zhang Bo. . . They received gifts from the Prince. Later, the prince sent a letter to the Throne asking that his maternal relatives, the Zhangs, be moved to his fief. Bo sent up a letter stating his desire to remain at the tomb, and he alone did not go. The Prince hated him for this. Later, when Bo arrived at Huaiyang, the Prince gave him few gifts. Bo said he was poor and had borrowed several million. He wanted the Prince to pay this debt, but the Prince would not do so." *Ibid.*: "Now there was an official who borrowed 2 million from a usurer."

[8]*Han History*, 6, "Annals of Emperor Wu."

[9]*Han History*, 9, "Annals of Emperor Yuan."

[10]*Han History*, 15, "Table of Princely Ranks": "In yuanding 1 [116 B.C.], Yin, the Marquis of Pangguang lent money at interest. He did not take over the land tax, but took interest in excess of the laws and got around the remission." *Ibid.*: "In jianshi 2 [31 B.C.] the Marquis of Lingxiang was accused of having someone injure the chamberlain of his household, and of lending money at a rate in excess of the legal one. Hence the

however, seen no reference to what the official ceiling on the interest rate actually was. Gong Yu's statement that "annually there was a profit of twelve-[fold]"[11] and Ban Gu's that "for commonors, peasants, artisans and merchants, the annual rate is 2,000 in interest on a sum of 10,000"[12] refer to commercial profit, and not to the pure rate of interest.

The *Nine Chapter Calculating Techniques* mentions "lending a thousand cash at a monthly interest of 30." This would amount to an annualized rate of 36 percent,[13] which was probably not an officially fixed interest rate.

At that time the highest legal interest rate in Rome was twelve percent. The interest actually being charged was six percent, and eight percent when silver was in short supply. It was only for the riskiest loans that as much as twelve percent would be charged. In Asia Minor then the rate was also only twelve percent. Certainly some charged more than the legal maximum rate. The highest such rate reached 48 percent.[14]

The rate for private loans seems to have been highter than this in China. For example, in the abovementioned case of the loan made by Wu Jian, for which he received a ten-fold return in a year. [Interest rates might have been higher because demand for loans was higher in the more monetized Chinese economy. It is also possible that then, as later, much credit was internalized within extended families or corporate analogs to such families, reducing the supply of loanable funds, and thereby raising the interest rates for those who could not borrow from kinsmen, real or fictive. EHK]

During ancient times, both in China and elsewhere, there were opponents of making loans at interest. In King Xian of Zhou's year 25 (344 B.C.), the Romans passed a law forbidding the taking of interest on loans.[15] Later on, the Christians also opposed the taking of interest. China's Confucians seem to have not approved of interest either. Mencius

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said "because they lend money and increase it, the old and weak are turned out into the ditches."

All of these opponents began from the same logical premise. Because most loans during antiquity were used for consumption purposes, and were rarely used to finance production, the exaction of interest increased the burden on the borrower to the point where he might have no way to make repayment.

This is unlike the situation for borrowing of money under a capitalist society, where most such funds are used to seek profit via production, so that interest is only one part of profit, and is thus considered a natural phenomenon. The capitalist's interest burden may be shifted onto others, but the ordinary consumer's burden falls on his own shoulders. Hence Chao Cuo alludes to people who sold their land and homes and even their children and grandchildren so as to pay their debts.

The Greek, Aristotle, believed that money was unproductive, and so interest ought not to be taken for it. This rather temperate attitude was close to that of Mencius. With the rise of the Roman Empire, however, European opposition to the taking of interest became more ardent. Cicero believed that taking interest was worse than stealing. That attitude continued dominant up through the European Middle Ages. In China, there was not much opposition among ancient period scholars to the taking of appropriate levels of interest.

In the first century, Wang Mang supplied credit via the government. There were different rates of interest for consumption loans and loans for production. This was a pioneering undertaking. The governmental credit Wang Mang offered was a throwback to the supposed credit mentioned in the *Rituals of Zhou*. The interest rate was three percent per month.[16] Loans of goods bore no interest.

Terms of loans were of two sorts: One for funerals and another for ceremonials. For ceremonials, the limit was ten days. For funerals, the limit was three months. The people could also borrow cash from the government to establish a business, and an annual interest of ten percent would be paid on the increased return.[17]

If we compare this with the nearly contemporaneous Roman legal rate, the short term rate is higher than the Roman, but the long term annual interest of ten percent is about the same as the Roman rate.[18]

The lending trade also flourished during Eastern

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debt was remitted."

[11] *Han History*, 72, "Biography of Gong Yu."

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[12] *Han History*, 91, "Biographies of the Moneymakers."

[13] *Nine Chapter Calculating Techniques*, 3.

[14] Tenney Frank, *An Economic Survey of Ancient Rome*, p. 350. Mommsen, *The History of Rome*, Book V, pp. 508, 526.

[15] Mommsen, *The History of Rome*, Book V, p. 523.

[16] *Han History*, 99, "Biography of Wang Mang": "He also ordered the market officials to buy cheaply and sell dear. Credit was offered the people at an interest of three percent per month."

[17] *Han History*, 24, "Treatise on Food and Money."

[18] Julius Caesar decreed a limit of one percent per month. It was forbidden to charge interest on interest or to allow interest to accumulate in excess of the principal. Mommsen, *The History of Rome*, Book V, p. 526.

Han. The income of most rich merchants was comparable to that of feudal lords.[19]

Even the government often floated loans because the Eastern Han government was usually in fiscal trouble. When, for example, in Emperor An's yongchu 4 (110 A.D.) there was a war with the Qiang, and tax receipts were down, the officials had to borrow several billion from the people.[20] In Emperor Shun's yonghe 6 (141), "an edict levied a loan of a thousand cash on each household which possessed some capital."[21] Because of a famine in Jizhou during Emperor Huan's yongshou 1 (155), thirty percent of their holdings was borrowed from princes and marquises who held reserves of grain so as to maintain the holdings of the imperial granaries until the new harvests could replenish them.[22]

During the Han dynasty the credit trade was probably limited to transactions between private persons or between the government and private parties. **[212]**
Apparently credit institutions had not yet appeared among the populace at large.

Some say pawnbroking was already present in China by Han times, and cite as proof of this the statement in the *Latter Han History*'s "Biography of Liu Yu," which states that "the reward bestowed on Yu was pawned to the Hu-Yi barbarians." However, the earliest pawnbroking in China was given the label *zhi* or *zhiku*, rather than the term now used, and used in this quotation, *diandang*. It was not until the Song Dynasty that the terms *dian* and *dianzhi* appeared, and it is not until the Ming Dynasty that the term *diandang* appears. Hence the practice which the *Latter Han History* labels *diandang* was not necessarily pawnbroking.

The idea of giving goods as security for a loan appeared very early. There are many instances of it during Spring-Autumn and Warring States times. There are instances during Han of something called *qiezhi* (i.e. holding for ransom), but we have no way of proving that pawnbroking as such existed during Han. If the term *diandang* in the "Biography of Liu Yu" does refer to the granting of credit in return for the giving of a material pledge, then the pledge market tower [*dangshilou*] whose existence is noted in the *Old Times in the Three Capital Districts* must have somehow been connected to pawnshops.

As for the making of deposits, that developed still more slowly. The wealth in coin accumulated by the ancients was for the most part kept in hoards. There were such things as money boxes during Han,[23] but there is no great difference between a money box and a hoard. It is merely a form of accumulation, and putting coins in one cannot be called making a deposit.

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[19] *Latter Han History*, 58, "Biography of Huan Dan."

[20] *Latter Han History*, 51, "Biography of Pang Can": "Yongchu . . . 4 . . . Can's memorial was recorded by Deng Xi, who said that in recent years the Qiang depradations have been especially severe. Tax receipts from the commuted land and labor service taxes for the Longyou [modern Gansu] have been ever more troubled, requiring the officials to add to the people's burden by borrowing several billions."

[21] *Latter Han History*, 6, "Annals of Emperors Shun, Zhong and Zhi."

[22] *Latter Han History*, 7, "Annals of Emperor Huan": "Yongshou 1, Spring . . . 2nd month. The Director of Retainers reported a famine in Jizhou so bad that the people were reduced to cannibalism. Imperial orders were issued to the prefectures and commanderies to give relief to the poor and weak. Those among the princes, marquises, officials and people who had stores of grain were all to lend three parts of ten to replenish the storehouses. Commoners and officials were to be recompensed with coin. Princes and marquises had to await arrival of the new tax receipts for recompense."

[23] *Miscellaneous Record of the Western Capital*: "In yuanguang 5 [130 B.C.] Gongsun Hong was made a Man of Wisdom and Virtue of the State Knight Hall. Because his family was impoverished, and he had little capital of his own, his colleague Zou Changqing took off some of his own robes to clothe him, and took off the hat and shoes he was wearing to give him. He also gave him a bundle of straw, a set of plain silk grave clothes, a money box and a book box. In leaving this to him he said . . . A money box uses the earth as an implement for storing up coins. Everything one has enters into the hole, and does not come out of it. When it is full, you have saved it. The earth makes things coarse. Coins are heavy goods. They enter and do not come out, they are accumulated and not dispersed, and so it is said one saves them. There are gentlemen who accumulate and save, but are unable to disperse wealth, and there are generals who have been defeated by money boxes." (Cf. *Collectanea of Ancient and Modern Books and Illustrations*, 358, "Coins and Notes: Records Thereof.")

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3.0 MONEY FROM JIN TO SUI

3.1 Monetary Systems

1. Coinage

From late Han and Three Kingdoms to Northern and Southern Dynasties times Chinese coinage remained in confusion, lacking both unity and continuity.

The peoples occupying the north were still at the level of a nomadic self-sufficient economy. In the south, reductions in the weights of coins caused great price fluctuations, and the people often resorted to grain and cloth as substitutes for coins.

Hence we may characterize this epoch as one having a dual cash-cloth standard, with cash coins as the main money and cloth as the secondary money. Nominally, use of grain and cloth was limited to given periods or particular forms of payment, or to particular regions, but in fact from Jin to Tang and Five Dynasties times, cloth never lost its function as an instrument for making payments. Bronze cash were, of course, the dominant form of coin, though the Xiao-Liang put iron coins into general circulation, and coins of gold and silver had also appeared.

During Han the unit for the bronze coins was the *qian* or cash, in denominations from one to ten-thousand cash. Now the unit became the *wen*.[1] One *wen* was the same as one *qian*, with denominations from one *wen* up to a thousand, with a thousand making one *guan* or string.[2] In other words, the unit for reckoning large quantities of coins changed from ten-thousand to a thousand. Where the men of Han spoke of a thousand ten-thousands of cash, people now and thereafter would refer to 10,000 strings. The tag line "girdled with a hundred thousand strings, he rode into Yangzhou astride a crane," was produced at this time.[3]

Another new development was placing year period designations on coins. This increased such coins' historical value. Not only is it easier to date such a coin, but errors in written sources can also be rectified.

The Five-grainer was still the main form of bronze cash, and it was the most successful coin in the course of Chinese history.

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The first time Wang Mang reformed the coinage he dared not abolish the Five-grainer. It was only later, because he wanted to carry out a depreciation, that he worked up the courage to abolish it. But even then the people continued to use it.

Before long Liu Xuan was again minting the Five-grainer. Liu Xiu (Emperor Guangwu) believed in omens, and so wanted to retain the Monetary-spring coins, but in the end wound up restoring the Five-grainer, and historians judge this to have been a good thing. In the aftermath of Dong Zhuo's minting of the Small-cash, the Cao-Wei once again restored the Five-grainer, and only then was the coinage stabilized. Most of the Northern and Southern Dynasties also minted the Five-grainer.

The histories do not mention coin minting during Jin. They merely say that during Western Jin the old Wei coins remained in use. Probably the Shu-Han

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[1]Li Daoyuan, *Water Classic*, "Notes on the Rivers of Zhejiang": "Liu Chong was of the line of Han. He had established a commandery and had political accomplishments. He was about to give up his post to go and take up the government when some old men sent him a hundred cash from this stream. He took one *wen* from each." *Ibid.*, "Notes on the Si River": "During the yongping era [291 A.D.] Zhong Liyi was minister of Lu. Upon taking up his post he gave from his own purse cash to the amount of 13,000 *wen* to Kong Qin of the Bureau of Households to construct the prince's carriage." *Jin History*, "Treatise on Food and Money": "Those whose fields are not taxed turn over righteousness rice to the amount of 3 *hu* per household, with those at a distance to pay 5 *dou*, and those at an extreme distance to pay an amount reckoned in cash of 28 *wen* per capita."

[2]*Wei History*, 91, "Biography of Xu Jian": "Year 22, Emperor Gao Zu . . . issued an edict stating . . . cash to the amount of 10,000 strings was to be conferred." Although the *Historical Records* contains the sentence "metal cash was loaned to the amount of a thousand strings" the character meaning "string" here could be a misprint for the graph for "ten-thousand." During Han the latter was used as a monetary unit, but one-thousand was not so used. The *Han History* "Treatise on Food and Money" mentions that during Emperor Wu's year 1 "the cash of the capital districts piled up by the hundreds and ten-thousands, and the strings rotted so that the coins could not be counted." This is the earliest example of the use of the word for string in connection with coins, but the string was not yet a monetary unit.

[3]*The Yin Yun Story*: "There were guests who followed after, each speaking his ambition. One wanted to be Inspector of Yangzhou. Another wanted much wealth. Still another wanted to ride a crane up

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to the skies. One of them said he wanted to ride a crane into Yangzhou girdled with a hundred thousand strings. He wanted to combine all three ambitions." *Stories of the Five Courts* (Sweep Leaf Mountain House edition) gives a "Story of Shang Yun," and also an abridgement of it by a Tang editor.

coins also remained in circulation, since Sima Yan seized power only two years after the fall of Liu Chan, communications with Shu were inconvenient, and it was difficult to link Shu-Han with the regions of China beyond its borders. Hence Shu-Han's coinage would have most likely preserved its independence. By that time coins had gone out of use in the near northwest.

During the five-odd decades of Western Jin, however, coining could not have altogether halted among the people. After the destruction of Wu, its coins would naturally have continued to circulate. The Taiyuan Monetary-spring, almost the same size as the Monetary-spring, could have been minted during Eastern Jin. The two characters Taiyuan were very nearly in modern plainscript. Hardly any of them survive. Illustrations in old catalogs are all forgeries.

Wu Xing's Shen Chong minted coins which were at the time called Lord Shen's Cash. [C. Plate xxxvi,1,2 at end of this subsection] Later, Li He's "Ballad of Remnant Silk" contained the lines "Elm pods countless press in sheets, Lord Shen's green cash line town streets." Wang Jian also used the phrase "green elm branches dispersed Lord Shen's Cash," so it is evident that this coin was thin and small, but there is no record of its inscription.

Numismatists consider one kind of small and light "Five-grainer" to be Lord Shen's Cash. Its metal is light in color and it weighs around 1 or 2 grams. Because a fair quantity have been unearthed in Shaoxing, Zhejiang, this surmise is plausible. Shen Chong rose in response to Wang Dun's rebellion, and the minting of this coin could be related to that event, which occurred between the end of Emperor Yuan's reign and the beginning of Emperor Ming's [323]. Shen Chong was killed in 324 A.D.

There are quite a few of these coins, and they are not entirely uniform. To consider only their reverses, there are two main types: one with a raised edge, resembling some Five-grainers, and one with a blank reverse like the Half-ouncer's. The obverses are divisible into those with and without raised outer edges. Actually, these have been excavated in the company of a number of Half-ouncers whose grade of bronze and construction are identical to this Lord Shen Five-grainer. It is possible that others were minting them in imitation, since they could not have all been minted by Shen Chong.

The Hexi region of the near northwest had not used coins since the 230s. This region remained at peace while the Central Plain of the near northeast was in tumult. Hence at the beginning of the reign of Emperor Min of Western Jin (313 A.D.), Zhang Gui took the advice of the Privy Treasurer and restored the Five-grainer to circulation.[4]

Some numismatists suppose that Zhang Gui minted

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another kind of Five-grainer. That is based on a mistaken interpretation of the historical texts. After coins came into use, however, it is possible that his government or people under his rule minted Five-grainers. Surviving "Liang-made New-spring" coins could have been minted by some successor of Zhang Gui. These are small coins, with the four characters in sealscript. They somewhat resemble the Monetary-spring, but that coin's later rather than initial issue. Some say they were minted in Liangzhou by Dou Rong. Dou Rong was a contemporary of Liu Xuan during early Eastern Han, and was a chief commandant in Zhang Ye's princely state.

Some independent authorities in the north also minted coins. For example, Latter Zhao's Shi Le in Emperor Yuan's taixing 2 (319) minted Feng-huo cash.[5] [Plate xxxvii,2] This coin weighed about 3 grams, had a sealscript inscription, and is divisible into two types: one with and one without an inner raised edge. The historical text states that "the people were displeased, and in the end the coin did not circulate."[6] It also says that Shi Le conferred on one Fan Dan wagons, horses, clothing ornaments and 3 million cash. Moreover, surviving Fenghuo Cash are not all that scarce.

In China then, in addition to Eastern Jin, Zhang Gui and his descendants in Hexi, and somewhat later Li Shou in Shu also had coins in circulation. It would have been exceedingly odd if the broad Central Plain region occupied by Shi Le had done completely without coins.

The Ba-Shu region of Sichuan still presents problems for investigation. Twenty-seven years after the

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[4] *Jin History*, 86, "Biography of Zhang Gui": "Emperor Min ascended the throne. . . The Privy Treasurer said to Gui . . . 'During taishi the Hexi was in chaos, and thereafter did not use coins. Bolts of silk were split up into pieces. With cloth thus spoiled, exchange in the market became difficult and the labor of women was ruined for no reason. That the making of clothing for use was not undertaken was the cause of great harm. Now, though the central districts are in disorder, this region is at peace. The Five-grainer should be restored so as to support the exchange of goods.' Gui accepted this advice and set up a system whereby cloth would be accepted for coins. Coins subsequently enjoyed broad circulation and men obtained profit."

[5] Cui Hong, *Sixteen Kingdoms Annals*, "Record of Latter Zhao" states that Shi Le minted Fenghuo Cash in the Summer, 4th month of year 1 of the King of Zhao.

[6] *Jin History*, "Biography of Shi Le."

fall of Liu Bei's Shu-Han, Li Te entered the area. One of his men, Zhao Qin, asserted his independence for a time, but was killed by Li Te. It is not known what coin Li Xiong's government used later on, or whether he minted it himself. During the years Li Shou was in Hanxing (338-343) he minted the Hanxing Cash.[7] [Plate xxxvii,1]

This coin was very thin and small, weighing around 1 gram. It may be divided into two variants on the basis of their inscriptions: One kind is read from top to bottom, is in clerkscript, and is popularly called the vertical Hanxing; the other is read from left to right, is in sealscript, and is known as the horizontal Hanxing. This is China's earliest year-period coin.

History states that Fu Jian used the metal statues of the First Emperor of Qin to mint coins.[8] This is entirely possible. Fu Jian's Former Qin was the most sinicized of all the non-Chinese regimes, and its internal policies were relatively stable. The roads from Chang'an to the various prefectures were lined with locust and willow trees "with a pavilion every 20 *li*, and a post-station every 40 *li*. Travelers took and gave things en route; merchants and artisans traded by the roadside."[9] Under these circumstances, coins must have been in use. Nine of the original twelve metal human figures of the First Emperor had been melted down by Dong Zhuo to mint Small-cash.Two were melted down by Fu Jian, but we do not know what coins they were used to mint.

There is a "Great Xia Zhenxing" coin which numismatists consider to have been minted during the zhenxing era (419-424) by Helian Bobo. With its large perforation and its clerkscript-like inscription, it somewhat resembles Wang Mang's coins.

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Only three such coins are known, and there are those who harbor doubts about them. Helian Bobo attacked Chang'an in 418, and he was not defeated by Northern Wei until 426.

Under Eastern Jin rule old coins were mainly relied upon. These came in large, middling and small denominations. The large ones were called Wheels [*bilun*]. The middling ones were called Four-*wen*, and the small ones were Lord Shen's Cash.

The term *bilun* was descriptive of that coin's large size, which made it resemble a cart wheel. This must have been the Large-spring of Sun-Wu. The history texts even say that the chiwu era old coin was used.[10] In terms of inscriptions, only the Large-spring-equals-thousand would have been minted during the chiwu period. The Large-spring-five-hundred would have been minted during the jiaxiu years. We should not, however, base our dating solely on inscriptions.

The term chiwu old coin must be interpreted as a coin which circulated during the chiwu year period [238-51], because after that time the circulation of coins was banned. Of course the fact that the Sun-Wu Large-spring was in circulation during Eastern Jin proves that the effectiveness of this earlier ban was not great. Either that or they continued to be used among the people at face value, or after a temporary ban their use was restored. The term chiwu Large-spring naturally includes denominations from 500 to 5,000, and all these coins come in small and large variants, with great differences between them, so that not all could have been called *bilun*. That term must have been reserved for large Wu coins.

The significance of the label Four-*wen* is less clear. This label might be glossed as "equal to four cash,"[11] since there were several different sizes of coins circulating then and naturally they could not all have circulated at the same value. If we take the small coins as the standard, the middling kind could have been used at a face value of 4 *wen*. Later, however, during the Xiao-Liang we encounter coins called Taiping Four-*wen* and Four-*wen* Tortoise-back.[12] Hence the term four *wen* might seem to re-

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[7]Earlier numismatists and historians took the Hanxing Cash for a Western Han Elm-pod coin. *Gu Xuan's Coin Catalog* and Du You's *Universal Statutes* both committed this error because of the sentence in the *Han History*, "Treatise on Food and Money" which reads "Upon the rise of the Han [i.e. *Hanxing* in Chinese], because the Qin coins were heavy and hard to use, the people were ordered to mint Elm-pod cash."

[8]*Water Classic*, "Notes on Rivers," 4: "In the First Emperor of Qin's year 26 . . . twelve metal statues of men were cast. . . Later, Dong Zhuo destroyed nine of them to make coins, leaving three intact. Emperor Ming of Wei wanted to move these to Luoyang, but they were so heavy that he did not succeed in doing so. They halted west of the Ba River. The *Han-Jin Annals* states that the metal statues wept, and that was the reason they were not moved further. Shi Hu took them and set them up in the Ye office. Fu Jian moved them back to Chang'an, and destroyed two of them to make coins. Before the last one arrived, Fu Jian rebelled, and the people pushed it into the Shan North River. Thus was destroyed the last of the metal barbarians."

[9]*Jin History*, "Record of the Establishment of Fu Jian," first part.

[10]The *Universal Statutes* and *Universal Record* both refer to it as "the Suns' chiwu era old coin." *Investigation of Literary Remains* merely says that they used an old coin of the Sun clan.

[11]Cai Yun, *Habitual Conversations*, 6, strongly maintains this equal-to-four theory.

[12]Hong Cun, *Record of Coins*, quoting *Gu Xuan's Coin Catalog*.

fer to a coin with a four character inscription [*wen* also meaning "inscription"] like the Taiping-hundred-cash. The Wu Large-spring also, however, had a four character inscription, as did the Shu-Han Value-hundred Five-grainer and even the small Dingping-one-hundred. How could the latter be considered a middling denomination coin? There are also some extremely small Taiping-hundred-cash.

Linked to this is another problem difficult to resolve. This is whether during early Eastern Jin there existed a small Taiping-hundred-cash and a Dingping-one-hundred. If the label Four-*wen* refers to a coin with a four character inscription, then we must note that those small four character coins had not yet been minted or circulated. Either that or the term Four-*wen* was the specialized name of a type of coin.

Perhaps these were not the only privately minted coins during Jin. Other old coins may also have been imitated.[13]

The Southern Dynasties states of Song, Liang and Chen all minted coins.

Liu-Song minted several kinds of coins. The earliest was the Four-grainer minted in Emperor Wen's yuanjia 7 (430). It resembled the Han Five-grainer. Some weigh 3.5 grains, but they are generally less than 3 grams. Naturally, others weigh
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still less. Some bear dots on their reverses, and others on both sides.

In Emperor Xiao's xiaojian 1 (454) a shift was made to the Xiaojian Four-grainer, with the two characters "xiaojian" on one side and the two characters for four grains retained on the other face, on the left and right sides of the hole. [Plate xxxvii,4-8] Those first minted weighed upwards of 2 grams.

There are many variants of the Xiaojian Four-grainer, with varying numbers of dots on their reverses, some incised and some raised. The inscriptions on some are in reverse order, and these could have been minted among the people. Later, the two characters "four grains" were omitted, leaving only the xiaojian year period. These weighed around 1 gram, which would make them two-grain coins.

In yongguang 1 (465) a Two-grainer was in fact minted, with its inscription changed to Yongguang. There was also a Jinghe year period coin. These three two-grainers were the same size, but the Yongguang was only minted for a month, and the Jinghe year period only lasted three months. Hence these two coins are both extremely rare. There is also a "Two-grainer" coin of very similar construction, which weighed around 1.2 grams, and probably was minted at that time. It too is extremely rare.

Liu-Song's coinage is of special significance in Chinese monetary history.

First of all, for the century and a half after the establishment of Jin there is no record of coins being officially minted. This would appear to be a kind of vacuum in monetary history, something unique in the period since Qin and Han. This hiatus only ended with Liu-Song.

Second, ever since Empeor Wu of Western Han brought out the Five-grainer, this designation had been employed by every succeeding dynasty, except when coins were not named after units of weight, as during Wang Mang's time, and with the coins of Wu and Shu-Han. Even Shu-Han, however, had used the label Value-hundred Five-grainer, though this coin's weight far exceeded five grains.

Hence the Liu-Song authorities' change to the name Four-grainer represented a couragious break with tradition. [Plate xxxvii,3,4] Liu-Song's high officials included a great many risen commoners. This was probably the reason for the change. The later change to the Xiaojian Four-grainer was also unusual. Though year-period coins had not been invented by Liu-Song, it made broader use of them.

Qi made plans to mint coins in jianyuan 4 (482), but did not carry them out. In yongming 8 (490) people were sent to Sichuan to mint more than 10 million cash, but halted operations because of high costs.[14] These were probably Five-grainers, but

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[13]The coin dealer Dai Baoting has said that small Half-ouncers made of tutenag and washed with mercury have been excavated in large quantities in the south, particularly in Shaoxing city, in all quarters of the town, and in amounts of 1,000 to 10,000 at a time, mixed with Five-grainers, and bearing the label half-ounce or ounce-half in roughly equal numbers. Size and weight are uniform. He insists that these Half-ouncers are Six Dynasties objects, possibly minted at the same time as the Lord Shen Five-grainers. There are also Large-spring-fifties and Monetary-springs. It is dangerous to date a coin entirely on the basis of the fineness of its metal content, because in ancient times coins were cast at the mines and the copper was not pure. However, if they were excavated in the company of Five-grainers, and in large quantities, that is worthy of note. Some of these Half-ouncers happen to bear rather non-uniform inscriptions. At a glance one can tell that this part of the work was not done in accord with some formal system, but rather that the foundry workmen added them during the manufacturing process as trade or hall marks. They could be place names.

[14]*Southern Qi History*, 37, "Biography of Liu Jun": "In yongming 8 Jun arose and said to Emperor Shizu 'in Southern Guang on the border of the commandery at the foot of Mount Meng there is a city called Meng City occupying 2 *qing* of land. There are four smelters there, each 1 *zhang* high and 1 *zhang* 5

there is no way to distinquish them.[15]

Some identify as Qi coins all or some of what have hitherto been called Immature coins [*zhi qian*] because their inscriptions and construction resemble those of the Xiaojian Four-grainer. These also come from Sichuan, and their reverses sometimes bear intaglio numerals.[16] The label Immature coin is applied to a kind of thin and small Five-grainer.[17] It is also called Pheasant-cash[18] because this coin was used in hunting pheasants. It is approximately 2 centimeters in diameter,[19] but its size varied. This coin was considered ancient even at the beginning of Liang, so it would seem unlikely to have been a Qi coin.

Gu Xuan was a man of Liang times, and was also a numismatist. He has

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concrete things to say about Song's Xiaojian Four-grainer and the Jinghe coin, and so there is no reason why he should have been ignorant of Qi coins. Moreover, Southern Qi did not mint coins for circulation in Sichuan, but to be brought back to the Jiangnan for circulation, and so how could these Qi coins have turned into Shu coins?

There is also a question as to whether marks were still being cut into the reverses of coins in Sichuan during Northern and Southern Dynasties times. Since, however, only something over 10,000 strings of coins were minted on that occasion, we cannot tell how great the possibility was that most of them were used in Sichuan. Nor is it probable that these coins were truly the so-called Immature coins. They were merely about the same size. Their inscriptions are relatively regular and similar to those of Song's Xiaojian Four-grainer.

Still, these could have been Qi coins, and Gu Xuan could have been referring to some other coins as Immature coins, ones with thin and irregular strokes in their inscriptions. The coins referred to here as Shu coins could have been minted by Li Xiong or his successors.

Xiao-Liang minted a great many kinds of coins, and there are many problems concerning them. As soon as Xiao Yan became Emperor, he began to mint coins. These were the two kinds of Five-grainer of tianjian 1 (502). Both were the same size and weight. They probably differed only in the presence or absence of an outer rim. The first type had such a rim. The second lacked it and possibly had a somewhat larger inscription.

We may call the first type the Tianjian Five-grainer. The second type was called by contemporaries the Public-female cash. [Plate xxxvii,10] Somewhat as in the case of the Immature coin, the epithet Female cash here symbolized smallness and thinness, except that the Female cash had been made small through clipping of its edge. Public-female cash referred to a Five-grainer officially minted with such a shaved edge.

Just which Five-grainer the Tianjian Five-grainer is to be identified with is a problem hard to resolve. Following the *Sui History*'s "Treatise on Food and Money," past numismatists have claimed that not only did the Tianjian Five-grainer have a raised outer rim, it also had an inner rim, and so have regarded a very fine and regular, thick Five-grainer with both inner and outer rims as a Tianjian Five-grainer.

But this coin's inscription and construction are too close to those of the later Chen coins. There is no Liang coin of comparable quality. Gu Xuan mentions no inner rim for the Tianjian Five-grainer. He

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chi wide. If you cross the river south from Meng City and go about 100 paces, and dig two *chi* into the level ground there, you will find copper. There is also a pit 2 *zhang* deep where in ancient times copper was dug. A habitation site still exists. Deng Tong [who held a highly profitable franchise to mint coins during early Western Han] was from Nan'an. . . Mount Meng is 200 *li* from Nan'an. This must be where Tong did his minting. In recent days the Liao tribesmen have come out of Mount Meng, and it has become more accessible. If this advice is accepted, profit without limit can be gained.' . . . The ruler accepted this advice, and sent men into Shu to mint coins. Over 10 million were obtained, but as the expense was great, the operation was halted."

[15]Fang Ruo supposed that a Five-grainer resembling the Liu-Song Four-grainer was the Southern Qi Five-grainer. (Cf. *Additional Record on Coins*. This rash statement is accompanied by no real evidence.

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[16]Wang Yirong, *Miscellaneous Notes of the Tianrang Pavilion*, was the first to propose that the Five-grainer Immature coin was a Shu coin. Luo Zhenyu supports this theory. He states: "I say that the inscription makes it clear that it is the Shu Value-hundred Five-grainer. Some reverses have intaglio numerals. Other coins lack them. My collection contains one Five-grainer which cannot be distinguished from the Immature coin. Its reverse bears in intaglio the two characters *nianwu* meaning twenty-five. This may be taken as evidence that these others are Shu coins." (Cf. *Yonglu Diary*.)

[17]Du You's *Universal Statutes* erroneously makes it a Five-grainer without the metal radical on "grain." That is to confuse it with the Lord Shen's Cash. In fact some people conflate these Five-grainers, or some of them, with the Lord Shen's Cash.

[18]The *Record of Coins* quoting *Gu Xuan's Coin Catalog*. The Mao edition of the *Sui History*, "Treatise on Food and Money" makes it the homonymous Pheasant-spring [*zhiquan*].

[19]*Gu Xuan's Coin Catalog* says its diameter is 8.5 *fen*. The *Universal Statutes* makes it 1.5 *fen*, and the *Book Hall of the Original Tortoise* 1.5 *cun*. Gu would seem to be closest.

merely states that the Public-female cash resembles the newly minted (Tianjian) Five-grainer in size and weight. That coin, however, lacked an outer rim, and the Public-female lacked an inner rim. Hence the Tianjian Five-grainer could also have lacked an inner rim.

Of course the Public-female cash had not been issued in a straightforward way, but rather had been privately minted among the people, and these coins were not circulated until 522, with iron coins issued the following year. Presumably the Public-female cash were hoarded by the people and reminted, and those seen by posterity were probably all ones which had been privately minted.

Hence these popularly minted coins would have no bearing on the relationship between the Public-female and Tianjian Fiver-grainer coins. If the latter indeed lacked inner rims, then the 522 issue of Liang Five-grainers were Tianjian Five-grainers. They are small, with diameters of around 2.4 centimeters, and weigh around 2.6 or 2.7 grams. They have outer

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rims, but not inner ones.

Although new coins were minted at the beginning of Liang, old coins formed the principal portion of those in circulation.

According to what the historical sources record, these included the Value-hundred Five-grainer, the Female cash, the Taiping-hundred cash, the Dingping-one-hundred, the Immature coin, the Facing-*wen*, the Fenghuo, and the Spade-spring.[20] Of these the Facing-*wen* is said by some to be a clipped edge Five-grainer.[21] According to this theory, the terms Facing-*wen* and Female coin may be taken as synonymous. Others say that the term Facing-*wen* refers to coins with the same inscription [*wen*] on both sides. Since, however, the former theory was expounded by men contemporary with the coins themselves, it should not be lightly discarded. Perhaps clipped edge Five-grainers only had their outer rims clipped, and when Five-grainers without rims were minted privately, they came to be called Female coins.

In the case of Facing-*wen*, not only were outer rims clipped, but even half the inscription was lost. In other words, one Five-grainer was cut into two concentric coins. The half closest to the outer rim was called a Brim-ring cash, and the half closest to the inner rim was called the Facing-*wen*. [Plate xxxvi,13] Sometimes there remained of the latter only a square frame called a Pierced-ring. The private coins may even have imitated these.

In summary, we can tell from the names of these coins that the old coins in circulation during early Liang differed from those in circulation during early Eastern Jin. During early Eastern Jin there were still large coins. During Xiao-Qi, Xiao Ziliang said that less than one out of ten of the large coins of the lower Yangtze region still existed. By the beginning of Liang, the Value-hundred Five-grainer was the largest surviving coin.

An edict of the Eastern Jin Emperor Xiaowu's taiyuan 3 (378) mentions that people were trans-

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[20]The sources differ on which coins were in circulation during early Liang. The *Universal Statutes* is the most detailed. *Investigation of Literary Remains* copies it. Neither mentions the Value-hundred Five-grainer, but merely refer to a Five-grainer. The *Sui History* "Treatise on Food and Money" and the *Universal Record* include the Value-hundred Five-grainer, but not the Fenghuo or Spade-spring. If we take the *Universal Statutes*' record of weights as our standard, then the following table can be constructed:

Coin Name	Weight	Diameter
Five-grainer	8 grains	1.1 cun
Female cash	5	1
Spade-spring	4.5	1
New Five-grainer (i.e. Tianjian Five-grainer	4.32	
Public-female cash	same	
Taiping-hundred-cash	4	1
Immature cash	4	0.15
Fenghuo	4	1
Five-grainer	3.5	0.75
Dingping-one-hundred	1.5	0.6
Facing-wen	?	?

If there are no errors in the *Universal Statutes*' figures on weights, then the Five-grainer weighing 8 grains must be an erroneous reference to the Value-hundred Five-grainer. The weights of the other coins do not, however, correspond to their sizes. For example, the Public-female cash ought not to be lighter than the ordinary Female cash. The Immature cash weighing 4 grains only has a diameter of 0.15 *cun*, which is not reasonable. *Gu Xuan's Coin Catalog* must be correct. The Taiping-hundred cash only weighs 4 grains. This must be the blank reverse version. Gu Xuan says the wavy line and tortoiseback Taiping-hundred cash weigh 6 grains. This is correct.

[21]*Record of Coins*, quoting *Gu Xuan's Coin Catalog*. Cai Yun's *Habitual Conversations* says: "Five-grainers with rims clipped, with some even losing part of their inscriptions, the metal signific of the character for grain being entirely lost, and the phonetic on the other side of the coin are called Facing-*wen*." [Bruce W. Smith comments that "surviving molds show that coins were cast which had the rim and part of the metal radical [*jin*] missing. Not all clipped coins had really been clipped; some

porting copper cash to Guangzhou to sell to the Yi barbarians, who recast them into bronze drums. Special mention was made of heavy *bilun* wheel coins being so transported in large numbers. Probably a number of heavy coins were being sent across the frontiers to be recast as bronze drums, and so by the beginning of Liang only middling coins remained in circulation. These also varied in size and weight, and when Xiao Yan sent down his edict prohibiting their circulation and permitting only the two new coins to be used, this edict had no effect. Its only consequence was the disappearance of bronze coins and a shift to use of iron cash.

In Liang's putong 4 (523), 12th month, an iron Five-grainer was minted. The reverse bore four radial lines like those on the Four-corner coins of Emperor Ling of Eastern Han. [Plate xxxvii,11-12] Gu Xuan says that in addition to this Five-grainer there were three other iron coins. One was the Great-auspicious Five-grainer. The second was the Great-circulation Five-grainer. The third was the Great-fortune Five-grainer.

All of these were the same size and weight, with diameters of 1.1 *cun*, the same as the Value-hundred Five-grainer. There are, however, no surviving iron Five-grainers this big, and I have only seen clay molds for the Great-auspicious, which are indeed large, but I have not seen the coins themselves.

Moreover, these names are not like those normally used for coins, but instead resemble the labels put on coins to commemorate the opening of a mint. Though some Northern and Southern Dynasties coin names broke with tradition, as with the Fenghuo and the Perpetual-circulation-myriad-states coins, the simultaneous minting of three propitious word coins would not, I suspect, have had putting them into circulation as a goal.

A face-value 10 coin was minted during the time of Emperor Yuan.[22] The histories do not state what coin this was.[23] We may surmise

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that it must have been a Five-grainer, and probably the Two-pillar Five-grainer, which was nearly the same size as the Tianjian Five-grainer, but which is distinguished from ordinary coins by the presence of dots above and below the hole on the obverse side. [Plate xxxvii,13]

Surviving Two-pillar Five-grainers fall into two variant forms. The first is uniform, with an inner rim. The other resembles the Immature coin, weighs 2.5 grams, and could have been privately minted. The histories state that there was a Two-pillar coin at the end of Liang. Later historians and numismatists supposed that the Two-pillar was minted at the end of Liang. This is incorrect.

In Emperor Jing's taiping 2 (557) a Four-pillar coin was minted. [Plate xxxvii,14] Each coin had a face-value of 20 *wen*. Its name is derived from the fact that in addition to the two dots on its obverse, there were also two dots on its reverse. It is about the same size as the Two-pillar coin.

There are only two Chen coins, a Five-grainer and a Taihuo Six-grainer. [Plate xxxvii,15-16] The Five-grainer was minted in tianjia 3 (562).[24] It weighs around 3 grams and has both inner and outer rims. Its inscription and construction are very fine. It has previously been referred to as Liang's Tianjian Five-grainer. The Taihuo Six-grainer was minted in taijian 11 (579), and has a face-value of 10. It weighs more than 4 grams, and is identical in inscription and construction to the Tianjia Five-grainer.[25] The Taihuo Six-grainer is considered the most beautiful of the Six Dynasties coins.

The Northern Dynasties of Wei, Qi and Zhou also minted coins. Generally, Northern Dynasties coins were more regular than Southern Dynasties ones. To put it more precisely, the problem of private coinage was not as serious for the Northern as for the Southern Dynasties, and that is why their coinage now appears to be more regular.

Although Northern Wei established its state very early, for more than a century it retained a nomadic way of life with a natural economy which did not need money. It was not until taihe 19 (495) that it began to mint the Taihe Five-grainer. [Plate xxxviii, 1] This coin's construction reflects a relatively low technical level, its bronze is crude, and its inscription loosely drawn. Compared to contemporary Southern Dynasties coins, however, it is thicker, coins ranging from 3 to 4 grams in weight.

In yongping 3 (510) another Five-grainer was minted which was somewhat more uniform, but was

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were actually cast that way!"]

[22] *Northern History*, "Biography of Yao Senghuan."

[23] The *Yongluo Encyclopedia* quotes the *Southern History* as saying that it had a rim, but lacked an inscription. There is a tradition that such a small coin existed, but it does not seem likely that the official mints would mint a coin without an inscription, particularly one with a face-value of 10. Hence this statement is unconvincing.

[24] *Universal Statutes*, *Universal Record* and *Investigation of Literary Remains* all make it tianjia 5. I have here followed the *Chen History*, "Annals of Emperor Shizu."

[25] Past numismatists have treated another Five-grainer as a Chen coin. That coin lacks an inner rim, and it differs in form of inscription from the Taihuo

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Six-grainer. The inner and outer rims on its reverse are thick,

still awkward. [Plate xxxviii,2] It weighed 3.4 grams and was peculiar in that the crossed legs of the character for five were done with straight lines, and the edges were wider than those of previous Five-grainers. The Taihe Five-grainer's character for five also sometimes bore such straight lines.

In the Autumn of yong'an 2 (529), a change was made to mint Yong'an Five-grainers. [Plate xxxviii, 3-4] These were finely made, and weigh 3.6 grams. The histories all say they were only minted for four months, but no small number have survived. The large ones are mostly uniform, and do not seem to have been privately minted. Probably the halt in their minting at the beginning of yong'an 3
[222]
was only temporary.

Coins were minted several more times after the split into Eastern and Western Wei. Eastern Wei continued to use the Yong'an Five-grainer. The histories say that at the beginning of wuding (543) a new coin was minted, which was still called a Yong-an Five-grainer, but numismatists have never been able to distinguish the Yong'an Five-grainers of Northern Wei from those of Eastern Wei.

In addition to varying in size, surviving Yong'an Five-grainers also come with reverses which are blank, have four radius lines, or have the character for earth [*tu*] above their holes, and it is not known which belongs to what period.

Fewer of them bear the character for earth, and the calligraphy of these differs from that of the other types: On ordinary Yong'an Five-grainers the two characters for five grains are long and thin, and the two legs of the character for five are straight, whereas on those bearing the character for earth, the characters for five grains are nearly square, and the legs for the character five are curved. The coin label Auspicious-cash of that time could refer to this character-earth coin, since the character for earth above the inner raised rim [read as the character for mouth] forms the character for auspicious.

The histories also mention several privately minted coins. For example, during the time of Emp eror Xiaojing, when Wang Ze served as Inspector of Luozhou, he melted down images so as to cast coins called Heyang cash.[26] These must also have been Yong'an Five-grainers, but they cannot be distinguished from the others. It is also said that in Western Wei's datong 7 [541], Eastern Wei had Sparrow-bit Yong'an cash established to prepare for Gao Huan, the King of Bohai. Gao Huan's son, Gao Deng, had a hundred furnaces minting this coin. In Henan they were called the Lord Prefect's Hundred Furnaces cash.[27] Some numismatists say these are the ones with four radius lines on their reverses,[28] but I do not know on what they base this attribution.

Perhaps the difference between the Northern Wei and Eastern Wei Yong'an Five-grainers was one of weight; otherwise they needed only to continue minting the old ones, and not change to a new issue. The small Yong'an Five-grainers resemble the first issued large Yong'an Five-grainers in inscription and construction. Both exist in large numbers, and so must have been national in scope of circulation.

If, however, it was intended to regularize them in wuding 6 [548], they would have had to have had a weight of five grains to stay in circulation, and so the official coins would not have been lightened. The small ones might have been privately minted or minted after wuding 6. The reminting at the beginning of wuding might refer to a recall of bad coins for reminting. The other kinds of Yong'an Five-grainer were probably local issues or were minted under special circumstances.

The Yong'an Five-grainer probably continued in use during early Western Wei, but in datong 6 (540) and 12 [546] changes were carried out. On both occasions Five-grainers were minted. Previous numismatists have not made any study of these two Five-grainers. Some say they were minted of pure copper.[29] There is no basis for such statements.

It is more reasonable to suppose that these two Five-grainers represented continuity with the Yong-an Five-grainer. Their inscriptions and construction must have been similar to it, including the peculiarity of the Yong'an Five-grainer, which was, aside from the wide rim, that the two legs of the character for five were straight lines. Among surviving Five-grainers, in addition to the Northern Wei Five-grainer, there is to be found such a coin. Not only are the legs of the character five straight, there is a straight stroke on the right side near the hole
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which connects the two horizontal strokes of the character for five, and forms what amounts to an

resembling the Northern Wei Yong'an and Sui Five-grainers.

[26]*Northern Qi History*, "Biography of Wang Ze," and Qiu Yue, *Outline of the Statutes of the Three Kingdoms*. There was another name incorporating the characters *heyang*, but I do not know if it refers to the same coin.

[27]Qiu Yue, *Outline of the Statutes of the Three Kingdoms*.

[28]*Record of Coins*, quoting an old catalog.

[29]Feng Yan says this was a coin with a four-radius line reverse. Zhang Tai says its radius was 8 *fen* and that it weighed 2 grains (the original makes it two *qian*) and 5 *li*. Li Xiaomei says that the color of the metal was a deep red, and that the inner rim was thinner toward (the original reads "than") the outside, like a rolling wheel. (Cf. *Record of Coins*.)

inner rim on that side of the hole, though there is no inner rim on the other three sides.

Past numismatists have considered this to be a Sui Five-grainer, and such a coin was probably also used during Sui, but it began to be minted during Western Wei. Some of these Five-grainers are the same size, thickness, fineness of metal, construction, and inscription as the Yong'an Five-grainer, and so it is evident that they were minted during the same period. This was probably the new issue of datong 6. It used the Yong'an Five-grainer molds, but with the two characters *yong'an* removed. The Five-grainer of tatong 12 was probably merely a reduced weight version of the datong 6 [540] Five-grainer, since Eastern Wei had carried out a weight reduction three years previously.

Northern Qi only minted one kind of coin, the Changping Five-grainer of tianbao 4 (553). [Plate xxxviii,10] This is very finely made and weighs around 4.2 grams.

In its early years Northern Zhou used the Western Wei Five-grainer. In baoding 1 (561) it minted a Spade-spring coin, a Five-grainer with a face value of five Five-grainers. [Plate xxxix,1] It weighs around 4.3 grams. The Five-grainer of which it was to be a multiple was, of course, the datong 12 small Five-grainer.

The Northern Zhou Spade-spring is easily distinguished from Wang Mang's Spade-spring. The latter's inscription was in Perpendicular needle sealscript. The Northern Zhou coin employed Jade-chopstick sealscript, with full and thick strokes.

In jiande 3 (574) the Five-agents Large-spade was minted, with a face value of 10, and circulated jointly with th Spade-spring. [Plate xxxix,2-3] The unit of which this coin was a multiple of 10 was not the Five-grainer, but the Spade-spring. The Five-agents Large-spade only weighed something more than 4 grams, but by then the Spade-spring had been reduced in weight.

In daxiang 1 (579) the Perpetual-circulation-myriad-states coin was minted. [Plate xxxix,4-5] It weighed around 6 grams, and was valued at 10 of the Five-agents Large-spades.[30]

The artistic level of Chinese coins suddenly rose during this period: The Southern Dynasties' Chen coins and the Northern Dynasties' Zhou coins were all extraordinarily finely made and beautiful. Moreover, the coins of north and south were identical in construction. All had narrow rims, and their inscriptions all approximated the Jade-chopstick sealscript in calligraphic style. The three Zhou coins and two Chen coins all had inner rims. The Perpetual-circulation-myriad-states coin's sealscript is beautifully elaborate, and it is considered the best coin made since Wei and Jin times.

It is no accident that the coins of the Northern and Southern Dynasties were so similar in construction. This was one more reflection of the development of the practical arts all over China at that time. [It is also evidence for the cultural convergence of north and south via interchange of people and ideas that would soon make possible Sui's reunification of the two regions. EHK]

The Sui Dynasty used only the Five-grainer. The histories state that in kaihuang 1 (589), 9th month, the Five-grainer was circulated, and at the same time they also say that additional new coins were minted. [Plate xxxix,6] This is not to reject the notion that in form these were modeled on the Western Wei Five-grainer.[31] [The Sui founder] Yang Jian's whole

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[30]The face values of Northern Zhou coins are very much muddled by the histories. This is particularly true of the Perpetual-circulation-myriad-states. The *Zhou History*, "Annals of Emperor Xuan" says that one of these was worth ten, and that they circulated alongside the Five-agents Large-spade. This must mean that one of the Perpetual-circulation-myriad-states was equal to 10 of the Five-agents Large-spades, but the *Sui History* "Treatise on Food and Money" says "one was equivalent to 10, and along with the Five-agents Large-spade and the Five-grainer, all three were used together." Thus, it is not clear whether the 10 coins to which one of these was equivalent were Five-agents Large-spades or Five-grainers. The *Six Statutes of Tang*, *Universal Statutes*, *Universal Record*, *Investigation of Literary Remains* and *Sea of Jade* all say that it was equivalent to a thousand, which must be a copyist's error.

[31]That the Sui dynasty used wide rimmed and straight stroked Five-grainers would seem to have been confirmed by excavations. Bao Kang's *Viewing Antiquity Pavillion Draft Collection Continued*: "In Tongzhi year guiyou [1873 –Nb. this is before the beginning of the Tongzhi era EHK], 10th month, 6th day, a stone Buddha was accidentally dug up . . . a day later a square piece of stone was found, some two *chi* in each dimension. There was a uniform depth depression in its middle. Eleven lines of regular script text were cut from it, raised on all four sides of the depression. They were one *cun* wide. Around it were scattered 72 Five-grainer coins, which had been covered by the stone. . . When washed and examined, the stele proved to be an inscription of Sui's renshou 2 [602] commemorating the establishment of the Golden Wheel Temple's pagoda . . . Fei Qing sent me two of the coins. They were thickly covered with earth. Upon examination they proved to be Sui Five-grainers. The body of the coin next to the character for five had a rim, and the crossed legs of the character were straight." Tang Jingu, "Preliminary Report on Excavation of the Tomb of Li Jingshun of Sui in the Western Suburbs of Xi'an," *Archeology*, 9 (1959), states that in this tomb, dated to daye 4 [608], 12th month, there were 5 Sui Five-grainers. These were probably also this type of

family had a very close relationship with Western Wei. His father was an important Western Wei general. His father-in-law was a high official of Western Wei. He himself grew up under Western Wei. So he probably adopted the Western Wei Five-grainer and merely increased its weight.

The Northern Zhou coins were, of course, new ones. The histories state that a thousand of them weighed 4 catties 2 ounces. At that time a catty was equated with

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three ancient catties. with Wang Mang's time probably being considered as antiquity. That is to say, a Five-grainer must have weighed 3.2 grams. Because of private minting, in kaihuang 3 [583] the authorities in the various excise tax stations took 100 coins to serve as standard coins. The capital district, the prefectures, estates and markets all employed such model coins, and hence numismatists of later ages have called this first issued Sui Five-grainer the Established-model Five-grainer.

Rather large numbers of these wide rim, straight-legged stroke Five-grainers have survived in different sizes, and most of them, naturally, are Sui coins, since it was only during the seventeen years from datong 6 that they were minted under Western Wei, and Sui lasted for some 38 years. Also, Western Wei only occupied a portion of China, while Sui unified the entire country. Hence, if the Sui coins were not modeled on the Western Wei pattern, then all of these coins would have to be classified as Western Wei rather than Sui.

Some of the large, wide rim, straight stroke Five-grainers weigh upwards of 4 grams, exceeding the standard weight, but these thick and heavy specimens are rare. Perhaps they are genuine kaihuang 3 Established-model Five-grainers which were intentionally made heavier to encourage the people to raise their standards. Their use by officials would have amounted to an increase in taxes, since ordinary large Five-grainers only weighed something over 3 grams when they matched the standard.

The above Five-grainer was probably not Sui's only coin. During the kaihuang year period [581-601] the imperial princes were granted the privilege of establishing furnaces to mint coins. For example, in kaihuang 10, the Prince of Jin, Yang Guang, was granted five furnaces for minting coins in Yangzhou. In kaihuang 18, the Prince of Han, Yang Liang, set up five furnaces in Bingzhou. On the pretext that coins were scarce among the people of the south, Yang Guang further asked that coins be minted at Baiding Mountain, Ezhou, where a copper mine existed, and so his father permitted him to establish a further ten furnaces. The Prince of Shu, Yang Xiu, also set up five coin furnaces in Yizhou.[32]

Were the coins minted by these princes up to the standard of kaihuang 1? In particular, could the headstrong and energetic Yang Guang have set up his own standards? In fact there are several types of Five-grainer which could have been minted by the princes. Of these, the most important is the so-called White-cash. [Plate xxxix,7]

The *Tang History* "Treatise on Food and Money" statement that this coin was minted at the end of Sui is absolutely incorrect. These coins are extraordinarily fine, and uniform in thickness, weight and size. They simply could not have been minted at such a time of troubles. Most contain a high proportion of tin and lead, which is what gives them their whitish color, and makes the label White-cash quite appropriate, though some are not white. The addition of tin and lead when casting coins began around kaihuang 5 [585], and was done under government regulations.

These White-cash very possibly could have been minted in Yangzhou by Yang Guang. There is no question but that these are Sui coins.

First, their color corresponds to that of the White-cash mentioned in the histories.

Second, their construction has several points of correspondence with that of the abovementioned Established-model Five-grainers.

For example, there is a straight line on the side of the character for five forming an inner rim, there is a wide outer rim, and the reverse is like that of the Established-model Five-grainer, with thick inner and outer rims. It differs in being somewhat smaller, but some heavier ones still weigh something over 3 grams. Strokes of the inscription are very delicate, and the calligraphy does not resemble

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that of the Established-model Five-grainer, but rather that of the Chen Five-grainer, with its curved-leg character five.

Such characteristics not only do not obviate the possiblility that these coins were minted by Yang Guang, but instead strengthen that possibility. Yang Guang was the commanding general during the pacification of Chen, and kaihuang 10 was the year after Chen's fall. In the ordinary course of events Yang Guang must have encountered quite a few Chen coins, and must have discovered that the calligraphy on the Chen coins was much handsomer than that on

wide rim, straight stroke Five-grainer.

[32] *Universal Statutes*, "Treatise on Food and Money," 9, "Coins," latter part.

Wei coins. The Sui later adopted other aspects of the Chen and Liang systems, as for example, their weights and measures standards.

Another type of Five-grainer is bigger than the White-cash, and its outer rim is narrower, and though its inscription resembles that of the White-cash, is not as finely done. Its reverse still more closely resembles that of the Sui coins.

In the past numismatists have said it is a Chen Five-grainer, but it has no points of resemblence to the Taihuo Six-grainer, the latter having an inner rim, a small hole, and being finely made, whereas this Five-grainer lacks an inner rim, has a large hole, and is not at all fine. Hence it is probably a Sui coin. It weighs around 2.5 grams. Some large ones have rather different calligraphic strokes. Perhaps these were minted by Yang Guang in Ezhou. [Plate xxxix,8-9] There is also a small, wide-rimmed coin with straight-stroke legs on the character five, and lacking a line next to the character five which could have been minted by another prince.

Five-grainers were minted from Emperor Wu of Western Han's yuanshou 5 [118 B.C.] until Tang wude 4 [621 A.D.], a period of more than seven hundred years. They were minted publicly and privately in a complex variety of variant forms, particularly during the several centuries of Wei, Jin and the Northern and Southern Dynasties, when there appeared a number of varying forms and sizes.

The names these went by in the histories are also extraordinarily numerous. To match these names with particular coins is very difficult.

Moreover, a number of coins metamorphosed out of the Five-grainer, such as the Five-grainer without the metal radical, the Five-metal and Five-*gong*, as well as some without inscriptions. Most of these were privately minted, and there is no way to trace their origins. One such is an iron Five-metal which some say is a Shu coin, but whose inscription resembles that of a Sui Five-grainer.

There are other coins unrelated to the Five-grainer, but which can be assigned to this period on the basis of their construction. Aside from the previously mentioned Liang-made New-spring, there are the Great-purity-abundant-joy, the Righteous-circulation, the Zouyuzhi, and the Five-[][a] iron cash.

The inscription Great-purity-abundant-joy is read by some as Heaven-purity-abundant-joy. The arrangement of the characters is very unusual. The characters for Great and Purity appear horizontally both atop and below the hole. Most have four radius lines on their reverses. They are made like the Yong'an Five-grainer and the small Sui Five-grainer, and are almost the same size as the small Yong'an Five-grainer.

Both the Former Liang and Xiao-Liang had a taiqing [great purity] year period, but the Former Liang's taiqing (363-376) was 150-160 years before the Northern Wei yong'an period, and such a coin could not have existed then. Xiao-Liang's taiqing (547-549) occurred precisely during the period when the Northern Dynasties were using Yong'an Five-grainers,

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and most of the Great-purity-abundant-joy coins have come from the south, which fits the Xiao-Liang hypothesis. At that time, however, the Xiao-Liang was heavily circulating iron coins, and it would seem that they could not have minted copper cash for circulation.

Some assert a connection between the words Great Purity and religious Taoism. They note that religious Taoism had three states of consciousness: the jade purity sagely state, the higher purity true state, and the great purity immortal's state. The phrase "riding the clouds astride a dragon, above and below is the Great Purity" is to be found in Ge Hong's writings. Though the Northern and Southern Dynasties was a period when Buddhism flourished, almost all Chinese charm coins which reflect religious influence are of Taoist origins.

The two characters meaning abundant joy signify that when the harvest is abundant, the people will be joyful. Six Dynasties literature yields the phrases "the market is not abundant and joyous"[33] and "the commoners had abundance and joy."[34] Hence this also could be a good luck phrase coin.

The Righteous-circulation was only recorded by numismatists in late Qing times.[35] It is the same size as later value-5 coins, and is thick and large, resembling the Large-spring-five-hundred in construction. Its inscription is in the Jade-chopstick sealscript. The two characters meaning righteous and circulation are divided between the two sides of the coin's hole. There is a rim.

According to numismatic records[36] the Zouyuzhi coin has a diameter of over 7 *fen*, and its hole a diameter of over 3 *fen*. Its construction and reverse rim make it closely resemble the Changping Five-grainer. The two characters *zou* and *yu* are in something close to clerkscript, and the remaining two characters are in an approximation of sealscript. The two styles do not harmonize. There was a place

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[33] *Record of the Three Kingdoms*, "Record of Wei," 23, "Biography of Yang Jun."

[34] *Jin History*, "Biography of Fu Jian."

[35] Cf. Weng Shupei, *Collected Investigations of Ancient Coins*.

[36] Cf. *Collected Investigations of Ancient Coins*, and *Miscellaneous Chants on Ancient Coins*.

called Zouyu during Han, but place names had not been used as coin names since Qin-Han times, except for the intaglio inscription Four-grainer. Probably this was not a coin put into actual circulation. The coin itself has, I have heard, been buried along with its collector owner.

The Five-[][a] iron coin is said by some to have been minted by Gongsun Shu because it was excavated in Chongqing, Sichuan, but that dating does not fit the fact that the inner and outer rims on its reverse resemble Sui coins.

The Six Dynasties was a period of change in Chinese history. Before Jin crossed south of the Yangtze, the center of the Chinese economy was in the north, and production in the south was so backward that a number of places did not use money. After Jin moved south, the economic and cultural center also moved south, and the circulation of coins was greatly extended.[37]

The monetary systems of the Northern and Southern Dynasties played a transitional role in Chinese monetary history.

First, just to speak of the names of the coins, ever since the Qin Half-ouncer, all coins had been named in terms of their weights. Even though the coins' names might not necessarily correspond to their actual weights, these coins still fell within the category of a weight measure coinage. After Sui, coins were no longer named after their weights. Northern and Southern Dynasties coin names were in the process of undergoing this transformation. Coins like the Spade-spring, Five-agents Large-spade and Perpetual-circulation-myriad-states broke with past traditions for naming coins. The Hanxing, Xiaojian, Taihe Five-grainer and Yong'an Five-grainer were the predecessors of later ages' year period names for coins.

Second, one may speak of the calligraphy of the coin inscriptions. Before the Six Dynasties, seal-script was always used. After the Six Dynasties, clerkscript or regular blockscript was mostly used. There were also many variations in the calligraphy of Six Dynasties coins, as for example in the Hanxing's

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inscription, which was close to being clerkscript, reflecting the development of Chinese calligraphy.

These several centuries were a great period in the artistic history of China. Buddhist influence in the arts brought a transfusion of foreign blood into the original body of China's plastic arts, and these arts achieved a high degree of development.

The general artistic level of coins was very high. The calligraphy of the Xiaojian coin's inscription, and the inscriptions and construction of Southern Chen and Northern Zhou coins all display a high artistic level.

People might will ask why, given the fact that Liu-Song and Xiao-Liang of the Southern Dynasties ruled the longest, and their rulers all encouraged the arts, producing such famous painters as Lu Shenwei and Zhang Sengyu, their coins make so weak an impression on people? This is because most Song and Liang coins seen in later times were privately minted. Both of these dynasties had inflationary policies, and their government expenditures were very large. We can imagine that taxes were also very heavy. All of this encouraged a flourishing private coinage, and private coiners care little for the artistry of their coins.

There are some handsome officially minted coins. For example, the Xiaojian Four-grainer's leek-leaf script can evoke in one's imagination the refined literary style of that period, and may even remind one of the slim torsos and graceful draperies of Northern Wei Buddhist icons. The same technique is used to form the strokes of the character *xiao* as was used for the robes in the Northern Wei relief sculpture of the Empress making obeisance to the Buddha. It would appear that Wu Daozi's depiction of the water lily or orchid leaf was derived from this technique. The brush strokes of the two have certain points of resemblance. Or take the two-grain Xiaojian. Although it is small, it is strikingly beautiful. Both in construction and inscription, its artistic level is high.

[37] *Liu-Song History*, 66, "Biography of He Shang": "When Jin moved south of the river, its borders were not broad, and the local customs did not encourage general use of coins. . . Now the prince has somewhat broadened their use, the sound of his teachings is heard afar, and strings of metal are spread about. Therefore, the wild submit, something which had hitherto not been attained, and all place them in circulation." *Liu-Song History*, 81, "Biography of Liu Xiu," yuanjia 25 [448]: "Previous to this Hanchuan used only cloth as money. Xiu's order to use coins has brought profit to the masses down to the present."

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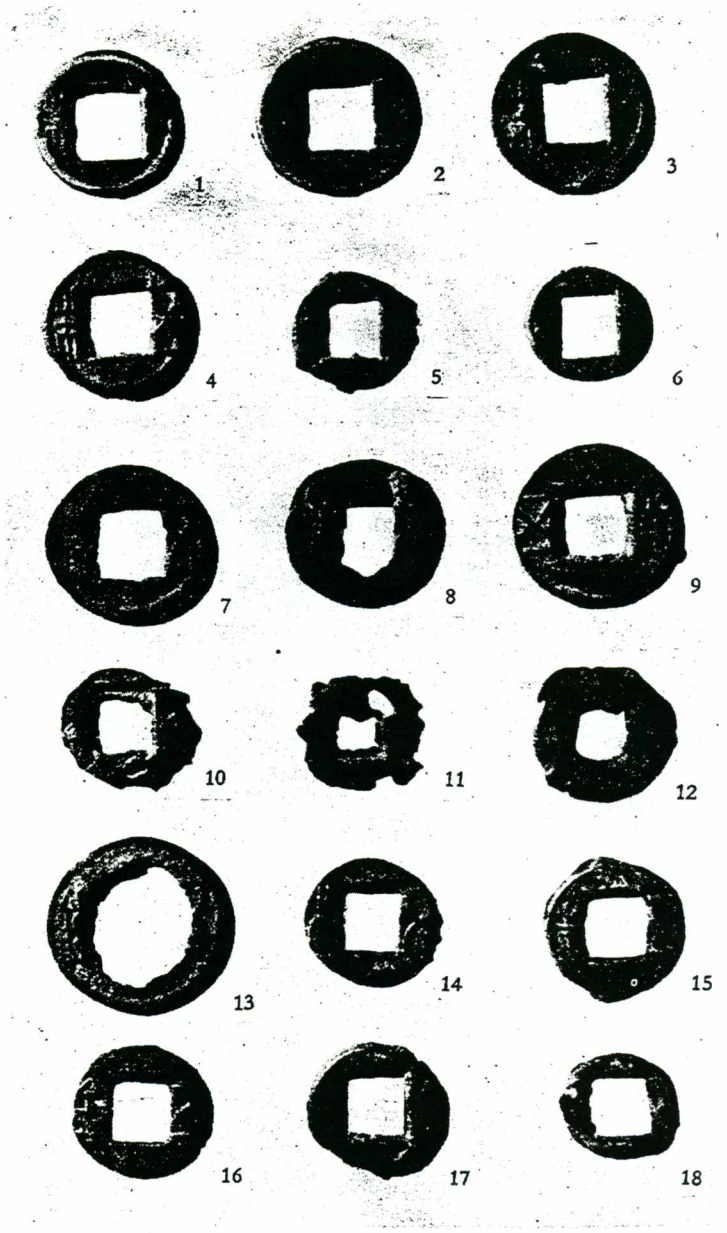
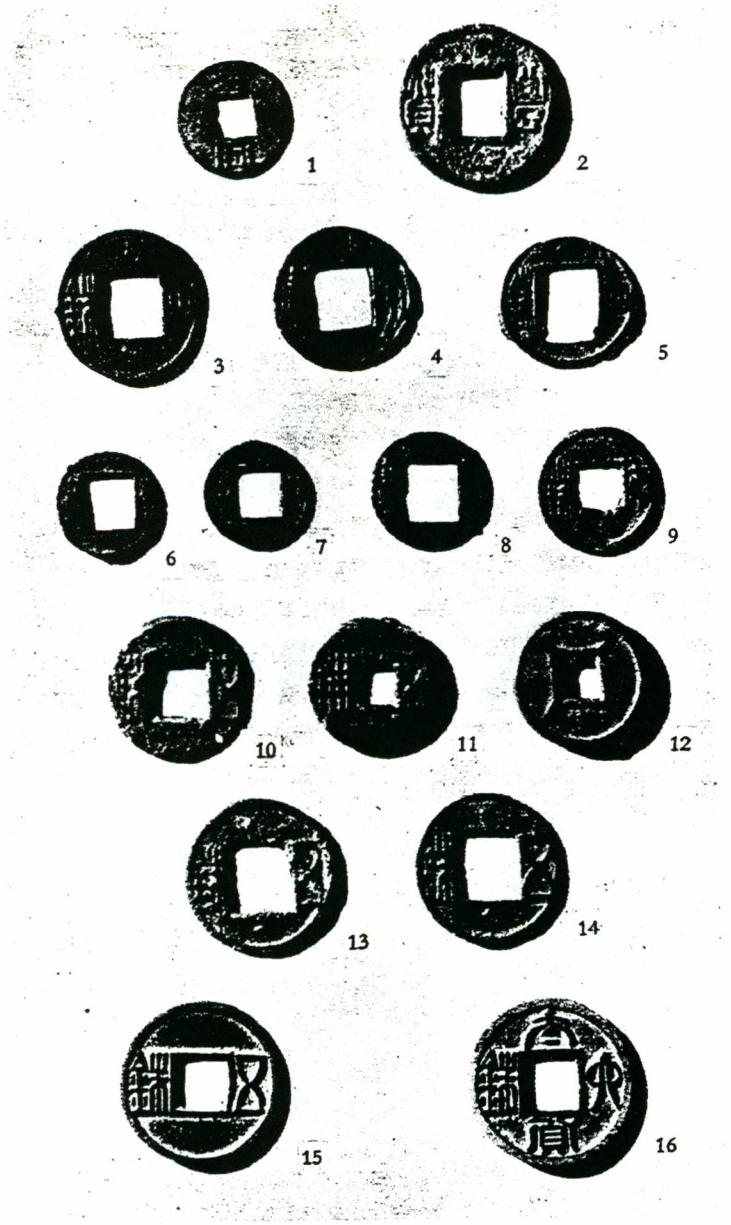


圖版三十六　六朝的私錢

第1、2兩品一般認爲是晉沈充所鑄，俗稱沈郎五銖，或沈郎錢。第7品可能不是私錢，而是齊梁間的官爐錢。第10品和第14品爲剪邊五銖或缺邊五銖。第13品爲緣環或鑽鑿。第15品爲鉛質五朱。第16品爲五金。第17品和第18品沒有文字。

PLATE XXXVI. SIX DYNASTIES PRIVATE COINS

Numbers 1 and 2 are generally believed to have been minted by Shen Chong of Jin, and are popularly called the Lord Shen Five-grainers or Lord Shen's Cash. Number 7 may not have been privately minted.It may be a coin from the Qi or Liang official mints.Numbers 10 and 14 are clipped edge or broken edged Five-grainers. Number 13 is of the Brim-ring or Pierced-ring type. Number 15 is a Five-grainer made of lead. Number 16 is a Five-metal. Numbers 17 and 18 lack inscriptions.



圖版三十七　兩晉和南朝的錢幣

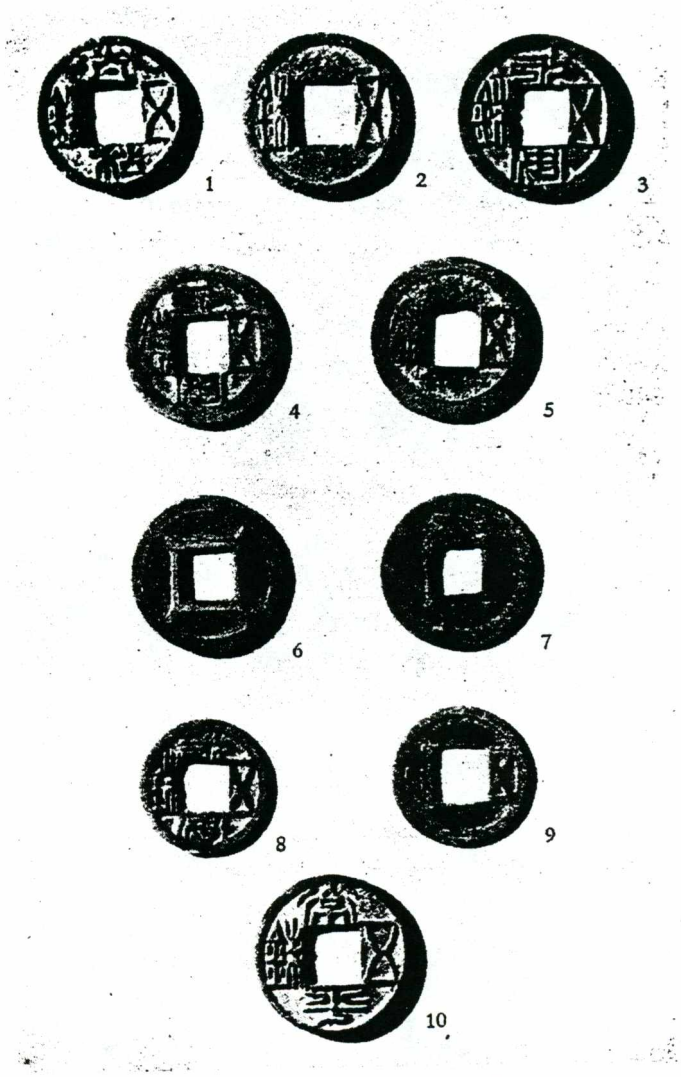
1.李壽的漢興。 2.石勒的豐貨。 3.劉宋的四銖。 4.孝建四銖。 5.孝建四銖之背。 6—7.減重後的孝建四銖。 8.孝建(二銖)。 9.兩銖。 10.蕭梁的公式女錢。 11—12.蕭梁鐵五銖的面和背。 13.二柱五銖。 14.四柱五銖。 15.陳五銖。 16.太貨六銖。

第15品過去被看作梁五銖，但文字、製作同陳錢一樣。

PLATE XXXVII. JIN AND NORTHERN AND SOUTHERN DYNASTIES COINS

1. Li Shou's Hanxing. 2. Shi Le's Fenghuo. 3. Liu-Song's Four-grainer. 4. Xiaojian Four-grainer. 5. Reverse of Xiaojian Four-grainer. 6-7. Xiaojian Four-grainer after weight reduction. 8. Xiaojian (two-grain). 9. Two-grainer. 10. Xiao-Liang's Public-female Cash. 11-12. Obverse and reverse of Liang iron Five-grainer. 13. Two-pillar Five-grainer. 14. Four-pillar Five-grainer. 15. Chen Five-grainer. 16. Taihuo Six-grainer.

Number 15 has in the past been treated as a Liang Five-grainer, its inscription and construction are identical to Chen coins.



圖版三十八　北魏和北齊的錢幣

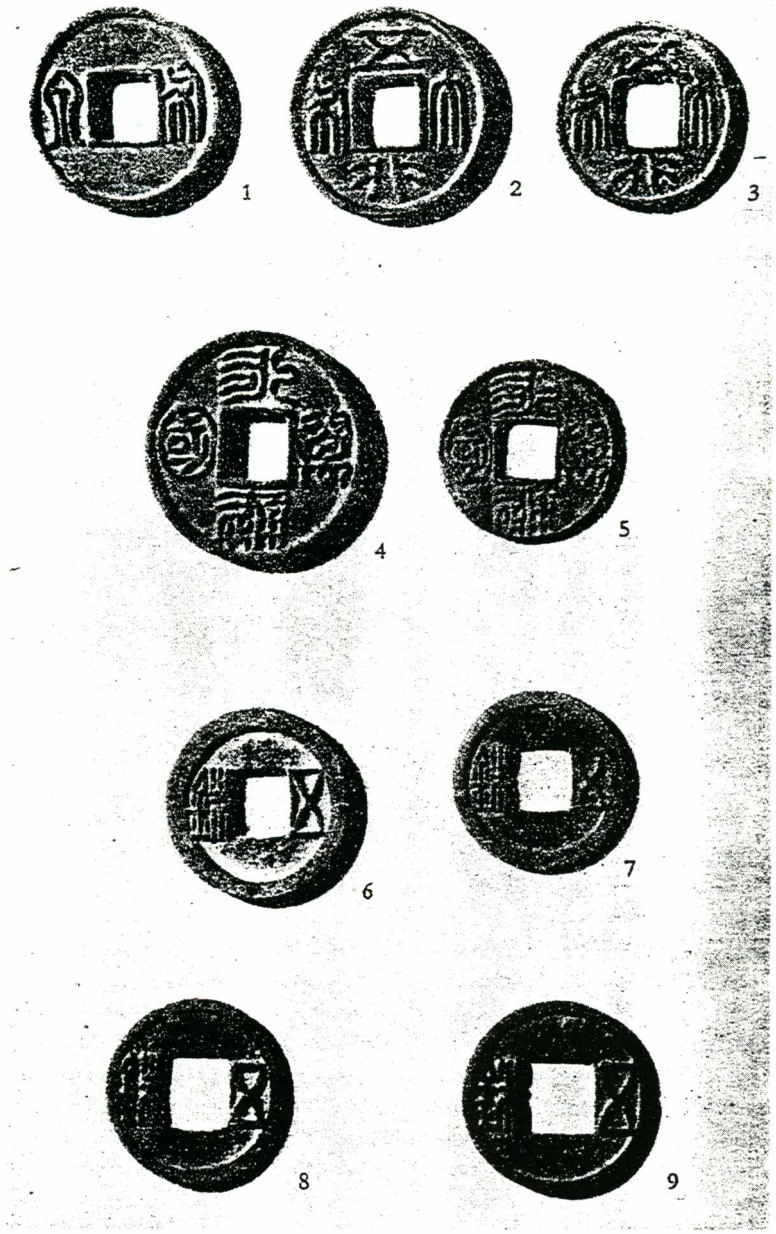
1.北魏的太和五銖。 2.永平年間的五銖(北魏五銖)。 3—4.永安五銖。 5.西魏的五銖(?)。 6.四出永安五銖之背。 7.土字永安五銖之背。 8.東魏的小樣永安五銖。 9.西魏的小樣五銖(?)。 10.北齊的常平五銖。

第5品和第9品舊作隋五銖，但第5品的文字、製作和銅色同第4品完全一樣，似爲同時所鑄。隋五銖可能是仿造它的。

PLATE XXXVIII. NORTHERN WEI AND NORTHERN QI COINS

1. Northern Wei's Taihe Five-grainer.2. Five-grainer of the Yongping year period (Northern Wei Five-grainer). 3-4. Yong'an Five-grainer. 5. Western Wei Five-grainer (?). 6. Four radius-line Yong'an Five-grainer's reverse. 7. Reverse of earth character Yong'an Five-grainer. 8. Eastern Wei's small Yong'an Five-grainer.9. Western Wei's small Five-grainer (?). 10. Northern Qi's Changping Five-grainer.

Numbers 5 and 9 were once mistaken for Sui Five-grainers, but the former's inscription, construction and quality of metal are identical to number 4's, and so they would seem to have been minted during the same period.The Sui Five-grainer could have been modeled on this coin.



圖版三十九　北周和隋的錢幣

1.北周的布泉。 2—3.五行大布。 4—5.永通萬國。 6.隋開皇時的五銖。 7.楊廣的五銖(白錢)。 8—9.隋代賜爐所鑄的五銖(?)。

PLATE XXXIX. NORTHERN ZHOU AND SUI COINS

1. Northern Zhou's Spade-spring. 2-3. Five-agents Large-spade. 4-5. Perpetual-circulation-myriad-states. 6. Sui kaihuang period Five-grainer. 7. Yang Guang's Five-grainer (White-cash). 8-9. Five-grainer minted at Sui Dynasty awarded furnace (?).

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2. Gold and Silver

During the several centuries from Jin to Sui, gold and silver became more abundantly used, particularly silver. This was in large measure a matter of foreign influence, since places using gold and silver were mainly in the southeast and northwest. What is now northern Vietnam and Canton were then foci of Chinese overseas trade. Persians were numerous there, and they used gold and silver. The northwest was the gateway for China's land trade, and had very close relations with places like Byzantium and Persia. Because the domestic coinage was in confusion, it was easy to find acceptance for gold and silver in other places as well.

Gold and silver had never completely lost their roles as money in China. Though since Eastern Han instances of royalty's use of gold to make gifts had declined, this did not necessarily mean that gold and silver were losing their monetary functions. They were used as money to virtually as great an extent as during Han. Only the quantities involved had changed, not the substance. In fact the changes in quantities were superficial. Royalty made less frequent use of gold and silver because specie had flowed into private hands, and private employment of specie for gifts or hoards[1] may well have increased, but was not fully reflected in the documentary sources.

That gifts of gold declined in number did not mean that China no longer had any gold, or that China's gold-producing areas had become played out. In yanchang 3 (514) Emperor Shizong of Latter Wei still had over a thousand gold-mining households in Hanzhong panning for gold in the sand of the Han River, and paying a tax on it at the end of the year.[2] So gold and silver continued to be produced. Since they are not used up in consumption, even if new production had declined, their total quantity would still have increased.

The price of specie rose from Eastern Han on, especially from Wei and Jin times on. During Western Jin the most commonly used unit of gold changed from the catty to the ounce.[3] The price of one ounce ranged from 6,250 cash[4] to 10,000 cash.[5]

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[1] *Jin History*, 63, "Biography of Duan Pichan": "Liu Yao was harassing Luoyang. Wang Jun sent the Protector General Wang Chang hurriedly by land along with his younger brother Wenyang and his cousin Mobei to attack Shi Le's state of Xiang. Le was defeated and returned to his fortifications. Mobei pursued him to the gate of his fortifications where he was captured by Le . . . Le returned him for a ransom of 250 fine horses, and one trunk each of gold and silver."

The *Compendium on the Various Arts*, 83, quotes the "Additional Biography of Bing Yuan": "Because of the intense disorder, Yuan moved to Liaodong. At that time his commandery colleague, Liu Pan and the people of Liaodong joined to carry off the Grand Administrator, Gongsun Du. Du figured out what was intended and arrested his family so that Pan would desist. Du said there was a hoard that Liu Pan jointly held with him. Pan was pressed to turn it over to Yuan. . . The Donglai Grand Administrator and Grand Clerk, Zi Yi, had hitherto been righteous, and Yuan wanted Pan to entrust it to him. When Pan was about to leave, he gave the sword he was carrying and three cakes of gold to Yuan. Yuan accepted the gold but declined the sword."

Northern Qi History, 47, "Biography of Song Youdao": "Youdao entered the ministry and impeached the Grand Clerk of Xianyang, Wang Dan; the Grand Guardian, Sun Teng; the Minister of the Masses, Gao Longzhi; the Minister of Works Hou Liang; the Manager of the Affairs of the Masters of Writing, Yuan Bi; and the Prefect of the Masters of Writing, Ma Ziru. He accused them of being involved in official loans in gold and silver, extorting taxes and payments. Though he did not specifically accuse them of being involved in bribery, in the end they did not avoid taking advantage of their position and wealth."

Zhou History, 22, "Biography of Liu Qing": "There was a merchant carrying 20 catties of gold to the capital to engage in trade."

Sui History, 78, "Account of the Fine Arts: Yang

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Bochou": "Someone had several ounces of gold which he and his wife had jointly saved. Afterward the gold was lost. The husband thought the wife was turning rebellious, and was about to drive her out, when she complained of the injustice and made a complaint before Bochou. Divination was carried out. He said the gold was still present. He called out everyone in the family, and pointed to one man, saying this fellow could bring the gold out. The man flinched, but promptly produced the gold."

[2] *Wei History*, 110, "Treatise on Food and Money."

[3] *Jin History*, 26, "Treatise on Food and Money": "In Emperor Min's western residence there were many starving people. A *dou* of rice was two *jin*." *Ibid.*, "Annals of Emperor Min": "Tenth month. Great famine in the capital districts. A *dou* of rice was two ounces of gold."

[4] *Master Sun's Calculation Classic*, latter part: "Now, if you have one catty of gold which is worth 100,000, then how much is an ounce worth?" Also, the *Calculation Classic of Marquis Yang of Xia*, latter part: "Now, there is one catty of gold, which is worth 100 strings of cash. How much is one ounce worth?" Both of these books were likely written during Wei-Jin-Northern and Southern Dynasties times, particularly the *Calculation Classic of Marquis Yang of Xia*, since it employs the string as its unit, which was a practice employed from Northern and Southern Dynasties or Wei-Jin times on.

[5] Ge Hong, *Accounts of Spirits and Immortals*, "Yin Gui": "There was a man who owed an official a million cash. He was

Probably these two prices are for different times. The first price may be for Western Jin, and the second for Eastern Jin.

During Northern and Southern Dynasties times specie was commonly reckoned by the ounce.[6] The tendency toward inflation then was greater than during Eastern Han. There could have been a number of causes for this inflation: Reduction in weight of the copper cash, a surplus of imports in foreign trade leading to an outflow of gold, increased domestic demand for gold by artisans and for other purposes, and hence the necessity to open mines with higher costs of production. Of still greater importance, I suspect, was

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a reform in the system of measures which made the catty and ounce even heavier.

China's coinage had already been lightened during Eastern Han. During Six Dynasties times especially severe reductions in coins' weights had occurred, and it was natural that coins' purchasing power would have fallen.

Materials are extremely scarce concerning the circumstances of money's circulation during Jin. At that time the quantity of Five-grainers surviving from the Cao-Wei period was not great. Shu-Han coins must have remained in circulation. Later, after the destruction of Wu, its coins must also have remained in circulation. Coins of such varying sizes and weights must not have circulated at equal values. It is possible that with small coins as the basic unit, large coins would have circulated at their face values. Small coins like the Shu-Han Value-hundred and Value-one weighed less than 1 gram, one-fifth of the weight of the Western Han Five-grainer.

If a gold price of 10-20,000 cash was expressed in terms of these small coins, it would be easier to explain. Thus, the price of gold would actually only have increased 3.8 times. The Western Han ratio of one catty to 10,000 cash represents a copper price of gold of 1:130. The Western Jin price of one ounce of gold for 10,000 cash represents a ratio of 1:500. During Western Jin an ounce was 16 grams and a small coin weighed 8 centigrams.

During Eastern Han times trade with Rome was mostly in the hands of Parthian merchants who made Petra, north of the Persian Gulf, their entrepot. The local name for Petra was Rekem (Chinese Lijian), which was used in the Chinese histories as one of the names for Rome (or Great Qin).

From 162 to 164 A.D. there was a war in Parthia, the road from the Persian Gulf to Rekem was broken, and as a consequence east-west trade was likely temporarily halted. Hence some have said[7] that the delegation supposedly sent by Rome to China in 166 A.D. was actually made up of Syrian merchant imposters. They came by the sea route, and hoped to establish direct relations with China so as break the Parthian merchants' monopoly. Thereafter China's trade with the west could come by sea, either from Annam by sail to Ceylon, and then by transshipment to the Red Sea, or by road from Yunnan to India's Bay of Bengal.

The land route to the west was probably not completely blocked, since the military base established in Loulan by Emperor Wu of Western Han was still in Chinese hands during Western Jin, and

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placed in bonds. The lord went to a rich man and borrowed several thousand cash to give him. He ordered him to acquire tin and obtained 100 ounces. After smelting it down, he threw an inch of a drug into it, and turned it into gold to repay the official." Ge Hong, *Bao Pu Zi*, 4, "Gold Cinnabar": "In ancient times a *jin* of gold was one catty. Now it is two catties, and it exchanges for only a little over 300,000 cash."

[6]During Northern and Southern Dynasties times, the catty and the ounce were both used as units for specie. Zhao Yi, *Balanced Scales Collected Investigations*, 30, "Reckoning Gold and Silver by the Ounce," mentions this question. Katō Shigashi, *Studies of Gold and Silver Found in Tang and Song Times*, chapter 11, section 1, also discusses this problem. Zhao Yi mainly bases his account on the official histories of the Northern and Southern Dynasties. Katō Shigashi uses the Song, Qi, Liang, Chen, Wei and Sui official histories. None of these works is complete.

Katō Shigashi's conclusions are that the *Liu-Song History* and *Wei History* only employ the catty, but that from Southern Dynasties' Liang and Northern Dynasties' Zhou on only the ounce was employed. References to the ounce in Sui times were especially numerous.

This approach suffers from no great defects, but it could easily give people the impression that from Han right down to Liu-Song and Northern Wei, specie was reckoned only by the catty, and only from then on did the ounce become the unit of account. This would be incorrect. The ounce was already being employed during Jin. There are surprisingly few references to specie in the *Liu-Song History*. Katō Shigashi could only find one item (the "Biography of Deng Yuan," which contains a reference to 500 catties of gold and silver), and of course this is insufficient to show that during Liu-Song specie was always reckoned by the catty, and not by the ounce.

The *Wei History*, "Treatise on Food and Money" contains the words two piculs of silver ore yield seven ounces of silver, and is this not use of the ounce as a unit? We can only say that in this matter as well the Northern and Southern Dynasties period was an age of transition from the Han pattern of using the catty to the Tang-Song pattern of using the ounce as a unit.

[7]F. Hirth, *China and the Roman Orient*, p. 173.

as silks from that time have been excavated there, the silk trade evidently still continued.[8]

In the third century A.D., the time when China's Three Kingdoms were being established, someone from the Roman Empire discovered the "golden road to Samarkand." It was probably not until after Emperor Yuan retreated across the Yangtze that this base was abandoned, and only then did the sea route become the dominant one for trade.

Perhaps these land routes were before long taken over by people of the Northern Dynasties, since from the fourth to the sixth centuries the Byzantine Empire imported large quantities of Chinese silk. After being woven in Constantinople, the silk was transported to Europe for sale at high prices.

In the sixth

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century two Nestorian pilgrims carried Chinese silkworm eggs back to Constantinople in a hollow bamboo tube, revealing the secret of how to make silk to the Byzantine Empire, so that they no longer were entirely dependent on China for their supply.

It is said that the Byzantines paid gold for Chinese silk. This is attested by the discovery of Byzantine gold coins in Xinjiang and Luoyang tombs,[9] as well as by a statement in the *Sui History*, "Treatise on Food and Money" that during the baoding year period (561-565) of Emperor Wu of Latter Zhou the commanderies of the near northwest used gold and silver coins from the western frontiers. The *Notes on the Water Classic* also mentions that the coins of []ª were more numerous than those of China.[10]

How much of the profit from this silk flowed into or was retained by China is a question awaiting study, since China also had high priced imports, like glass. Though the price of silk rose, the prices of imports were not low either. A glass mirror had a price of a million strings, which would have burdened even the national treasury.[11]

Nevertheless, the price of gold during the Northern Dynasties period was low, and when Liu Cuan of Southern Qi went to Northern Wei he said that gold and jade were too cheap in the north. The governments of the Northern Dynasties said themselves that gold was produced in the hills and from the rivers, but perhaps exports exceeded imports then among the Northern Dynasties, while the Southern Dynasties had a surplus of imports. Moreover, the price of gold in the north was low only compared to the price in the south then, and not compared to the Western Han price.

Demand for gold by craftsmen was probably far greater during Jin and Northern and Southern Dynasties than had been the case during Han. Gold jewelry in particular was in broader use than during Eastern Han. This can be discerned both from contemporary written records and later excavations of tombs.

Liu Xi of Han times' *Explanations of Names*, under the heading "Jewelry" lists forty to fifty kinds of jewelry, of which only tweezers and ornamented hairpins were of metal, and it is not certain if these were made of gold. In Jin and Northern and Southern Dynasties works, however, gold ornaments are frequently mentioned.[12] Under Emperor Houfei of Song, Liu Yu learned how to smelt lead, gold, and silver.[13] Evidently gold and silversmiths were numerous then.

Gold was frequently circulated in the form of objects of adornment. For example in Southern Qi's jianyuan 2 (470), Zhou Panlong was helping Huan Chongzu attack Wei when Xiao Daocheng sent him twenty gold hairpins.[14] Emperor Wu of Liang, Xiao Yan, in his song "The Water in the River" has the line "twelve gold/metal hairpins on her head." In taiping zhenzhun 5 (444) Northern Wei issued an edict banning all those of rank from prince and duke on down from keeping gold and silversmiths in their

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[8]Sir Aurel Stein, "Central-Asian Relics of China's Ancient Silk Trade," *Toung Pao*, Series II, Vol. XX, p. 130.

[9]Cf. note 31.

[10]Li Daoyuan, *Water Classic*, "Notes on the Rivers": "After the defeat of the Yuezhi, their King Sai went south and took over []ªbin, controlling Xiancheng. The land was flat, and lacked for nothing --gold, silver, precious stones, unusual beasts and rare things-- surpassing those of China. It was a large country."

[11]*Liang Sigong's Diary*: "A large southern ship came from India in the west to sell a glass mirror, which was one *chi* 4 *cun* in breadth, and weighed 40 catties. It was bright and clean inside and out, so that if one put a colored object in front of it and looked, one could not tell the thing from the reflection. I asked its price and was told it was a million strings of *wen*. If the Emperor ordered the officials to calculate it, there would not be enough in the treasury. The merchant said that this thing of beauty originally belonged to the King of the Boundaries of Heaven. There was an auspicious event. A Heavenly tree brought great rain, and the rain filled a jewelled mountain. The mountain could not hold it all. A large animal's meat was thrown in. The meat in the hoard rotted, and a crow vomited out this treasure. No one in the country understood this, and none dared meet the price." (*Taiping Yulan*, 808.)

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[12]Gan Lingshen of Jin's *Spirit Search Record* contains numerous references to metal jewelry. References to metal hairpins are especially common.

[13]*Liu-Song History*, 9, "Emperor Houfei."

[14]*Jiankang Veritable Record*, 15, "Qi."

private establishments.[15] Obviously golden jewelry was abundant.

Gold and silver jewelry are rather common among the grave furniture of tombs of that period excavated in modern times. Grave furniture in Western Han tombs is virtually limited to pottery objects and coins. Grave furniture is more numerous in Eastern Han tombs, and includes golden jewelry. Gold and silver jewelry is extraordinarily common in Jin Dynasty tombs, at least in the tombs of women from rich families, which generally have several pieces of gold or silver jewelry such as rings, hairpins, bracelets,

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pearls, thimbles and earrings.[16]

Aside from its use in making jewelry, gold was also in great demand for illuminating manuscripts and for applicationn to images in temples. In the year 467 alone the Heavenly Palace Temple's image of Sakya required 600 catties of gold.[17] The Northern and Southern Dynasties period was a time in Chinese history when temples were extremely numerous. We can surmise how great a demand for gold this stimulated. Aside from this, Han was followed by the great disorder of the Three Kingdoms, and the notably insecure Jin and Northern and Southern Dynasties, and so one suspects a large amount of gold was placed in hoards.[18]

If the quantity of gold produced increases enough to match increases in the demand for gold, and if the cost of production does not change, then there could be no increase in its price. Increases in the price of food caused costs of production in general to increase, and because demand remained high, mines which had not previously been worth working were brought into production. It was merely because of the rise in its price that less use of gold was made in royal gifts.

As for silver, except for its use during Han as money by Emperor Wu and Wang Mang, it was employed domestically solely as a store of value. After the death of Dong Zhuo, there existed inside his lines a hoard which included 80-90,000 catties of silver, as well as 20-30,000 catties of gold.[19]

From Wei and Jin on, instances of silver's use gradually increase in number, and gold and silver are frequently mentioned together.[20] Because the

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[15] *Wei History*, 4, "Annals of Emperor Shizu."

[16] A Jin tomb in the neighborhood of the North Station in Canton (with a tomb tile bearing the yongjia year period [307-313) contained five silver hairpins, two gold inlaid bronze hairpins, a silver earring, a silver thimble, ten silver rings, four gold rings, three silver bracelets, two gold bracelets, and one small gold dog. "Discovery of Six Ancient Tombs At West Village, Canton City," *Cultural Relics Reference Materials*, 1 (1955), 133.

The Jin tomb on Chengdu's Mount Yangtze (previously entered by tomb robbers) yielded one small gold bead, four silver bracelets, twelve silver rings and one silver needle. Shen Zhongchang, "Jin Dynasty Tile Tomb On Chengdu's Mount Yangtze," *Cultural Relics Reference Materials*, 7 (1955).

The Jin tombs in Hunan's Liuyang, Yaojiayuan (with a tomb tile bearing the date dakang 8 [yuankang?, 298]) contained three silver rings, one gold ring and one gold plated hairpin. "Uncovering of Two Jin Tombs in Liuyang, Yaojiayuan," *Cultural Relics*, 4 (1960), 88-89.

[17] *Wei History*, 114, "Biographies of Buddhist Elders."

[18] *Jin History*, 95, "The Arts: Biography of Wei Zhao": "The commissioner . . . informed Zhao and his wife, saying 'I did not want to carry the gold. You, good sir, keep the gold yourself. I know that after the disorder there will be poverty for a time, and so you hoard the gold to await peace. Hence I did not inform my son and daughter-in-law, fearing that if the gold was used up, there would be no recourse in case of difficulty. Someone knew I was good at divining the *Changes*, and hence I intended to send the text. There are 500 catties of gold filling a blue jar with a bronze cover buried on the east side of the room in the hall, one *zhang* from the wall, and 9 *chi* under the surface.' When the wife returned and dug it up, all was as had been divined."

Southern Qi History, 38, "Biography of Ying Zhou": "The business of the monks of the temples of Changsha was prosperous. They cast gold weighing several thousand ounces into the shape of a dragon and buried it. The story of this was handed down, and it was referred to as the yellow iron below. There are none who were witnesses to it, but this dragon was later taken away for military expenses."

[19] *Latter Han History*, 72, "Biography of Dong Zhuo."

[20] *Record of the Three Kingdoms*, "Record of Wei," 4, "Biography of Prince Fang of Qi": "Zhengshi 1 [240] . . . an edict stated . . . most recently the masses have been in want, and yet the Office of the Imperial Wardrobe makes more things of gold and silver."

Record of the Three Kingdoms, "Record of Shu," 38, "Biography of Mi Zhu": "Jian'an 1 [196] . . . Zhu thereupon promoted his younger sister as the wife of the previous ruler with 2,000 slaves, gold, silver and coins to aid with military expenses."

Jin History, 39, "Biography of Wang Jun": "During the yongjia period Shi Le raided Yizhou. . . Mo Bei . . . was captured by Le. . . Subsequently he was ransomed for 240 riding horses and one chest each of gold and silver. A treaty was signed and he pulled back."

Liu-Song History, 45, "Biography of Wang Zhen'e": "Emperor Gaozu secretly sent someone to observe where the Imperial Carriage was. The imperial carriage was ornamented with gold and silver. . . "

Liu-Song History, 5, "Annals of Emperor Wen," yuanjia 24

supply of gold did not match demand, silver had to be used to make up the difference.

By the last years of Western Jin there were already examples of silver being used as the medium for expressing the prices of goods. In Emperor Min's jianxing 1 (313) there was a great famine in the state of Xiang, with 2 *sheng* of grain worth 1 catty of silver, and 1 catty of meat going for 1 ounce of silver.[21] This situation may have been influenced by circumstances on the western frontier. Before the tenth century, the price of silver was relatively high, probably because China's silver mines were very inefficient. In Latter Wei Emperor Shizong's yanchang 3 (514), silver was discovered at Deng Mountain.[22]

The most common shapes given to gold and silver were the cake and the ingot. Written primary sources on gold and silver cakes during this period are too numerous to all be mentioned.[23] There was probably no set standard weight for the cake. Perhaps one catty per cake was common.[24] This was the practice with the Western Han Deer-hoof Gold. The ingot was a rectangular object. Most of them were rod-shaped, but there was no single fixed shape for them. At the very latest, gold and silver ingots had appeared by the Northern and Southern Dynasties period.[25]

Jin and Northern and Southern Dynasties gold and silver were not only cast into cakes and ingots, they were also cast into the shape of coins. The earliest written attestation of such coins is during Southern Dynasties, for the period between Liang and Qi times, when Song Jiya sent a thousand gold coins to Lü Sengzhen on the occasion of the birth of the latter's son.[26]

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[447]: "Autumn, 7th month, day jimao. The gold, silver, and precious objects obtained at Linyi were distributed to all."

Southern Qi History, 7, "Record of the Marquis of Donghun": "Mr. Fan served the ruler extremely well and selected precious things. . . The market for precious things among the people caused prices to go up several fold."

Liang History, "Biography of Yang Kan": "Taiqing 2 [548] . . . There was an edict to deliver 5,000 ounces of gold and 10,000 ounces of silver."

Sui History, 65, "Biography of Zhou Luohou": "(Taijian) 11 [dajian?, 579], gifts of 3,000 ounces of gold and silver distributed among the officers of the army as rewards for bravery."

Wei History, 30, "Biography of Dou Daitian": "For success in battle, gifts were conferred of 15 slaves, 100 catties of gold and 100 catties of silver."

Sui History, 37, "Biography of Liang Rui": "Some 5,000 objects were conferred, as well as 1,000 slaves, 2,000 ounces of gold and 3,000 ounces of silver."

[21]Cui Hong, *Sixteen Kingdoms Annals. Jin History*, "Biography of Shi Le," says that one *sheng* of grain cost 1 catty of silver.

[22]*Wei History*, "Treatise on Food and Money": " In Shizong's yanchang 3, an official memorialized that there was a silver mine at Chang'an's Li Mountain, from which 2 piculs of ore would yield 7 ounces of silver. In the Autumn of that year word came from Huanzhou that there was a silver mine at Deng Mountain, from which 8 piculs of ore would yield 7 ounces of silver and over 300 catties of tin. Its color was clean and white, better than the top grade. An edict established a silver official there, and its product was frequently ordered collected for casting."

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[23]*Accounts of Spirits and Immortals*, "Zhang Daolu": "The third trial is the Way of ascending motion. I suddenly saw 30 cakes of gold arise and go past so that they could not be grasped. *Liu-Song History*, 27, "Record of Fu Rui," first part: "Fayi in year 13, 7th month, obtained 32 jade rings and 1 cake of gold from under the stone altar of the Songgao Temple." *Southern History*, 28, "Biography of Chu Yanhui": "When Emperor Ming of Song ascended the throne, clerks were frequently sent to the Master of Writing. One person was seeking to be an official, and surrepetitiously took a cake of gold from his sleeve to aid in his search. He covertly showed him the gold, saying no one would know of it."

[24]*Southern History*, 53, "Biographies of the Sons of Emperor Wu of Liang: The Prince of Wuling's Son, Yuanzhen": "From the east on down, one catty of gold made a cake, 100 cakes made 1 *zao*, until 100 *zao* was reached. Silver was five times this amount."

[25]*Southern History*, 53, "Biographies of the Sons of Emperor Wu of Liang: Prince Mao of Luling, Continued": "When the prince died, in his inner treasurey were revealed precious objects and gold ingots. Those to the left and right were asked: 'Can these be eaten?'" *Northern Qi History*, 24, "Biography of Chen Yuankang": "Emperor Shizong ordered Yuankang to gallup over to observe it. Having accomplished his mission, he returned and said it could certainly be taken. Thereupon Shizong led the attack in person. As soon as he arrived he was victorious. He rewarded Yuankang with 100 ingots of gold. *Wei History*, 35, "Biography of Cui Hao": "Hao was well versed in astronomy, and good at observing the changes of the stars. He would frequently place ingots of gold, silver and bronze in a wine vessel, and on a clear night when they could be seen, he would arrange the ingots to form the strokes of characters so as to record anything unusual."

[26]*Southern History*, 56, "Biography of Lü Sengzhen": "When Sengzhen had a son, Jiya sent over to congratulate him a bag containing, he said, a thousand cash. The servants looked down on this as too little and would not let it go through. The messengers tried to force their way in. Sengzhen suspected what was going on and personally came out. They turned out to be golden cash."

The earliest record of silver coins is in the *Sutra on the Effect of the Past on the Present*, which was translated during the yuanjia period [424-454] of Liu-Song, and records 500 disciples each presenting one silver coin to those who accomplished good works. These, however, were foreign silver coins, and so this is irrelevant to the situation within China. The earliest reference to Chinese-style silver cash would seem to be the story about the son of Emperor Xiaowen of Northern Wei, Yue, the Prince of Runan, scattering silver cash.[27] There are many other references to gold and silver coins.[28]

This practice is further attested by excavations. Recently two silver Five-grainers have been unearthed in a Six Dynasties period tomb.[29] A collector also has a "tianxing 7" gold cash.[30] This represents an interesting episode in the history of Chinese money.

First of all, we must ask why specie coins were not minted during Western Han, when use of gold flourished, whereas during Jin and the Northern and Southern Dynasties specie coins were minted? Perhaps they were minted during Western Han, but I have seen no record of this. This question cannot be answered merely by citing the chaotic state of the monetary systems of the latter time, since specie coins were not formal substitutes for copper cash. Their minting would seem to have been influenced by foreign practices, on the basis of models provided by foreign specie coins.

Foreign coins began to enter China during the first century A.D., in the course of trade. During this period the most important coins were those of Byzantium and Persia. Byzantine coins were mainly gold, carrying on the tradition of the Roman Empire. The most notable of these was the Constantinople *solidus*, commonly called the *bezant*, which weighed over 4 grams. Persia's coins were mainly of silver, displaying continuity with the Parthian *drachma*, and were larger and thinner than the Greek *drachma*. Their obverse held a royal likeness; the reverse a fire altar and a priest. Each coin weighed 4 grams.

That Byzantine gold coins and Persian silver coins must have been among those that flowed into China can be proven from modern excavations. Byzantine gold and Persian silver coins have been unearthed in modern Xinjiang. Byzantine gold coins or imitations of them have also been found in Luoyang and Xi'an.[31] This proves that they came into China during that period.

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[27] *Northern Qi History*, 31, "Biography of Wang Xin": "Yue several times threw coins on the ground, and ordered the assisting officials to compete in picking them up. Only Xin would not do so. Yue again threw down some silver coins, and looked at Xin. Xin finally picked one up."

[28] *Zhou History*, 25, "Biography of Li Xian": "In baoding 2 [562] . . . there were conferred . . . 10,000 silver cash." *Sui History*, 48, "Biography of Yang Su": "The Ruler [Gaozu] . . . conferred 40 catties of gold and silver cakes, but actually in gold coins." Duan Chengshi, *Xiyang Miscellaneous Trays*, 19: "Gold coins, originally called *hua* ["flowers"] originally came from foreign countries. In Liang's datong 2 [536] they entered the central lands. During Liang times, in Jingzhou a bet was settled with gold coins. When the coins were exhausted, gold and silver *hua* were used to make up the difference. Lu Hong said that getting *hua* was better than getting cash coins."

[29] In 1955, outside Nanking's Guanghua Gate, at Number 5 Huangjiaying, two silver Five-grainers were unearthed from a Six Dynasties tomb. Judging from the photographs, they resemble Eastern Han Five-grainers, but are extremely irregular. Based on the standards of copper cash, they would be dated to Eastern Han, but they could be Six Dynasties imitations. (*Cultural Relics Reference Materials*, 12 (1955) contains the photographs.)

[30] The tianxing 7 gold coin is said to have been excavated from a Northern Wei tomb on the north side of Beimang Mountain in Luoyang in 1925. (Fang Ruo *Ancient* hua *Miscellaneous Chants*). It is as big as the Worth-two [*Zhe*-two], weighs 0.45 treasury ounces, and has an inscription approximating clerkscript and blockscript. Tianxing was a year period of the Northern Wei Emperor Daowu. Its seventh year was 404 A.D. Both the strokes of the inscription and the rim are narrow, and it does not conform to the contruction of copper cash later coming out of Northern Wei. At that time Northern Wei had still not put any of its own coins into circulation. Of course this coin was not something put into formal use, but was made by a goldsmith.

[31] There are several instances of the excavation in China of ancient foreign coins:

(1) During late Qing in Shansi's Lingshi District sixteen first and second century Roman coins were found. Bushell, "Ancient Roman Coins from Shansi," *Peking Oriental Society*, 1, 2 (1885). I have not seen the original text of this. Various works quote parts of it. Some say they were gold coins; others say they were bronze coins. Kuwabara Tōzō in his *Westerners Who Visited China During Tang and Song Times* (in the Zhonghua shuju edition translated by He Jianmin) says that they were bronze coins and concludes they were brought into north China during Northern and Southern Dynasties times or before. Because during Sui and Tang times in the neighborhood of Lingshi District there was a place named Guhubao [Merchant-barbarian-ward], it is evident that a great many foreign merchants passed through this place. (Cf. pp. 58-59 of the Chinese translation.) If, however, these were bronze coins, they would not have been in circulation, but were merely carried along for convenience by merchants. Because China had its own bronze coinage, it had no need to use foreign bronze coins. Moreover, the *Sui Record* clearly states that it was western frontier gold and

During the last years of Western Jin, north China was full of barbarians of various kinds. Silver was probably already in use among them, and by jianxing 1 [313] the state of Xiang was reckoning prices in terms of silver. Xiang was within the domain of the Xiongnu Liu Yuan and Liu Cong, and probably had people from the western frontiers frequently passing through it. Bodhidharma came there during the time of Liu Yao.

During this period of the so-called Five Barbarians of the Sixteen Kingdoms, a scarcity of coins led to increased use of gold and silver, particularly silver. During Northern Zhou, the commanderies of the near northwest began to openly use gold and silver coins from the western frontier, and the government did not ban them. We can see from the *Sui History* "Treatise on Food and Money" that this was definitely a

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widespread phenomenon then, and one which caught people's attention.

It was not, I suspect, confined to Northern Zhou. Both at court and in the country at large, the Chinese had seen foreign gold and silver coins. That they would begin to mint Chinese style versions of them would have been very natural. Historical accounts of gold and silver coins begin in China at precisely this time.

Minting of gold and silver coins was not based on governmental rules. Hence we cannot say they were an integral part of the monetary system. Nevertheless their monetary status was not inferior to gold and silver cakes or ingots, since the uses of gold and silver coins in ancient records were the same as those of bronze cash.

The Prince of Runan scattered silver coins after he had scattered bronze cash. Song Jiya substituted gold cash for bronze cash when he sent them as a present. Gold and silver coins merely had greater value than bronze cash. At the very least they were used as money within the palace. In later ages there were the so-called Model-coins, which were larger than ordinary coins, and circulated within the palace. We cannot deny their monetary character.

Before and after Northern Zhou, foreign gold and silver coins were used all over the near northwest, and a great many gold and silver coins were minted within China. That these would not have circulated at face value is unimaginable.

I have seen no records concerning the gold price of silver in China from Wang Mang's time right down to late Tang. During the fifth century, however, the Arabs used a ratio of 1:6.52. In India the ratio ranged from 1:5 to 1:6.[32]

This is an interesting phenomenon, since at that time Roman and Byzantine gold and silver coins were minted at a ratio of 1:14.4.[33] From this we can see that even in antiquity the gold-silver price ratio differed in the orient and occident. The price of silver was very high in the East. The ratio in China at that time may well still have been 1:5. This ratio of Han times was likely maintained during the Six Dynasties because as late as the beginning of Northern Song it was still only 1:6.25. [Bruce W. Smith observes that archaeological finds confirm that foreign silver then flowed in from abroad, but not gold. "Many Persian silver coins have been found in Sui and Tang sites, but western gold is almost never seen." EHK]

3. *Grain and Silk*

Grain and silk were two important instruments for making payments in China, but the degree to which they were used as money varied over time. At

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silver coins and not bronze coins that were involved. In China gold and silver were reckoned by weight, and so no distinction would have been made between Chinese and foreign coins. Bronze cash were reckoned by number, and so it would have been difficult for foreign bronze coins to circulate in China.

(2) The Englishman A. Stein bought two fourth-century Byzantine coins in Xinjiang. (Cf. his *Serindia*.)

(3) In an ancient tomb in the neighborhood of Turfan, Stein discovered one Persian silver coin of the Sasanid Dynasty and three Byzantine gold coins, or imitations thereof. (Cf. his *Innermost Asia*.)

(4) William C. White in 1931 bought in Luoyang a Byzantine gold coin which was said to have come out of an ancient tomb, but according to the research of an American numismatist this is a tenth- or eleventh-century Central Asian imitation of a first to third-century coin. Cf. "Byzantine Coins in China," *China Journal of Science & Arts*, (July-December 1931). Evidently Byzantine coins entered China during the first through third centuries.

(5) An Eastern Rome (i.e. Byzantine) gold coin was found in the Xianyang area tomb of a Sui Dynasty general who had served in Liangzhou. Cf. Zhang Tiexuan, "Items From the North Among Objects Unearthed Throughout the Nation," *Cultural Relics Reference Materials*, 10 (1954).

[32]Del Mar, *Money and Civilization* (London, 1886), p. 22.

[33]According to the *Theodosian Code* of 438 A.D.

times when coins were scarce, or there was lack of monetary unity, or when money's purchasing power oscillated too severely, the monetary functions of grain and silk were immediately strengthened. At times they even entirely usurped the position of coins. This sort of development has also occurred in foreign countries.[1]

The Chinese are an especially pragmatic people. Western Han thinkers had already discussed the uselessness of gold, silver and coins. Over the centuries the Chinese had gone through innumerable disorders. Wars, natural disasters and monetary depreciations had come one after the other. At such times people with money were unable to buy things which they needed, among which none were more necessary than grain and silk cloth.

Though use of these two commodities as money carried a number of disadvantages, in times of disorder they were the goods most willingly accepted by the people, and this is money's most indispensable attribute. Hence, during the reign of Emperor Yuan of Western Han, Gong Yu called for the abolition of the coin minting office and the substitution of grain and silk for coins.

In fact, during Western Han gifts were made in fine silk as well as in gold and coins.[2] In the last years of Wang Mang coins no longer circulated, and bolts of silk, gold and grain came into use among the people for purposes of exchange. The Five-grainer coin was not restored until year 16 [40 A.D.] of Emperor Guangwu.

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During Eastern Han bolts of silk gradually took on the function of means of payment.[3]

During the chaotic times of Jin and the Northern and Southern Dynasties, much use was made of grain and silk. For a decade or so after Dong Zhuo's Small-cash had thrown prices into disorder there were places where coins no longer circulated, and people used grain and silk for exchange. Cao Cao restored the Five-grainer in jian'an 13, but after thirteen years, in huangchu 2 (221) use of coins was again halted.

By the time of Emperor Ming the shortcomings of grain and silk as money had become evident. The people "watered grain to make profit, and made thin silk for use in the market."[4] The virtue of grain and silk lay in their value in use. Watering grain and thinning out silk greatly reduced this use value, and so the rationale for their use as money no longer existed.

Hence in taihe 1 (227) the Five-grainer was again restored. Grain and silk had circulated as money for a total of six years. There were some places where they continued to be used as money for thirty to forty years.[5] When Cao Bei was heir apparent, he himself used silk cloth.[6]

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[1]In sixteenth-century England, college land rent was paid one-third in grain. In France at the time of the revolution (1795), the 173rd article of the constitution, regulating the pay of legislators, specified payment in wheat. In Japan, right down to the Meiji Restoration, taxes were still paid in rice.

[2]*Han History*, 24, "Treatise on Food and Money": "Thereupon the Son of Heaven [Emperor Wu] went north to the northern extremity, east to Mount Tai, inspected the seashore to the north and returned. Wherever he went he gave as gifts over a million bolts of silk, and millions in gold and coins. All was used to make agriculture sufficient."

[3]*Eastern Monastery Han Record*, 3, Emperor An, yongchu 4 [110 A.D.]: "The Lord of Xinye died. There were gifts of jade, red sashes, 30 million cash and 30,000 bolts of cloth." *Ibid.*, 7, King Chiang of Donghaigong: "During the yongchu year period, because the Western Chiang had not been pacified, there was sent 20 million cash. During the yuanchu year period there was sent 10,000 bolts of fine silk to supplement national expenditures." *Eastern Monastery Han Record*, 18, "Biography of Wang Fu": "Later, Fu stole a book and read it all. . . He carried off 2,000 cash and 2 rolls of cloth."

[4]*Jin History*, 26, "Treatise on Food and Money": "In huangchu 2, Emperor Wen of Wei abolished the Five-grainer coin, causing the masses to use grain and silk for exchange. By the generation of Emperor Ming, because coins had been abolished and grain had been in use for a long time, fraud had gradually increased among the people. They competed in watering grain to gain profit, and making silk thin for use in the market. Though strict punishments were enforced, these practices could not be eliminated."

[5]*Liu-Song History*, 56, "Biography of Kong Linzhi": "During the time of Emperor Ming of Wei, coins were abolished and grain used for thirty years. Because this was inconvenient for the people, there arose at court a great debate." *Universal Statutes*, "Food and Money, 8": Kong Linzhi argued: "In the days of Emperor Ming of Wei, coins were abolished in favor of grain for forty years." The two statements do not agree on the number of years.

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From chuping 1 when Dong Zhuo minted the Small-cash to Emperor Wen of Wei's huangchu 2 was thirty-two years, to Emperor Ming's taihe 1 was thirty-eight years, which would make the statement in the *Universal Statutes* closer to the facts. The Small-cash was not, however, abolished in the first year. The price of 500,000 per *hu* of grain in xingping 1 must have been calculated in terms of the Small-cash. So the abolition of coins in favor of grain must actually have been for less than thirty years. This theory also assumes that Cao Cao did not restore the Five-grainer. Since I believe Cao Cao did restore the Five-grainer, then only in some remote places could coins have remained out of use for as long as several decades.

During the century or so of Western Jin, although for the most part the Five-grainer of Cao-Wei times and before continued in use, the positions of grain and silk remained very important, particularly for official salaries, which were paid entirely in such commodities as grain and silk.

For gifts, cloth almost entirely took over the place gold had held during Western Han.[7] Gifts of silk might be as few as 2 or 3 bolts, and as many as several tens of thousands of bolts.[8] Cloth was not limited to use as a gift. At times it was used for rewards[9] and even for making loans,[10] and for travel expenses.[11] Not all such cloth can be considered as money. In practice, it was often sold to raise cash.[12]

During the yuanxing period (402-404) of Emperor An, Huan Xuanjing called for the formal abolition of coins in favor of grain and silk. Because of the opposition of Kong Linzhi and others at court, this was not done.

Commodity money has, after all, quite a few drawbacks. Even if the silk is not thinned out, because quality can never be uniform, it will prove troublesome to set a standard face value for it. Moreover, "to cut the bolt into several pieces would spoil the cloth, making it hard to market, thereby harming the industry of women without cause, so that they would no longer take on the task of making clothing to wear."[13] As a consequence, coins could not be abolished for long.

Because coins were not standardized during the Northern and Southern Dynasties, there are very many instances of use of grain and silk in various places. Before the circulation of coins by Northern Wei in taihe 19 [495], there was a period of more than a decade when the dynasty was completely dependent on silk cloth. The land tax,[14] bribes,[15] relief of the distressed,[16] salaries,[17] loans,[18]

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[6]*Record of the Three Kingdoms*, "Record of Wei: Biography of Cao Hong" has a note quoting the *Digest of Wei*: "When Emperor Wen was in the Eastern Palace, he borrowed 100 bolts of silk from Hong."

[7]*Jin History*, 6, "Annals of Emperor Ming": "In taining 2 [324] the Minister of Masses, Wang Dao, was enfeoffed as Duke of Shixing Commandery, with a city of 3,000 households, and with a gift of 9,000 bolts of thick silk. To the Governor of Danyang, Wen Qiao . . . a city of 1,800 households, 5,400 bolts of thick silk. To the Prefect of the Masters of Writing, Chi Jian . . . a city of 1,600 households, 4,800 bolts of thick silk. To the Inspector Guardian General Zhao Yin . . . a city of 1,600 households, 3,200 bolts of thiick silk."

[8]Wang Mao, *Wild Crane Collection*, 27: "Han mostly used gold for gifts. Jin mostly used silk cloth. Each used whatever it had during its time. . . During Jin, gifts of silk cloth were not discussed in amounts of less than 100 bolts. Ruan Dan got 1,000 bolts. Wen Qiao, Sou Liang, Xun Song, and Yang Yao each got 5,000 bolts. Tang Lin and the Prince of Langxie, Chou, each got 6,000 bolts. Wang Hui and Du Yu both got 8,000 bolts. From beginning to end, Jia Chong got 9,000 bolts. Wang Rui, Zhang Hua and He Pan each got 10,000. From beginning to end Wang Dao got nearly 20,000 bolts, and Huan Wen nearly 30,000 bolts. During Su Jun's rebellion, when the ministry was in ashes, there was still 200,000 bolts of ordinary cloth, and 10,000 of heavy silk. This shows the size of gifts of cloth during Jin."

[9]*Jin History*, 6, "Annals of Emperor Yuan": "Jianwu 1 . . . the Emperor published a placard to the empire which stated . . . anyone able to take a dragon's head will be rewarded with 3,000 bolts of heavy silk and 50 catties of gold."

[10]*Jin History*, 73, "Biography of Sou Liang": His younger brother Bing "frequently bragged of his frugality and temperance. His middle son, Xi, had borrowed 10 bolts of heavy silk from the officials. Bing was incensed, beat him, and bought silk to return to the officials."

[11]*Jin History*, 90, "Biographies of Good Officials: Hu Wei": "Wei left the capitaal to make inquiry after his parents. His family was poor and he was without cart, horse, or servant. He drove a donkey ahead of him and walked alone. Whenever he reached an inn, he would unpack the ass by himself, and fetch wood for a fire. Having eaten, he would again follow his companion back onto the road. When he arrived to see his father, he stayed in a stable for ten days. When he was saying his farewells, his father gave him a roll of heavy silk as a reward. Wei said: 'A great man is morally lofty. Will people not look into how I acquired this silk?' The father replied, 'This is the surplus from my salary. Use it for your food.' Wei accepted it."

[12]*Jin History*, 65, "Biography of Wang Dao": "At the time the treasury was empty. It contained only several thousand bolts of raw silk which could not be sold to meet the state's needs. Dao was distressed at this, and joined with the worthies of the court in all wearing plain raw silk garments. Thereupon the gentry competed among themselves to wear such cloth, and it leaped up in price. Those in charge were ordered to sell the government stocks, and one bolt reached the price of 1 *jin*.

[13]*Jin History*, 86, "Biography of Zhang Gui."

[14]*Wei History*, 7, "Annals of Gaozu": "Taihe 8, 6th month, an edict stated . . . per household in addition there is to be collected 3 bolts, of grain 2 *hu* 9 *dou*, to be used for official salaries. All this is to be collected along with the 2 bolt land tax."

[15]*Ibid.* "Those who bribe to the amount of 1 bolt are to die."

[16]*Ibid.*, 8, "Annals of Shizong": "Yanchang 2, 3rd month. . . There was a famine. Several tens of thousands died. Summer, 4th month, day gengzi, 150,000 bolts of thick silk were used for relief measures."

[17]*Ibid.*, 55, "Biography of Liu Fang": "Fang had frequently served various monks as a copyist of holy books. As his calligraphy was considered good, one scroll was considered worth 1

measures of value and instruments for making purchases[19] and rental of carts[20] were all reckoned in cloth.

Historically in China, textiles have come in set sizes. From Han on, cloth was always 2 *chi* 2 *cun* wide, and 4 *zhang* long
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per bolt. Northern Wei maintained this standard: a bolt-sized length of cloth was 2 *chi* 2 *cun* wide and 40 *chi* long. Sixty *chi* made one *duan*. When a tendency to produce bad cloth appeared, an order was issued in yanxing 3 (473) containing strict rules for maintaining standards.[21]

Although Northern Qi made some use of coins, a natural economy was pervasive.[22] Gifts to a bride's family were made entirely in goods.[23] Official salaries were paid one third in silk, one third in grain, and one third in cash, but were reckoned in terms of cloth.[24] Fines in remission of punishments were also paid in silk.[25]

Northern Zhou also put textiles into circulation. In the *Book of Punishments Digest* of Emperor Wu's jiande 6 (577), the punishment for robbery was based on the value of the goods stolen, and this value was expressed in terms of the bolt of cloth.[26]

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bolt of fine silk. In a year he could earn over 100 bolts. He did this for several decades, and relied on it for a living."

[18]*Northern Histories*, 45, "Biography of Xia Houdao": In the time of Dowager Empress Ling of Latter Wei, "In her father's time, their fields and gardens and goods had all been sold off, and several thousand bolts had also been borrowed."
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[19]*Wei History*, 52, "Biography of Zhao Rou": "When Gaozong ascended the throne . . . Rou once on the road obtained a string of gold beads which someone had sent. They had a value of several hundred bolts of fine silk. Rou called upon the ruler to return them. Later, someone gave Rou several hundred boots, and Rou gave them to his son Shanming to sell in the market. Someone bought them from Rou for 20 bolts of plain thick silk. A merchant realized this was cheap, and offered Rou 30 bolts. Shanming wanted to accept this offer, but Rou said, 'You have traded them to another. A man's word is his bond. How can you let profit move your heart!' He gave them to the first man."

[20]*Wei History*, 110, "Treatise on Food and Money": "The Inspector of the Three Gates, Xue Qin, sent word that 'in Fenzhou and Huazhou in Jingxi, and in the five commanderies of Hengnong, Hebei, Hedong, Zhengping and Pingyang, the normal harvest of silk and hemp had been discounted into public goods, and carts and oxen had been rented to send it to the capital. The road was dangerous and the people corrupt, and so both public and private interests had been harmed. It was reckoned that in Huazhou one cart was officially recompensed with 8 bolts, 3 *zhang* 9 *chi* of heavy silk. In addition, the hiring of private individuals ran to 60 bolts of plain cloth. In Hedong, for one cart the official recompense was 5 bolts 2 *zhang* of heavy cloth. In addition, 50 bolts of plain cloth were needed to hire private individuals.

"'Though not so great at the other places, it was no less in proportion to their distances. If you now seek a cart, it will cost 3 bolts of heavy silk to rent. A freight boat requires less labor. One vessel can carry thirteen cartloads. If a cart takes 3 bolts, the total will be 39 bolts. Sailors, artisans, and various items including food aboard ship would take 78 bolts of heavy silk, and 780 bolts of plain cloth.

"'The official rate for renting one cart is 40 *hu*. The rate among private parties for distant places is 5 *dou* or 1 bolt of plain cloth; for near places, 1 picul or 1 bolt of plain. The permitted private expenses per cart are 80 bolts of plain for distant places, and 40 bolts of plain for nearby ones. For freighters which would carry 700 piculs, the rent would be 1,400 bolts. Now, for 300 bolts of plain, to build one freighter . . .'"

[21]*Wei History*, "Treatise on Food and Money."

[22]*Northern Qi History*, 44, "Biographies of the Literati: Shi Yue": "During the wuping era, the Protector of Liyanjun, Lü Wudu, was sent off to be Inspector of Yanzhou. Wudu . . . had an extremely avaricious nature. When he first passed through Weixian, all the officials there gathered several thousand bolts of heavy silk with which to see him off."

[23]*Sui History*, 9, "Treatise on Rituals": "Latter Qi bridal family gifts . . . invariably comprised one lamb, one goose, stillbeer, lacquerware, and one *hu* each of panicled millet, paddy, rice and wheat flour. This was the same for all from heir apparent and prince on down to the nine official ranks. For those outside the stream of officeholders and for commoners, these quantities were reduced by half. In paying tax, the heir apparent and princes used 3 bolts of dark, 2 bolts of light red, 10 bolts of bundles of silk, one large jade ornament, 2 wild animal hides, 60 bolts of brocade, 200 bolts of heavy silk, 1 lamb, 4 sheep, 2 calves, and 10 *hu* each of stillbeer, lacquer, panicled millet, paddy, rice and wheat flour."

[24]*Sui History*, 27, "Treatise on Officials": "Officials of the first grade annually receive in salary 800 bolts, 200 bolts forming one rank in a series. From the first grade 700 bolts, 170 bolts constituting one rank. . . Ninth grade 28 bolts, 7 bolts as one rank. From ninth grade 24 bolts, 6 bolts as one rank. Salaries were paid one part in cloth, one part in grain, and one part in cash."

[25]*Sui History*, 25, "Treatise on Punishments": "Of old, fines were paid in gold, but all now substitute silk. . . Districts without silk are permitted to commute silk into coin."

[26]*Zhou History*, 6, "Annals of Emperor Wu," latter part: "For robbery armed with a stick, 1 bolt and more; for unarmed robbery, 5 bolts and more; to steal from a master, 40 bolts and more; petty theft and falsely requisitioning official goods, 30 bolts and more; to keep secret 5 households and 10 or more individuals, or keeping secret amounts of land of 3 *qing* or more, death penalty. For those crimes the *Book of Punishments* does not record, follow the statutes."

Fines were also expressed in heavy silk.[27] It was even used among the people as an instrument for making purchases.[28]

Textiles were a common means of payment among the Southern Dynasties. Under Liu-Song rule, the Han River [?and Sichuan?] region used heavy silk as its money.[29] During the reign of Emperor Xiaowu (454), Zhou Lang advocated the abolition of metal coins and the use of grain and cloth.[30]

During Xiao-Qi, the household capitation tax in some areas was mainly in bolts of plain cloth.[31]

At the beginning of Liang, only the capital, the three Wu districts, Jingzhou, Yingzhou, Jiangzhou, Xiangzhou, Liangzhou and Yizhou used coins. The other prefectures and commanderies all made varying degrees of use of grain and cloth for exchange.[32] In yongming 4 [486] Xiao Ziliang said "coins and silk will each hold to half as a permanent arrangement."[33] This demonstrates the position of textiles among the instruments for making payments at that time.

At the beginning of Chen, people were also making use of grain and silk as money. The prefectures of Lingnan in the far south also employed salt, rice and plain cloth, and did not use coins at all.[34]

In such chaotic times, bronze cash were most commonly employed in the political centers. Regions removed from the center also employed commodities as well as coins. Remote frontier regions did not use coins at all.

As for the monetary values of textiles, before Han times the ratio was generally 1 bolt of heavy silk to 3 bolts of ordinary cloth.[35] During Han, the rate was 2 bolts of plain cloth to 1 bolt of heavy silk.[36] During the Northern and Southern Dynasties the rate was 3 bolts of plain cloth to 2 bolts of heavy silk.[37] Evidently the value of plain cloth was gradually increasing.

If we calculate in terms of copper cash, then the value of heavy silk was also gradually increasing. During Spring-Autumn and Warring States times, a bolt of heavy silk was worth from 125 to 150 cash, and ordinary cloth was one third of this. During Western Han, the most expensive white plain silk was 800 cash per bolt.[38] The value of thin silk was about half that of the plain kind,[39] or around 400. The heavy silk was

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about a third the price of the thin,[40] with a bolt being equal to 260 cash. During Eastern Han the price of both light and heavy silk shot up, the former rising to 618 per bolt, and the latter to around 400.

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[27]*Sui History*, 25, "Treatise on Punishments": "Those sentenced to shaving of the head 5 years imprisonment and 200 strokes of the bamboo, may if they are men, pay a fine of 60 bolts. Men under sentence of 4 years may pay 48 bolts. Those men under sentence of 3 years may pay 36 bolts. Those men under sentence of 2 years may pay 24 bolts. Fines in gold of 1 ounce and above are for remission of guilt. . ."

[28]*Zhou History*, 27, "Biography of Kou Jun": "His temperament was honest and merciful, and he did not harbor desire for wealth and profit in his heart. Someone in his household once sold some goods to a person, and there remained 5 bolts of heavy silk. When Jun later learned of this . . . he visited the customer to return it."

[29]*Liu-Song History*, 81, "Biography of Liu Xiuzhi": "Xiuzhi was a good administrator, and was frugal in his own expenditures. Prior to this, the Han River [?and Sichuan?] region in its entirety used heavy silk as money. Xiuzhi

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put out an order that coins be used, and the masses have profited from this right up to the present."

[30]*Liu-Song History*, 82, "Biography of Zhou Lang."

[31]*Southern Qi History*, 3, "Annals of Emperor Wu." In yongming 4, 5th month, an edict stated "In Yangzhou and southern Xuzhou, this year's household tax is to be in three parts. Two are to be collected in plain cloth; one in cash. From next year on, prefectures near and far in places where payment is made in cash, may reduce their cash payments and substitute cloth, with 1 bolt being commuted to 400, which is half the former rate. This change is to be permanent."

[32]*Sui History*, "Treatise on Food and Money." *Jiankang Veritable Record*, 17, Liang zhaotai 1, 12th month: "The blockage began on the north and south sides of the rocks, cutting the through road. The eastern gate of the city was also blocked. The wells inside the city were without water. One bucket of water traded for one *sheng* of rice, and a *sheng* of rice traded for one bolt of heavy silk."

[33]*Southern Qi History*, 41, "The Seventeen Princes of Emperor Wu: Zilang, the Prince of Jingling Wenxuan."

[34]*Southern Qi History*, 41, "The Seventeen Princes of Emperor Wu: Zilang, the Prince of Jingling Wenxuan."

[35]Cf. also chapter 1.2.4 above.

[36]*Han History*, 99, "Biography of Wang Mang," middle part: "Having encountered Yang Jiu's obstruction, and the One-hundred-six Association, there was not enough to meet the state's needs. The people were agitated. From ducal ranks on down, one month's salary was 2 bolts of ten-thread ordinary cloth or 1 bolt of heavy silk."

[37]Cf. Wang Guowei, *Explanations of Money*, latter part, "Investigations of the Widening Value of Textiles Through History."

[38]Cf. chapter 2.1.3, note 41.

[39]Cf. chapter 2.1.3, note 41.

[40]The Jin ordered that 1 bolt of the thin be equal to 6 *zhang* of the heavy. Cf. note 37 above.

There is no material on the price of heavy silk during Jin, but it was very high during Latter Zhao. During Shi Le's time, the official price for middling heavy silk was 1,200. The lower grade was 800 per bolt. The market price for middling grade heavy was as much as 4,000, and for the lower grade 2,000 per bolt.[41] This cannot be taken as representative of heavy silk prices during Eastern Jin, but rather reflects cloth prices in the north, where unrest had limited production.

During the Northern and Southern Dynasties period the situation gradually improved. During Northern Wei between the tian'an and huangxing periods (467) drought brought the price to 1,000 cash per bolt.[42] In taihe 19 (495) official salaries were commuted from heavy silk to cash, with each bolt discounted to 200 cash.[43] In yong'an 2 (529), in order to promote use of bronze cash, official heavy silk was thrown onto the market, and a bolt sold for only 200. Private purchases were at 300.[44] In Southern Qi's yongming 2 (484) a bolt was 300.[45]

There was also a tendency for ordinary cloth to fall in price during the Northern and Southern Dynasties. In Song Emperor Wu's yongchu era (421), official plain cloth was 1,000 *wen*, and the government's purchasing price was 900 *wen*. In Emperor Wen's yuanjia 17 (440), the market price was 600 per bolt. The officials took 500. In yongming 2 a bolt fell to something over 100 cash.[46] In yongming 4, however, the household tax paid in plain cloth fetched 400 per bolt.[47] This fall in price was related to the constricted supply of coins in circulation, and will be discussed in the following section.

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[41] *Jin History Records*, 3, "Shi Le," latter part: "Hence the circulation of public and private coins was ordered, but the people were displeased, and when public heavy silk was sold for cash, the middle grade fetched 1,200 per bolt, and the lower grade 800. Yet the people privately sold the middle grade for 4,000, and the lower grade for 2,000."

[42] *Wei History*, "Treatise on Food and Money."

[43] *Wei History*, "Treatise on Food and Money."

[44] *Wei History*, "Treatise on Food and Money."

[45] *Southern Qi History*, 26, "Biography of Wang Jingzi": "Yongming 2 . . . the Prince of Jingling, Ziliang, said . . . At present, times are hard for the looms; a bolt has been cut to 300."

[46] *Ibid.*: "When the Jin house first moved, grass was cut on the left side of the Yangtze, and and heavy silk and plain cloth were worth ten times what they are now. The amount of tax collected varied with the times. During the yongchu era, official plain cloth was worth 1,000 cash, and those among the people who paid it in, accepted it at 900. Gradually, by the yuanjia era, prices fell. Private goods in the east were worth 6,000, and officials accepted a bolt at 500. . . Now, good plain cloth entering the offices is barely over 100 . . ."

[47] Cf. note 31 above.

3.2 Money's Purchasing Power

1. The Value of Jin Money

During the several centuries from Wei and Jin through the Northern and Southern Dynasties, changes in Chinese money's purchasing power were rather large, but most of these changes were localized rather than nationwide. From a pan-national perspective, the situation was extraordinarily chaotic.

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Jin witnessed a period of relative decay in the monetary economy. This is discernible from several sides. First, we can see it from the quantity of bronze coins included in gifts. There were no banks in antiquity. Money was put into circulation mainly via official salaries and by such government expenditures as gifts. Jin salaries, however, were paid entirely in goods, including both food and textiles.

Gifts were also mainly in commodities. Western Han gifts were generally in gold and bronze cash. Eastern Han mainly employed coins, with gold and textiles coming next. During Jin, however, gifts were made primarily in grain and silk, and secondarily in coins. Gold was not used at all. Though Western Han mainly employed gold for gifts, the quantity of coins it used for this purpose was greater than the figure for Eastern Han, and far more than Jin was able to use.

HAN-JIN GIFTS OF COINS (unit: wen)[1]

Dynasty	Total Amt.	Avg Amt per Ruler	Annual Avg
W. Han	1,550,800,000	119,292,461	7,246,728
	(100.00)	(100.00)	(100.00)
E. Han	531,200,000	44,266,666	2,724,102
	(34.25)	(37.17)	(37.59)
Jin	136,400,000	9,093,333	880,000
	(8.79)	(7.62)	(12.14)

Of the total for Jin, 102 million, 75 percent of the total, were given by Emperor Jianwen to Huan Wen. The total of gifts by all other rulers was extremely small.[2]

Second, we can discover a similar tendency in the contents of relief measures. During Western Han, relief was granted in coins, and in rather large quantities. For example, Emperor Jin gave 200,000 cash to the people who moved to Yangling tomb city.[3] Emperor Wu gave 200,000 cash to every family moving to Maoling tomb city.[4] In addition, during one imperial tour the families in the places through which the Emperor passed were each given 5,000 cash.[5] Emperors Ai[6] and Ping[7] made gifts of from 2,000 to 5,000 cash for every person who died in a natural disaster.

Such arrangements continued during Eastern Han, particularly during the reigns of Emperors An[8]

[1]Included in this table are only those gifts from the *Former Han History*, *Latter Han History* and *Jin History* for which specific amounts are given. Gifts to relieve distress

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are not included because amounts are not specified. Western Han gifts of gold were sometimes actually paid in coins, and so the figures for Western Han are lower than the actual amounts. Nor is Wang Mang data included within Western Han.

[2]The figures for each Jin emperor are as follows:

Emperor	Amount (in wen)	Number of Gifts
Wu	23,400,000	8
Hui	600,000	3
Xiaohuai	0	0
Xiaoyuan	1,000,000	1
Yuan	1,200,000	2
Ming	0	0
Cheng	100,000	1
Kang	200,000	1
Mu	1,000,000	1
Ai	0	0
Duke Haixi	0	0
Jianwen	102,000,000	3
Xiaowu	5,000,000	8
An	1,900,000	4
TOTAL	136,400,000	62

[3]*Han History*, 5, "Annals of Emperor Jing": "Year 5, Spring, 1st month. The Yangling tomb city was built. In the Summer people were recruited to move to Yangling with gifts of 200,000 cash."

[4]*Han History*, 6, "Annals of Emperor Wu": "Jianyuan 3, Spring. The river flooded Pingyuan. There was a great famine and cannibalism. Households which moved to Maoling were each granted 200,000 cash and 2 *qing* of fields.

[5]*Ibid.*: "Taishi 3 . . . gave to the households passed in the tour, 5,000 cash."

[6]*Han History*, 11, "Annals of Emperor Ai": "Coffin cash to the amount of 3,000 was given for each person who died."

[7]*Han History*, 12, "Annals of Emperor Ping": "Yuanshi 2. . . for the dead in each family involving six or more persons, burial money of 5,000 cash; for four persons or more, 3,000; for two or more 2,000."

[8]*Latter Han History*, 5, "Annals of Emperor An": In chuyuan 2 ". . . for especially poor families who are unable to pay for burials, gifts of 5,000 cash per individual were made."

and Shun.[9]

By Jin times, however, this was no longer the case. During Jin relief was given entirely in grain, in amounts as small as 2 *hu* and as large as 5 *hu*. On only two occasions during Emperor Hui's reign was plain cloth employed, with each person receiving 3 bolts. If converted to bronze cash, such quantities of rice and cloth would have amounted to no more than 1,000 cash.

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Third, we can tell from objects excavated from tombs that coins were not numerous during Jin. Practically all Han tombs excavated during modern times have contained coins, even tombs in the distant northeast and Mongolia. Eastern Han and Three Kingdoms tombs in particular have yielded coins in numbers ranging from several to several dozen, and even from several hundred to as many as several thousand. Han tombs without coins are the exceptions. The opposite is the case for Jin tombs. Burials not accompanied by coins are the majority. Even those with coins contain very few, each tomb containing only two or three coins.[10]

There is nothing better for reflecting the flexibility of an age's circulatory media than the circumstances under which coins are made. Both in numbers and varieties of coins Western Han was extremely prolific. Eastern Han also minted no small number of coins. There are, however, no records of Jin having minted coins. If coins were made, this was done privately among the populace.

For the most part old coins were employed. The Cao-Wei Five-grainer was used during Western Jin. After Emperor Yuan crossed the Yangtze, the coins in circulation there were the old coins of the Sun-Wu state.

Since there were no new coins, when people melted down old ones, this reduced the total number.[11] Moreover, as the Yi of Guangdong used bronze drums, but did not produce copper themselves, avaricious merchants and officials sold Chinese bronze coins to them, particularly surviving large Sun-Wu era coins, which were transported to Guangzhou, sold to the Yi and melted down to be

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Also: "Jianguang 1 . . . [because of an earthquake] 2,000 cash per dead person was granted."

[9] *Latter Han History*, 6, "Annals of Emperors Shun, Zhong and Zhi": "Yangjia 1 . . . an edict conferred 3,000 cash for people killed by wolves."

[10] News accounts and summaries of the clearing of tombs in recent years (cf. *Cultural Relics Reference Materials*) have not given many details on coins. Not only are variant forms not distinguished, but at times even the numbers involved are not clearly stated. But even if we cite only accounts where numbers are specified, it is clear that coins are far more numerous in Han than in Jin tombs.

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TABLE OF COINS RECENTLY EXCAVATED FROM TOMBS IN VARIOUS PROVINCES

Dynasty	Location	No. of Coins	Source of Information
Han	Shandong, Yucheng	22	Cultural Relics Reference Materials, 6 (1955)
	Canton, Shahe	500+	Cultural Relics, 2 (1961)
	Jiangsu, Wuxi	208	CRRM, 1 (1955)
	Henan, Rongyang	700	CR, 5 (1960)
	Gansu, Jiuquan	176	CR, 2 (1960)
	Baotou, Zhaowan	193	CRRM, 10 (1955)
	Chongqing, north of river	177	CRRM, 3 (1955)
	Sian, northern suburbs	569	CR, 5 (1960)
	Changsha, Dongcundu	several hundred	CR, 5 (1960)
	Wuchang, Renjiawan	3,630	CRRM, 12 (1955)
Jin	Liaoyang, Sandaohao	3	CRRM, 11 (1955)
	" " " "	3	" " "
	" " " "	1	" " "

The quantities of coins in the table are enumerated tomb by tomb. If there are a number of tombs belonging to the same period, the one with the most coins is selected. Obviously, there are more Han than Jin tombs, many Jin tombs have no coins accompanying the burial, and many other Jin tombs have been given the general label "Six Dynasties tomb" by those who excavated them and so cannot be distinguished. The territorial range of the Jin tombs is not wide, which is regrettable. My sources have been drawn from *Cultural Relics Reference Materials* from the beginning of 1954 to February 1961, and *Cultural Relics* (from 1959 when this new title was adopted), but this list is not complete. There are many omissions from 1957 to 1959. This is not important. What I have here can serve as a representative sample which is sufficient to meet the question.

[11] *Jin History*, 26, "Treatise on Food and Money": "In taiyuan 3 of Emperor Xiaowu, an edict stated that 'coins, the state's valuable treasure, are constantly being melted down by profit-seeking mean fellows. The supervisory officials ought to give thought to this.'"

recast into drums.[12] In recent years 2,000 Large-spring coins have been unearthed in the far south. It is natural that all this would have constricted the supply of coins.

The constriction of the coinage is demonstrated by the Short-hundred technique. Ge Hong alludes to the phenomenon that "long cash is taken from the people, and Short-hundreds are returned to them."[13] The Short-hundred was also called Short-cash, and was the antonym of Long-cash, just as Short-hundred was the antonym of Sufficient-hundred. Short-hundred was the name applied to the practice of discounting 100 cash to some lesser amount at the time of actual payment. This was the equivalent of a fall in price, but one which was not visible on the surface.

We should not, however, exaggerate the role played then by the natural economy merely on the basis of data on official salaries and gifts. Some historians attempt to characterize China during this period as being in transition from the Slave Society to Feudal Society stage of development. This thesis cannot stand up.

At least in terms of the circulation of money, it finds no support. The fact that Huan Xuan advocated the abolition of coins in favor of grain and silk shows that a monetary economy was still present then, and that there had been no complete return to a barter economy. In fact, not only was money in circulation then, but quite a few people were seeking after money: He Ceng and his son, Shi Chong and Wang Rong are all prominent examples of this. The great official He Ceng required 10,000 cash per day for food. It is said he "never put down his chopsticks." His son used 20,000 cash per day.[14] This obliged them to strive for money. Shi Chong's wasteful life also depended on obtaining great quantities of cash. Wang

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Rong was even reluctant to spend money for his own use so as to seek out still more money.[15]

When the Tile Coffin Temple was established during the xingning year period of Emperor Ai of Eastern Jin [363-366], each high official contributed 10,000 cash. For Gu Kaizhi's painting of the image of the Weimojie, observers contributed a million cash. All of these examples demonstrate the range of money's circulation then.

During the reign of Emperor Hui [290-307], Lu Bao wrote the "Paen to the God of Money." Such a work could only have been written during a time of rather profound money worship. A purely feudal society erected on the foundation of a natural economy could not have evoked a work like this.

Then why did the scope of money's use narrow during that time? This could only have been the consequence of government policies. No matter whether the policy was a positive one of promoting constriction or a negative one of not carrying out depreciation, the consequences would have been virtually the same.

The monetary chaos of late Han and Three Kingdoms times had caused some decay in the monetary economy of the north. Shu's and Wu's large scale monetary depreciations had evoked a pro-goods and anti-coins psychology among most people, and prices of goods rose.

Later, quite a few bronze cash, particularly the thick and heavy so-called *bilun* coins, flowed into the hands of the southern Yi. These were transported to Guangzhou and sold to the Yi, who recast them into bronze drums. This reduced the number of coins in north China.

But minting may not have been so necessary. Many payments could be made without use of coins. Commodities could be used instead. There is another aspect of this coin constriction to be considered. So long as coins were still being used at all, owing to the high degree of adaptability to different and unexpected circumstances inherent in coins, the psychological impulse to search for money was not lost among the upper classes.

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[12] *Jin History*, 26, "Treatise on Food and Money": "The Yi of Guangzhou value bronze drums, but copper has never been produced within their borders. Hearing this, avaricious officials and merchants took the *bilun* coins and sent them by ounces and catties to Guangzhou, where they were sold to the Yi to be cast into drums."

[13] *Bao Pu Zi*.

[14] *Jin History*, 33, "Biography of He Ceng."

[15] *Jin History*, 43, "Biography of Wang Rong": "With a nature which loved high profit, he received things from all points of the compass: His gardens, fields and water mills filled all under Heaven. He amassed cash in amounts too great to be known. Whenever he picked up his ivory calculating rods, he could reckon on them from day to night, and he still would not get through it all. Moreover, he was stingy, and did not spend much on his own maintenance. People said he had the illness of a fat heart. When his daughter married Pei Wei, Rong lent him several tens of thousands of cash, which were not returned for a long time. When his daughter returned home on a visit, Rong showed his displeasure. The daughter returned to her own house in agitation, and remained fearful. Upon the announcement of his cousin's marriage, Rong sent him a single garment as a present. When the marriage was called off, he demanded its return. He frequently put money out at loan, and because he feared people would get the advantage of him, he constantly checked into things."

It is only by taking into account both the partial decay of the monetary economy and contemporary monetary policy that we can explain why during the chaotic age of Jin a large scale monetary depreciation did not occur.

The Sima clan had used conspiratorial methods to usurp power from the hands of the Caos. This had not caused large scale civil war, but after the Simas had established their power, there was uninterrupted warfare.

For example, the war against Wu of xianning 5 (279) mobilized an army of over 200,000 men. The Eight Princes' Rebellion occurred during the reign of Emperor Hui [290-307]. After Empress Hui's campaign north against Tangyin, there was only 3,000 cash in hand for the expenses of the trip back.[16] When Emperor Hui was carried off by the Prince of Chengdu, Ying, he could borrow only 3,000 cash from his courtiers to buy food.[17]

Even before the death of Emperor Hui the so-called Five Barbarian peoples of the north had begun their rise, and one after the other they assumed royal titles. In yongxing 1 (304), Liu Yuan took on the title of Prince of Han in Shanxi. The same year Li Xiong called himself Prince of Chengdu in Sichuan. Later, Emperor Huai was captured (yongjia 3, 309), and Emperor Min surrendered (jianxing 4, 316).

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Unlike Emperor Wu of Western Han or Wang Mang, the Western Jin authorities never issued large denomination coins.

The Eastern Jin authorities who established themselves in Jiankang [modern Nanking] were still weaker. Over and above their many domestic difficulties, the foreign policy disasters they endured were endless. Early on there was Latter Zhao's Shi Le. Later there was Former Qin's Fu Jian.

The Eastern Jin authorities made several attempts to recover the Central Plain. In taiyuan 8 (383) there occurred the Battle of the Fei River. Fu Jian had sent out 520,000 cavalry and 600,000 guards stretching over a length of a thousand *li*, and 10,000 *li* from east to west. Avoiding panic, Eastern Jin responded with a force of several tens of thousands, and won the victory. I have not heard that this was the occasion for the issue of any large denomination coins, which demonstrates the dominance of the natural economy then. This also shows that, like the Chibi Battle, the Battle of the Fei River was speedily decisive.

Though Eastern Jin did not mint large denomination coins, it could still have carried out a small-scale depreciation. Shen Lang's Five-grainer was a reduced weight issue. If the Female-cash, Immature-cash and Facing-*wen* coins were in fact minted by Eastern Jin, they too would have represented a weight reduction. These, however, were all privately minted coins, or were clipped by private parties, and cannot be ascribed to the government.

Of course Jin prices were not as low as those of the reigns of the Western Han Emperors Wen and Jing. In such troubled times as those of Jin, relatively high prices would have been hard to avoid, even in the north where the monetary economy had suffered the greatest deterioration.

Under Shi Le, prices were very high. For example, a bolt of middle grade heavy silk had an official price of 1,200, and a market price of 4,000, which was ten times the Eastern Han price. Under Sima rule, during times of famine or war, rice often sold for 10,000 cash per picul. In yuankang 1 (291) of Emperor Hui, a *hu* of rice sold for 10,000 cash in the near northwest.[18] The same was true in yuankang 7 (297).[19] In tai'an 2 (303) war caused diffi-

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[16] *Jin History*, "Treatise on Food and Money": "At the beginning of yongning, there was still 4 millions in brocade in Luo, and over 100 *hu* of pearls, gold and silver. Empress Hui attacked Tangying in the north. The imperial chariot returned to Hantao. There was one chicken in the chariot. There were two quilts containing 3,000 cash to pay for a cart. Emperor Huai was surrounded by Liu Cui, and the royal army was repeatedly defeated. Because supplies were exhausted, the officials were in great hunger. Smoke was not to be seen coming from the houses, and the starving people were practicing cannibalism. In Emperor Min's Western Residence the starving were very numerous. A *dou* of rice fetched 2 *jin*, and more than half the people died. Liu Cui deployed his soldiers, and those within were cut off from those outside. Some humble food was given to the Emperor. The high officials exchanged glances, and all were in tears."

[17] *Jin History*, 4, "Annals of Emperor Hui": "The Anbei General, Wang Jun, sent Wu Xun on a cavalry attack against the Prince of Chengdu, Ying, at Ye. The latter suffered a severe defeat. Ying and the Emperor escaped to Luoyang on a lone chariot. The courtiers were dispersed, and there was nothing for anyone to eat. Attendants of the Yellow Gate used 3,000 of their own cash to respond to an edict asking for a loan to buy food. The palace ladies ate at an inn alongside the road. One of the court ladies carried a pint of coarse rice and dry garlic with salt to the Emperor, who sucked it down. . . There was an old man who presented a steamed chicken, which the Emperor accepted. When they reached Wen, and were going to visit the imperial tombs, the Emperor put on mourning clothing, and received his followers' obeisance. They bowed down with tears flowing. On all sides they sobbed and sighed."

[18] *Liu-Song History*, "Treatise on the Five Agents."

[19] *Jin History*, 4, "Annals of Emperor Hui."

culties for both the treasury and private persons, and a picul of rice cost 10,000 cash.[20] There was mass famine in Emperor Huai's yongjia 5 (311), and a *hu* of rice was 10,000 cash.[21] In Emperor Min's jianxing 1 (313) there was a great famine in Xiang state; 2 pints of cereal was worth a catty of silver, and a catty of meat was worth an ounce of silver.[22]

In 316 there was a great famine in the capital, and rice went for 2 ounces of gold per *dou*.[23] Taicheng was besieged in xianhe 4 (329) of the Eastern Jin Emperor Cheng, and a *dou* of rice went for 10,000 cash.[24] In xiankang 1 (335) there was a great drought in Kuaiji and Yuyao, and a *dou* of rice was 500.[25] Of course these are all exceptional prices, and so cannot be relied on for information on ordinary times.

There is not much material on normal prices during Jin. At the beginning of Western Jin it was possible to commute rice into coin for paying the household tax. "The distant Yi barbarians who do not practice agriculture are to transport rice at the rate of 3 *hu* per household. The distant ones will pay 5 *dou*. Extremely distant ones will pay in coin, at a per capita rate of

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28 *wen*."[26] It would be very difficult to calculate the price of rice then from this data. If the obligations of the distant and extremely distant taxpayers were the same, and we assume five people per household, then the price of 5 *dou* of rice would have been 140 cash, and a picul would have gone for 280 cash. If, however, the household tax was discounted in proportion to distance, this calculation would be rendered unreliable.

The *Calculation Classic of Marquis Yang of Xia* mentions three rice prices, 120, 130 and 135 cash per *dou*. Since these are quite close, they must be normal prices. It is generally accepted that Marquis Yang of Xia lived during Jin times.[27] That would make the normal Jin rice price around 1,300 cash per picul. Assuming the Jin picul was 2.023 decaliters, then a hectoliter of rice corresponded to 6,426 cash, which was much higher than the normal Han price.

If, however, we take into account the weight of the coins, it may not have been ten times more expensive. This price may have been expressed in terms of the Lord Shen's cash or some equally light coin, or perhaps even in terms of some much depreciated large high denomination coin.

In yonghe 10 (354) of Eastern Jin, a picul of rice was worth a bolt of ordinary cloth.[28] We do not know how many cash per bolt ordinary cloth fetched then. If we assume that the prices in the *Calculation Class of Marquis Yang of Xia* are Jin prices, then a bolt of plain cloth cost from 1,200 to 1,700 cash.[29] This corresponds exactly to the rice price given above.

There are several other prices for heavy silk, but they are far apart: The lowest is 1,100 cash per bolt. The next highest is 1,700 cash. Higher are prices of 3,500 and 3,870 cash. The highest is 4,360 cash. Differences in quality probably account for the discrepancies. Heavy silk was divided into upper, middling and lower grades under Shi Le's rule, and official prices differed from market prices by factors of two or three.

Because the bureaucracy did not put into effect monetary depreciation policies, and because the quantity of money was not very large, the above high prices were the results of shortages of the goods themselves. The purchasing power of even privately minted coins like the Lord Shen cash was rather high.[30]

The coinage was somewhat more stable in the northwest. For example, in the Hexi region, probably the most secure area in China then, the Han and Wei Five-grainers were still in use, and prices could not have been very high. In Sichuan the Hanxing coin was in use, and Shu-Han coins may also still have existed. The Hanxing coin was light and small, and so prices must have been higher than in Hexi.

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[20] *Jin History*, 4, "Annals of Emperor Hui."

[21] *Jin History*, 5, "Annals of Emperor Xiaohuai."

[22] *Taiping Yulan*, 35, quoting Cui Hong, *Sixteen Kingdoms Annals*.

[23] *Jin History*, 5, "Annals of Emperor Xiaomin."

[24] *Jin History*, 7, "Annals of Emperor Cheng."

[25] *Jin History*, 7, "Annals of Emperor Cheng."

[26] *Jin History*, "Treatise on Food and Money."

[27] For the *Calculation Classic of Marquis Yang of Xia* cf. the *Sui History* "Treatise on Classical Books." In this work cloth is calculated by the *duan*, and coins by the string. It appears to have been written by a person who lived under Northern Wei.

[28] *Jin Record. Universal Investigations*, 99.

[29] The *Calculation Classic of Marquis Yang of Xia* contains two plain cloth prices, both expressed in terms of the *duan*. The prices are 1,800 and 2,600 cash per *duan*. To convert to bolts, I assume that 1 *duan* was 60 *chi* long, and one bolt was 40 *chi*.

[30] *Jin History*, "Treatise on Food and Money": "Under Jin, from the time of the loss of the Central Plain and Emperor Yuan's crossing of the Yangtze, the old coins of the Sun clan came into use. Light and heavy coins were circulated together. Large ones were called *bilun*. Middling ones were called Four-*wen*. Wu Xing and Shen Chong also minted small coins, which were called Lord Shen's cash. Since coins were not numerous, they were somewhat expensive."

2. Changes in the Value of Song and Qi Money

Although the Southern Dynasties did not last much longer than the Jin, they suffered many more and more violent changes in the value of their moneys. These reflected the political instability of the times.

Like Cao Bei and Sima Yan, Liu Yu had taken power through a peaceful coup rather than by way of bloody warfare requiring monetary depreciation. After his death, however, it was necessary to respond to Northern Wei aggression.

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In Emperor Wen's yuanjia 7 (430) a campaign against the north was launched. At first some lost territory was recovered, but then Northern Wei counterattacked, the Song armies lost their previous gains, and the treasury was emptied.

The Four-grainer coin was minted at this time. Nominally, at least, this coin represented the beginning of the lightening of the coinage, since the coins in circulation then were Five-grainers. The Sun-Wu Large-spring and Shu-Han Value-hundred Five-grainer and Taiping-hundred cash may also still have been in circulation.

In fact, however, we cannot say that lightening had as yet begun, since the Five-grainers in circulation then were mostly Eastern Jin Five-grainers, like Lord Shen's cash, Immature cash, Facing-*wen* and Female cash, whose weight was even less than 4 grains.

Liu-Song must have had two aims in minting the Four-grainer. One was to meet the state's deficit, and the other was to unify a hitherto chaotic coinage. The Four-grainers first minted were relatively thick and heavy. In both name and reality they weighed four grains. Hence history says "there was no profit in undermining their use, and so the masses did not illicitly coin them."[1]

This, however, only holds for the earliest period. Private coining reappeared later, because we know that the heaviest Four-grainers ran to 3.5 grams, and the lightest to less than 3 grams. In addition, old coins were clipped to obtain bronze.[2] There are Four-grainers with clipped edges which weigh less than 1 gram. Therefore, in yuanjia 24 [447] it was proclaimed that the large versions should be used at a face value of two.[3]

This amounted to a monetary depreciation, or at least was a recognition that such a depreciation had already taken place. These large coins were old coins, such as the Han Five-grainer and the old Wu and Shu coins. In any event, they were not newly minted large coins. The histories all say that "regulations made large coins equal to two."

The word "regulations" [*zhi*] means to use law to regulate something. This was an idea first raised by nominalists. Shen Yanzhi, who approved of this arrangement, said "the state will disseminate a hard to decay treasure, and families will win a hundred percent profit." He also said "with the issue of a single order, beautiful things will come in bunches, without the expense of making anything."[4]

At this point He Shangzhi raised objections, saying "without troubling to take them in for reminting, the profit will automatically double."[5] The insistence by later numismatists that a Five-grainer weighing 8 grains, equal to two Four-grainers, was minted at that time is based on a forced reading of this text.[6]

The authorities said that this measure was to halt the clipping of heavy coins. Perhaps this was their intent, but the results were not good. Because there were many different kinds of coins, there was no clear line between large and small ones. Hence this measure was rescinded within a year. Because the supply of money was not very large then, prices were likely not much affected, but after the revocation of this measure, a number of large coins must have been melted down.

During the two or three decades before yuanjia 27 [450], the social order was relatively stable. The historians say that "the regional militia were at peace, and nothing occurred within the borders," that "the masses were all at rest," that "the labor service was limited to the annual tax," and "all

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townships with a hundred households and all towns with markets reverberated to the sounds of songs and dances, and everywhere there were crowds."[7]

This was the so-called "good government of the

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[1] *Liu-Song History*, 75, "Biography of Yan Jun."

[2] *Liu-Song History*, 66, "Biography of He Shangzhi." There are obvious contradictions between the "Biography of He Shangzhi" and the "Biography of Yan Jun" on the situation subsequent to the issue of the Four-grainer. The latter states that "the masses did not illicitly coin them" whereas the biography of He says that "illicit coining occurred among the people." We can only judge in terms of the sequence of events and acknowledge both statements as correct for different times.

[3] *Liu-Song History*, 5, "Annals of Emperor Wen," yuanjia 24, 6th month. "Because the money was expensive, regulations fixed the large coins at a value of two."

[4] *Liu-Song History*, 66, "Biography of He Shangzhi."

[5] *Liu-Song History*, 66, "Biography of He Shangzhi."

[6] *Record of Coins*, quoting an old catalog. Later numismatists have accepted this statement.

[7] *Liu-Song History*, 92, "Biographies of Virtuous Officials."

yuanjia era." For 30 cash per day a family could eat meat.[8] In yuanjia 17 a bolt of plain cloth sold for only 600, which was much lower than the yongchu era price of 1,000 per bolt. When Wang Xuanmo called on people to pay 800, the historians say he thereby lost men's allegiances.[9]

Livestock prices were apparently not high either. The price of a horse in Sichuan was 20,000 Shu cash.[10] These Shu coins must have been either surviving Shu-Han coins or Hanxing coins. In general Shu coins were likely lighter than ordinary coins, so a price of 20,000 cash for a horse would have been considered high then. This was, however, lower than the Han price.

During Western Han cattle sold for 45,000 cash per head.[11] During yuanjia the price was 30,000 per head.[12] These two prices were, however, for different times and places. Sichuan was close to the western frontier, and so horse prices ought to have been relatively low. Elsewhere horses were generally more expensive than cattle. Because demand for horses was large during Western Han, horse prices probably were more than double cattle prices, perhaps 150,000 as compared with 45,000.

In yuanjia 27 [449], the Northern Wei Emperor Taiwu attacked the south with a force of several hundred thousand men, and the Song army was repeatedly defeated. The people of six prefectures were unable to cultivate their fields in peace, government expenditures greatly increased, official salaries had to be reduced,[13] and higher taxes taken.[14] However, "all the regions east of the Yangtze amounted to no more than several thousand *li* with less than a million households. To raise an army there was to court disaster."[15] This region could not assume such a burden. As a consequence the coins must have been reduced in weight then.

The Xiaojian Four-grainer of xiaojian 1 [454] constituted a formal weight reduction. The heaviest of these coins weighs 2 grams, but these are rare. Most are very thin, weighing around 1 gram. Moreover, as soon as they were issued, the people began to privately coin them, and the private coins were, of course, even thinner and smaller than the official coins, some being as light as 0.6 grams. Prices must have gone up.

During daming 7 and 8 [457-8] there was a drought in the east, and a picul of rice ranged from 1,000 to several thousand cash.[16] We cannot tell how much of this increase can be ascribed to monetary causes, nor do we know whether the 2 grain Xiaojian coin was minted at this time. The best examples of these weigh only 1.24 grams. Illicit privately coined specimens turn up as light as 0.5 grams. In addition, clipping old coins and adding lead and tin to coin alloys both rendered old coins lighter and increased the supply of new coins, thereby driving prices up further.[17]

The Two-grainer and *Liang*-grainer coins issued during the yongguan and jinghe year periods were probably not as light and small as the private coins

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[8] *Liu-Song History*, 61, "Biographies of Three Princes of Wu" records the story of Yiji, Prince Wen of Hengyang: "Prior to this Yi was placed in office, and sent to Ba and Shu because of disorder. There was a response to the army's expedition. The prefectural treasury was empty. Yiji carried out economizing measures, storing up wealth and reducing expenditures, and within a few years the treasury was again full. The officers enjoyed abundance, but widows and elderly poor were not provided for and did not eat meat. Yiji was saddened, and allotted 2 *hu* of white rice per month and 1,000 cash, and by rule established the eating of meat."

[9] *Liu-Song History*, 76, "Biography of Wang Xuanmo."

[10] *Liu-Song History*, 45, "Biography of Liu Cui."

[11] *Historical Records*, "Biographies of the Moneymakers."

[12] *Taiping Yulan*, 828, quoting the *Grove of Words*.

[13] *Liu-Song History*, 5, "Annals of Emperor Wen," yuanjia 27, 2nd month: "Because of having to raise an army, official salaries were reduced by one third. 3rd month, day yichou. The Grand Administrator of Huainan, Zhuge Danyong, reduced his salary in proportion to the reduction in the salaries of court officials. Thereupon prefectural, commandery and district heads all followed his lead."

[14] *Liu-Song History*, 95, "Biography of So Lu": "This year great military movements began. Princes, dukes, court ladies and courtiers and local military commanders all contributed gold, silk and other goods in aid of the state. Below, rich households and common people also contributed private wealth to the amount of several hundred thousand. . . Officials memorialized that military needs were not being met. Rich commoners with family fortunes of more than 50 million and monks and nuns with more than 20 million from Yangzhou, Xuzhou, Ruizhou and Jiangzhou, were to contribute one-fourth of their fortunes. If greater amounts than this were taken, they were to be returned after investigation."

[15] *Liu-Song History*, 92, "Biographies of Virtuous Officials."

[16] *Liu-Song History*, 84, "Biography of Kong Ji": "Taming 8 . . . at this time there was a great drought in the lands of the east, and in the towns a *dou* of rice approached 100 cash." *Ibid.*, 7, "Annals of Emperor Qianfei": "Last year and this year there was a great drought in the commanderies of the east, with a *sheng* of rice even rising to several hundred. It even rose to 100 in the capital." *Southern History*, "Basic Annals of Song: Emperor Qianfei": "Last year and this year there was a great drought in the eastern commanderies, with a *dou* of rice even rising to several hundred. It also rose to over 100 downstream from the capital. Sixteen or seventeen people starved to death."

[17] *Liu-Song History*, 75, "Biography of Yan Jun."

of that time, and so very few of them were made. The private coins must not have reached 2 grains, and lacked rims, and either were not polished or underwent clipping. They were popularly called "weeds." There were other, still lighter ones called *xingye* vegetables.

In yongguang 1 permission
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was granted for private minting among the people, which threw the coinage into greater disorder. A thousand of these coins made a stack less than 3 *cun* high. They were called Goose-eye cash, because, says Gu Xuan, they were no bigger than a goose's eye. There were others, still worse, which were called Brim-ring cash. They would not sink in water, and would break in one's hand. In the market, people would not bother counting them, but would pick them up by the handful. A hundred thousand of them would not fill two cupped hands. One *dou* of rice or a *chi* of silk sold for 10,000 of them. As a consequence they did not circulate commercially.[18]

This amounted to the extinquishing of the monetary system. The so-called Brim-ring coins must not be explained as having been made by cutting out rings from Han Five-grainers. Such coins would not only have been large, they would have been much heavier than Two-grainers. There are Six Dynasties coins which are extremely small, but have large holes, and so resemble small rings, and these are probably the Liu-Song period Brim-ring cash, which were later also called String-ring cash.

The cost of a *dou* of rice during Eastern Jin had reached 10,000 cash, but only when famine or war had caused a scarcity of goods, and not because of monetary depreciation. Rice also shot up during Liu-Song because of such natural disasters as the floods of yuanjia 12 [435], during which the cost of rice in Qiantang reached 300 cash per *sheng*.[19] I have previously mentioned the drought-induced jump in the cost of rice during daming 7 and 8, but those rises were not as great as the one during the jinghe period.

There is no reliable material on normal prices for rice under Liu-Song. In taishi 2 (466), when Liu Xun was proclaimed Emperor in Xunyang, the officials levied cash and rice to meet state deficits. Based on the coin-rice commutation rate, a picul of rice was approximately equal to 280 cash.[20] If we take this as the normal Liu-Song rice price, then the jinghe price was three or four times the normal level. There was a folk saying current then in the Kuaiji Mountain region of Zhejiang which ran "hit the white, a *hu* of rice at a hundred height; hit the black, a *hu* of rice will the level thousand crack."[21] Evidently, the normal price of rice was around 500 cash per *hu*.

These wild price jumps probably did not continue for very long. After Emperor Ming assumed the throne (465), he began to set things in order: To begin with, he banned the Goose-eye and Brim-ring cash, and forbad private coining. He also closed the coin offices. In taishi 2 [466], he banned the circulation of any new coins. Only old coins were to be used. At the same time he permitted rich men to buy official positions with rice and cash, so as to bring in a certain quantity of the coins in circulation as the only way to raise money's purchasing power.

In Emperor Shun's shengming 2 (478), because the price of grain was too low, the authorities ordered the people to raise the commutation price of rice for cash, so that 1 *hu* of rice had a value of 100 cash.[22] Of course this is an exceptional price rather

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[18] *Ibid.* Also, *op. cit.* 7, "Annals of Emperor Qianfei": "Last year and this there was a great drought in the commanderies of the east. A pint of rice went for as much as several hundred, and it was as much as 100 even in the capital city. Some sixteen or seventeen died of starvation. Since the xiaojian era, offices for minting coins have been set up, and for this reason the masses have engaged in illicit coining. The coins have become small and do not circulate in commerce." The *Record of Coins* quotes Gu Xuan as saying "a *chi* of silk, a *dou* of rice jumped to 10,000."

[19] *Liu-Song History*, 63, "Biography of Shen Yanzhi": "Yuanjia 12. There was a flood in the eastern commanderies. . . In the Wuyixing and Wujun districts of Qiantang, a *sheng* of rice was 300."

[20] *Liu-Song History*, 84, "Biography of Deng Yuan": "At that time [taishi 2, 466] great military movements had begun, and there was a deficit. People who contributed 200 *hu* of rice, 50,000 cash or 500 *hu* of mixed grains were rewarded with various local appointments. Those who gave 300 *hu* of rice, 80,000 cash, or 1,000 *hu* of mixed grains were granted the fifth rank as prefectural clerks as recompense. If they wanted provisional fourth rank for their families, this too would be done. Those who gave 400 *hu* of rice, 120,000 cash, or 1,300 *hu* of mixed grain were granted the fourth rank as prefectural clerks in recompense. If they wanted provisional third rank for their families, this too would be done. Those who gave 500 *hu*, 150,000 cash or 1,500 *hu* of mixed grain, would abe granted third grade rank as prefectural clerks. Those who gave 700 *hu* of rice, 200,000 cash, or 2,000 *hu* of mixed grain, would be granted appointment in a remote commandery, and could have appointment to the various princely fiefs in their families."

[21] Li Daoyuan, *Notes on the Water Classic*, 40, "Rivers of Zhejiang." Li Daoyuan lived under Northern Wei in the taihe period [477-500]. This folk saying probably reflected circumstances under Eastern Jin as well as Song and Qi.

[22] *Southern History*, 42, "Biographies of the Sons of

than an ordinary one.

In fact, the reordering of the monetary system only prevented further price rises, and probably did not return prices

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to their previous levels. This is because during the taishi and taiyu eras which followed the reform, there was still military activity in the Huai and Si River regions to exhaust the treasury. When added to Emperor Ming's wasteful activities, the entire nation was kept in commotion.[23]

Hence in yuanhui 4 (476) of Emperor Houfei, Yu Wanzhi said that tax revenues were not as high as in former days, but that the state's needs were four times what they were during yuanjia times.[24] Before long, the Liu-Song government came unravelled.

After Xiao Daocheng usurped power, monetary constriction occurred, because after taishi 2 of Song no coins had been minted, and old coins had been melted down to make other things, causing the quantity of money to steadily decrease. Simultaneously, through taxation, the government was collecting the circulatory media into the treasury. That is why the quantity of money was inadequate to meet the demand.

In jianyuan 4 (482), Kong Ji called for renewed minting of coins. He viewed the failure of rice prices to rise in the aftermath of a flood as something abnormal. He believed that the monetary constriction had caused production to decrease, and that it was necessary to increase the quantity of money before production in general could also increase. Xiao Daocheng ordered prefectures and commanderies to make large purchases of copper in preparation for minting coins, but he died before this got under way.

In yongming 2 (484), Wang Jingze advocated the commutation of labor service into cash delivered to the treasury. Xiao Ziliang opposed this, and in doing so discussed the current situation.[25] He blamed the constriction of the money supply on the government's tax policy, saying that taxes were too heavy, and that a standard coin was used in collecting them. Coins in use among the people were, however, mostly clipped. Because very few coins were intact, when people paid taxes, they had to use two bad coins to buy one good one. In jianyuan 1, the capitation tax in the five commanderies of Zhedong was 1,000 cash per head. This reduced the supply of coins in the people's hands still further, and could not but reduce the prices of things offered for sale by taking in copper cash to pay taxes.

Naturally prices fell. For example, because the price of rice was too low in jianyuan 2 (480), the government permitted taxes to be paid in rice, with 1 *hu* commuting 100 cash, and even this price was considered high.[26]

As for the price of cloth, during the yongchu era (421) of Emperor Wu of Song, government plain cloth was valued at 1,000 cash per bolt, and when paid in by the people it was reckoned at 900. During yuanjia (424-454), the price of plain cloth began to fall. In the east a bolt was worth 600; and when received by the officials was 500. By 484 it was only worth 300, and when paid in to the government, it was only reckoned at something over 100 cash, which was much lower than at the beginning of Song. Hence even if the producing masses multiplied their efforts, they still would not obtain much.

In yongming 4 [486], Xiao Ziliang again spoke of the evils of coin clipping. Of the large coins of Jiangdong, he observed, fewer than one of every ten

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Emperor Gao of Qi," first part: "Shengming 2 . . . because grain was too cheap, in allowing the people to discount rice for coin, the level was raised to 100 per *hu*." This item is identical to the one in the *Southern Qi History*, 22, "Biography of the Prince of Yuzhang, Wenxian," jianyuan 2. This could have been an erroneous transposition by the *Southern History* of something from the history of Southern Qi to the Liu-Song section.

[23]*Liu-Song History*, 8, "Annals of Emperor Ming": "During taishi and taiyu, still more cruel deaths were endured, on all sides people were disobedient, and there were frequent beheadings. Along the Huai and Si, military activity was unceasing, and disorder long endured, so that the treasury was empty. Both at court and outside of court officials received their salaries by the day, and the Ruler's wastefulness was excessive. Tasks were done wastefully. For every man in charge there were thirty subordinates, and each of these had thirty subordinates in turn. Ninety coins were required for each thing done. The empire was in commotion, and the people did not respect the Mandate."

[24]*Liu-Song History*, 9, "Annals of Emperor Houfei."

[25]*Southern Qi History*, 26, "Biography of Wang Jingze": "In the interior of the three parts of Wu, the state's excise tax stations take the full value of capital, and the common people every day fall into difficulties and die. Little is obtained from sericulture and agriculture. Starvation and cold are especially severe. The rich somewhat increase their largesse. The poor intensify their malpractices. . . When coins are expensive and goods are cheap, covetousness increases several fold. This is always the case. Agriculture is full of toil. As for the price of a *hu*, it is worth several times what it fetches. Now the shuttles of the looms are enduring bitterness, with a bolt of cloth being only 300."

[26]*Southern Qi History*, 22, "Biography of Prince Yuzhang Wenxian": "Because grain had become too cheap, the people were allowed to use rice to substitute for cash at the high rate of 100 per *hu*."

had survived, but the officials would only accept those with intact rims. Of those current among the people, 1,700 would not be enough to buy 1,000
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good coins. He proposed four policies: First, return to collecting the labor service tax in labor. Second, reduce the land tax. Third, in places where it was necessary to use coins, not distinguish between large and small coins, and accept all coins at par. Fourth, for all types of taxes, permit people to pay in local products which the government was able to use, rather than in coin.[27]

In yongming 5 (487), the household tax in Yangzhou and Southern Xuzhou was discounted if paid in cash, thereby reducing the price of plain cloth, which was calculated at 400 cash per bolt, and discounted by half.[28] Because grain and textile prices were low everywhere in the country, the following year a large amount of money was put out to buy these commodities. In total 100.6 million cash was expended in the capital and the various commandaries to buy rice, millet, beans, wheat, hemp, raw silk, cotton, fine silk cloth, heavy silk and plain cloth.[29]

These low prices were not, of course, because of increases in production, but rather because the quantity of money was small. Whether or not the officials actually bought low priced goods to keep them in reserve, so long as they put additional money into the market, the effect would have been the same.

However, this also used up the government's reserves of money. Hence in 490 people were sent to Sichuan to mint coins, but because the cost of production was too high, production was halted after something over 10 million had been minted. Naturally, 10 million was not enough to make any difference. Hence during the several decades of the Xiao-Qi, there was no great prosperity. "Agriculture and sericulture did not flourish as in bygone days, and grain and cloth were lightly demanded and cheap in those years."

We must view the monetary constriction of Xiao-Qi as the result of the policies of those in power. It was not really because of the high cost of minting coins, because if they had really wanted to carry out a depreciation of the coinage, they could have minted large coins at any time.

When Xiao-Qi succeeded Liu-Song, it knew that monetary depreciation would evoke far more support for themselves than would monetary constriction. The latter is a blow to producers, but a blessing to consumers. The members of the official class were all consumers. Xiao Daocheng in particular had an unusual bias in favor of low prices. He often said: "If I could rule the Empire for a decade, I would reduce the price of gold to the same as dirt."[30] He only ruled for a little over three years, but his son, Xiao Ze, carried on his policies, and a large quantity of coins was amassed unused in the national treasury.

Therefore, though the Xiao-Qi constriction was the most severe in Chinese history, it did have some good points. During the yongming era [483-493], "for over a decade, the people were not alarmed by so much as the crowing of a rooster or the barking of a dog. There was abundance in the cities. Men and women were well off. Singing and dancing and beautifully adorned clothing were to be seen. Peach blossoms floated on the waters. Beneath the Autumn moon and in the Spring wind, they were present by the tens of thousands."[31]

After the death of Emperor Wu (483-493), Suo Lu raided the frontiers, labor service was extended for a year, and military expenditures harmed agriculture. To make matters worse, the imperial house was extremely wasteful, and the price of a rooster for cockfighting reached several thousand.[32] For one piece of amber, there was spent

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[27] *Southern Qi History*, 40, "Biographies of the Seventeen Princes of Emperor Wu."

[28] *Southern Qi History*, 3, "Annals of Emperor Wu."

[29] *Southern Qi History*, 3, "Annals of Emperor Wu." An edict of yongming 5, 9th month states: "Formerly, in transportation of goods, records were altered, and other malpractices were even worse. Agriculture and sericulture did not flourish as in bygone days. Grain and cloth were lightly demanded and cheap in those years. Artisans and merchants rarely kept holdings of gold. Commoners often suffered from hunger and cold. Copper cash had long been abolished, and good money was scarce. People lost their property, and could this be without effect? All families which have fallen into poverty may make three tax payments in two years. In the capital district and in the four quarters surrounding it, a hundred million cash are to be disbursed to buy grain, raw silk and cloth. This will harmonize prices so as to aid the black-headed people. Distant countries market various goods which are not produced locally. All of this is to be halted." For the specific figures on the quantity of coins employed in each locality, cf. *Universal Statutes*, "Food and Money, 12" and *Book Hall of the Original Tortoise*.

[30] *Southern Qi History*, 2, "Emperor Gao," latter part.

[31] *Southern Qi History*, 53, "Virtuous Policies."

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[32] *Southern Qi History*, 4, "Annals of the Prince of Yulin": "When he took power, he had an exaggerated idea about conferring gifts, and used several hundred thousand for that purpose. Whenever he saw a coin he would abruptly say: 'I used to think of you, but didn't get a single coin. Now I've gotten to use you.'

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1.7 million.[33] The several hundred million cash accumulated by Emperor Wu was all gone within just a few years.[34] By the end of the dynasty, rice had shot up in price everywhere to several thousand cash per picul.[35]

3. *Changes in the Value of Chen and Liang Money*

The coinages of Liang and Chen were unstable.

Southern Qi's monetary constriction probably started to ease by the end of the dynasty because of the dispersal of the coins hoarded in the treasury.

Because there was no warfare during the two decades of Southern Qi, there were no very large price disturbances, but during the five decades of Xiao-Liang warfare was constant. Invasions by Northern Wei began, and Hou Jing's rebellion occurred during its middle. As a consequence the value of money could not be maintained.

Soon after Xiao Yan (502-549) took power, Northern Wei launched a series of attacks, and the histories report that he destroyed bronze Buddhas to mint coins.[1] These were probably the Five-grainers with inner rims and the Public-female cash. The histories[2] say that both were in circulation at the same time, but the Public-female must have come a little later because in neither weight nor construction was it up to the level of the Five-grainer with inner rim. Two coins should not be minted and put into circulation together unless they have different face values. The Public-style female-cash was probably minted in response
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to the Northern Wei invasion. It is said[3] that the

Within a year the several hundred million cash saved by his predecessor had all been exhausted. The clothing treasury was opened for the Empress and her attendants' observation. The eunuchs and young palace officials were allowed in, and each took what he pleased. They tore at each other to get hold of the precious objects. Breaking them was considered a joke. The place was stripped bare except for a pair of red crepe trousers and a multi-colored screen. A good fighting cock was secretly purchased for several thousand."

[33]*Southern Qi History*, 7, "Annals of the Marquis of Donghun": "Mr. Fan made obeisance, and selected a great number of precious jewels. The main clothing treasury's old goods could not be completely exhausted. On the luxury market there were precious objects of gold and silver, all at high prices, and an amber armlet worth 1.7 million cash. The capital city wine tax was entirely discounted into gold to be used for gold plating, but even this was not enough. The purlin and beam and embankment repair labor service tax in Yangzhou and Southern Xuzhou was commuted to ready cash, and entirely devoted to the miscellaneous expenses of the clothing treasury."

[34]*Wei History*, 98, "Biographies of the Island Barbarian Xiao Daocheng and His Son Ze": "After the burial of Ze [Emperor Wu of Qi], Zhao Ye [the Prince of Yulin] went out in disguise to tour the market quarters. He also frequently went to his parents' land to carry out base arts with his inferiors. Wrestling and gambling, falconry and hunting with dogs, treacherously, day after day he would go out to do these things as a normal activity. Court business, whether great or small, was left to the Prefect of the Masters of Writing, Xiao Luan. Earlier, Xiao Ze had gathered some 500 million cash from the Upper Treasury. The Alms Treasury had yielded another 300 million and gold, silver, ordinary and silk cloth in amounts beyond counting. By the end of this year half had been used. All had been given to the servants and soldiers who followed him. By the time he was forced from office, the treasury was exhausted."

[35]*Liang History*, 53, "Biographies of Virtuous Officials": At the end of Qi "when all was exhausted, the masses engaged in evil acts, and grain was expensive everywhere, rice reaching several thousand, and most of the people were dispersed." During Southern Qi, 1 picul equalled 0.2972 hectoliters.

[1]*Southern History*, 52, "Biography of the Prince of Nanping Yuanxiang, Wei": "At first, Emperor Wu's army went to the east, but funds were insufficient, and Wei took the bronze Buddha from the Xiangyang temple, and destroyed it to make coins."

[2]*Sui History*, 24, "Treatise on Food and Money": "At the beginning of Liang, only in the capital districts and the three Wu, and Jing, Ying, Jiang, Xiang and Liang prefectures used coins. The other prefectures and commanderies used various forms of grain and cloth for exchange. The Jiao and Guang frontier in the southeast used nothing but gold and silver for money. Emperor Wu minted a coin with rims around both the outer edge and the hole, the inscription on which read five grains, and whose weight corresponded to its inscription. Another coin was minted without an inner rim, and was called a Female-cash. (The *Book Hall of the Original Tortoise* and *Universal Statutes* make it Public-style female-cash.) The two items circulated together.
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The masses had privately used old coins for exchange, such as the Value-hundred Five-grainer, the Five-grainer Female-cash, the Taiping-hundred-cash, the Dingping-one-hundred, the Five-grain Immature-cash and the Five-grain Facing-*wen*. Their weights varied. The Son of Heaven repeatedly issued edicts and messages not to newly mint the two coins, and did not permit them to be used, but in the search for profit, they were turned to private use in great numbers. At the beginning of the putong era [520], there was advice that bronze cash be entirely banned, and that iron cash be minted instead." *Record of Coins*, quoting Gu Xuan, says that the Public-style female coin was not put into circulation.

[3]*Record of Coins*, quoting Gu Xuan.

people then were permitted to privately coin them, with 12,000 of them exchanging for 10,000 old coins from the treasury.

The monetary economy of early Liang was unevenly developed. Coins were used only in the capital districts, the three Wu prefectures, and in Jingzhou, Yingzhou, Jiangzhou, Xiangzhou, Liangzhou and Yizhou. Elsewhere various forms of grain and cloth were employed for exchange. The Jiao-Guang region of the far southeast used gold and silver. Prices probably also varied by locality. In tianjian 1 (502), 12th month, during a drought, a *dou* of rice was 5,000 cash.[4] Because of the effects of war, in Sichuan 3,000 cash was not enough to buy 1 *sheng* of rice.[5] When, however, in tianjian 4 there was a big harvest, 1 *hu* of rice only fetched 30 cash.[6]

In putong 2 (521), 6th month, the Inspector of Yizhou, Wen Sengming, rebelled and brought his prefecture over to Wei. An army was raised and invaded the north. At the end of putong 4, use of bronze cash was ended, and iron coins minted instead, thereby beginning a monetary depreciation. Before this, both large denomination and small coins had been used in China, but this was the first time large-scale use of iron coins had occurred.

Iron coins were used because the supply of copper had become insufficient, and because of the chaotic state of the bronze coinage at the beginning of Liang. In addition to the two kinds of Five-grainer minted by Emperor Wu, there were various sorts of old coins, like the Han Five-grainer,[7] the rimless Five-grainer (i.e. the Female-cash), the Taiping-hundred-cash, Dingping-one-hundred, Five-grainer (without the metal radical), Immature-cash, Facing-*wen*, Fenghuo, and Spade-spring. Of these, the Han Five-grainer was the heaviest. All the others were light and thin.

Probably by then only the small variety of the Taiping-hundred-cash remained in circulation. Some of these coins were old coins which had been renamed after undergoing clipping. The more severely clipped, the lower their value. At the beginning of Southern Qi, one good coin was already worth two bad ones. The situation worsened over time. An intact or not severely clipped Five-grainer might be worth 100 bad coins. Therefore, they might as well have gone over to iron coins so as to at least have gained a measure of uniformity.

Though the bronze cash were nominally abolished, they retained an exchange price with iron coins. There is a line in one of Ren Fang's poems which goes "two iron cash worth one."[8] Evidently two iron cash were the equivalent of one bronze cash. Perhaps even though the government had banned bronze cash, the people continued to circulate them alongside iron coins.

Iron, however, is cheap, and private coining of it would yield a very large profit. For this reason illicit coiners must have been very numerous, and the government itself minted no small number of iron coins. Emperor Wu several times relinquished his freedom to the Tongtai Temple, and each time was ransomed by his officials for 100 million cash. Naturally this ransom cash was paid in iron coins.

During the datong year period the phenomenon of the Short-hundred appeared once more. This practice had been carried on under Jin and Song rule, but during Song the supply of coins had not been constricted, and the Short-hundred's use may have been limited to official

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extortion from the people, as for example by its use when purchasing goods from the people.[9] By the time of the Xiao-Liang dynasty it became still more common.

The amount of the Short-hundred discount varied by time and place. From the Poling east, 80 was taken as 100, and this was called Eastern-cash. Upstream from Jiangzhou and Yingzhou, 70 was taken as 100, and this was called Western-cash. In the capital, Jiankang, 90 was taken as 100, and this was called Long-cash.[10]

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[4] *Liang History*, 2, "Annals of Emperor Wu," middle part: "Tianjian 1, 12th month. . . This year there was a drought. A *dou* of rice was 5,000." *Southern History*, "Basic Annals of Liang," contains the same information.

[5] *Liang History*, 20, "Biography of Liu Jilian": "Tianjian 1 . . . Because the rebellion in Shu had gone on for two years, all the food in the cities had been used up, and even with a *sheng* of rice at 3,000 no food was coming in. Deaths from starvation mounted."

[6] *Southern History*, "Basic Annals of Liang," 6: "Tianjian 4 . . . There was a large harvest this year. A *hu* of rice was 30." *Sui History*, "Treatise on Astronomy" has the same statement, but the *Jiankang Veritable Record*, 17, makes it "grain was 30 *wen* per *hu*."

[7] *Universal Statutes* makes it the Value-hundred Five-grainer.

[8] *Southern History*, 25, "Biography of Wang Yi," quoting Ren Fang's "Ode to Wang Gai": "Two iron cash worth one, Name for fact's oft changed; When time for kindness reached, Wait not pure Autumn's light." Wang Gai died during the troubles of the taiqing era.

[9] *Liu-Song History*, 72, "Biography of the Nine Princes of Wen: The Jin Pingze Prince, Xiuyou": "Jinghe 1 . . . the short cash one hundred was used to tax the people's fields. In registering [?] the tax rate and in seeking to purchase 1 *hu* of white rice or rice seed, such a discount was ordered."

If reckoning was done in Short-hundreds and prices remained unchanged, that would have amounted to a revaluation upward of the money, but actually as the hundred was reduced, prices rose, and when the hundred was complete, prices were low. In zhongdatong 1 (546), the authorities ordered use of the Sufficient-hundred, and banned the Short-hundred.[11] This edict had little effect, and the hundred became shorter and shorter.

Descriptions of the Xiao-Liang Short-hundred may be referring to the relationship between bronze and iron cash. We must also take account of whether prices were high or low independently of the discount. If 80 was taken for 100, but prices went up by 50 percent, then prices were going up independently of the discount.

Hou Jing's rebellion occurred during the last years of Emperor Wu. The capital, Jiankang, was besieged, and soon fell, Emperor Wu perishing of starvation. Loyalist local forces converged on the capital. At this point the quantity of iron coins must have continued to increase. The history says that "after datong, iron cash were everywhere heaped up like hills, and prices were exceedingly high. Those making exchanges used carts to carry coins, which were no longer counted individually, but only reckoned by the string."[12]

During Hou Jing's siege of the city, prices in Jiankang shot up wildly: One *dou* of rice was 800,000, one dog sold for 200,000.[13] Because there was also a food shortage on Hou Jing's side, 1 *hu* of rice sold for several hundred thousand. Naturally, these prices were all expressed in terms of iron cash.

After the death of Hou Jing, Xiao Yi succeeded to the throne in Jiangling, and issued a 10-cash coin. This was probably a bronze coin which was equated with ten iron coins. If that was the case, then the authorities were conceding a monetary depreciation to one-fifth of the former level. Since this 10-cash coin could not have matched in size the Tianjian Five-grainer or Public-style Female-cash, the depreciation was even greater. In chengsheng 3 (554), Western Wei's army launched a large scale invasion of the south, and Xiao Yi was killed. Chen Baxian set Xiao Fangzhi on the throne in Jiankang as Emperor Jing.

In taiping 1 (556) Emperor Jing issued an order that old and new coins be used together, the term old and new coins probably referring to bronze and iron coins. Most of the bronze coins were likely Goose-eye cash, and these surely could not have circulated at par. The following year the Four-pillar coins were minted at a face value of 20, which probably referred to 20 Goose-eye cash, and represented a further depreciation. Even this nominal value was not easy to maintain, so that after thirty days their face value was changed to 10, and after another four days they were allowed to circulate at par with ordinary coins. A few months after that, the government fell.

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Though there are no price records for late Liang, in addition to the issue of large face value coins, the Short-hundred phenomenon became still more severe, until 35 cash were taken as 100.[14] This was probably because iron coins were not being used, and bronze cash were deficient. Nominal prices must have been very high, but prices calculated in actual coins may not have been.

In addition to the Four-pillar cash, coins circulated at the beginning of Chen included the Two-pillar and Goose-eye cash. These all circulated at the same value, even though their weights differed. The Two-pillar coin was heavier than the Goose-eye, and so private parties melted down the heavier coins and reminted them, adulterated with tin and iron. There were also instances of payments being made with

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[10] *Sui History*, "Treatise on Food and Money": "Traveling merchants lustfully schemed after profits because of this. From the Poling east, 80 was taken as 100, and called Eastern-cash. Upstream from Jiangzhou and Yingzhou, 70 was taken as 100, and called Western-cash. In the capital districts, 90 was taken as 100, and called Long-cash."

[11] *Liang History*, 3, "Annals of Emperor Wu," latter part, zhongdatong 1: "7th month. An edict stated . . . 'Recently We have heard that outside much use has been made of 90 for 100 cash. When the hundred is reduced, prices render goods expensive. When the hundred is sufficient, then prices are cheap. It is not that the goods are expensive or cheap; it is that minds are unstable. As for distant places, great profit is made there too. . . Henceforth the Sufficient-hundred may be circulated. One hundred days after this order has been circulated any who violate it will, if males, be transported, and if female, be treated the same."

[12] *Sui History*, "Treatise on Food and Money."

[13] *Liang History*, 56, "Biography of Hou Jing": "Jing's provisions were nearly exhausted. By this point, a *hu* of rice was several hundred thousand, and there had been fifteen or sixteen cases of cannibalism." *Wei History*, 98, "Biography of Xiao Yan": "In Yan's city there was a great famine, with people eating each other. One *dou* of rice was 800,000. Human flesh was everywhere being sold mixed in with cow and horse meat. The men of the army joined to set up a market in front of the Hall of Virtuous Yang. For butchering one cow, 3,000 bolts of heavy silk were obtained; for selling one dog, 200,000 cash were obtained."

[14] *Sui History*, "Treatise on Food and Money": "By the final years, 35 were taken as 100."

grain and textiles, which shows the chaotic state of money's circulation then.

Southern Chen wanted to stabilize the value of its coins. In tianjia 3 (562) it put out a Five-grainer with a face value of 10 old coins. This was the heaviest coin to have been issued for forty or fifty years. Certainly it was heavier than the Four-pillar Five-grainer and Two-pillar Five-grainer issued in the closing years of Liang. To have equated it with 10 Goose-eye cash can not be considered excessive. In taijian 11 (579) of Emperor Xuan the Taihuo Six-grainer was minted and circulated alongside the Five-grainer at a face value of 10 Five-grainers, but it was less than twice the weight of the Tianjia Five-grainer, and so represented a severe depreciation.

The people were very dissatisfied. Because they lacked the strength to oppose this, they could only curse and say that the Six-grainer would bring no profit to the Emperor. Because the sealscript character for six in the inscription of the Six-grainer resembled a man standing with arms akimbo, everyone said it symbolized the Son of Heaven standing in that fashion while crying. Before long, Emperor Xuan in fact died. At first it was intended to have these coins circulate at par with the Five-grainer. Later, the Six-grainer was abolished and only the Five-grainer was used.

Southern Chen's territory was much more constricted than its predecessors' because after Hou Jing's rebellion Yizhou and Jiangling had been occupied by Western Wei. None of the prefectures of the Lingnan in the south used coins. Some used gold and silver. Others used salt, rice and bolts of plain cloth. By the time of Emperor Houzhu, the monetary system had become useless, and when the Sui army attacked, no resistance was offered.

4. *Value of the Coins of the Northern Dynasties*

As the Jin Dynasty fell into decay, there were already a number of nomadic tribes present in the north. Among

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the somewhat more advanced of these were the Xianbi. They steadily expanded their territory, and pillaged other tribes' livestock. This people had long since absorbed Chinese culture, and by the late fourth century had established a state, the Northern Wei.

At that time they did not yet even produce the textiles characteristic of an agricultural society, much less money, and depended on plundering the regions south of them to obtained such goods. Hence when Xu Qian stole 2 bolts of heavy silk, Emperor Taizu dared not look him in the eye for fear he would commit suicide.[1]

Northern Wei's economy developed through three stages.

Before Eastern Jin's long'an 2 (398, tianxing 1 of Emperor Taizu of Latter Wei), they still led a purely nomadic life. They clashed with other tribes mainly to plunder slaves and livestock, and regularly engaged in the hunt.

Their place names then were all associated with wild or domesticated animals, as for example Yanggu (Sheepram), Chaishan (Jackal Mountain), Macheng (Horsetown), Qingniushan (Blue Ox Mountain), Hujuan (Tigerpen), Bailupo (White Deer Slope), Niuchuan (Ox River), Panyangshan (Coiled Ram Mountain), Duzhu (Calf Sandbar), Maomaoling (Horsemane Ridge) and Du'ershan (Calf Mountain). There was a prince named Yang'er (Sheep), an Emperor's uncle named Hutou (Tigerhead) and a general named Pibao (Skinned Leopard).

Gifts to officials were made in cattle and sheep. They feared plagues rather than floods or droughts.[2] An agricultural society's people would have feared floods and droughts as threats to their livelihood instead. Right down to the time when Toba Hong (Emperor Gaozu) moved his residence to Luoyang, his subordinates from the old days remained unwilling to leave the broad plains of the north for an urban existence. Hence he decided to spend his winters in the south (i.e. in Luoyang), but to return to the northern plain for the summers.[3]

During the century between long'an 2 of Jin and taihe 19 (495, yanxing 2 of Southern Qi) of Northern Wei, they completed the task of unifying the north, their life became more sedentary, and they easily assimilated the relatively higher feudal culture of the Chinese, adopting an agricultural plantation life, and even scheming to acquire fields. Accompanying the development of agricultural production was the appearance of agricultural surpluses, which encouraged commerce and even the appearance of credit. The natural economy still occupied a dom-

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[1] *Wei History*, 1, "Prefatory Annals": "When Taizu ascended the throne . . . there was a shortage of textiles for the state. A clansman named Xu Qian stole 2 bolts of heavy silk. When those guarding it were going to report the theft, the Emperor concealed the offense. He said to Yan Feng, 'I cannot bear to look upon Qian's face. Do not let word leak out or Qian might commit suicide out of shame. To shame a gentleman over a matter of wealth would be wrong."

[2] *Wei History*, 2, "Annals of Emperor Taizu."

[3] *Wei History*, 15, "Biographies of Zhao Cheng, His Son and Grandson."

inant position, and land taxes, savings, relief measures, salaries and prices were all reckoned in textiles. It was not until after taihe 19 that they entered the stage of a monetary economy.

Although it was only in taihe 19 [495] that Northern Wei began to formally mint coins, this is not to say that before then no use of coins was made. I do not wish to say that at least the ethnic Chinese of the Northern Dynasties lived under a monetary economy before this, but merely that their own merchants would have found it hard to avoid commercial intercourse with the people of the Southern Dynasties and the consequent bringing home with them of bronze cash.

Moreover, the Northern Dynasties had on several occasions invaded the cities of the Southern Dynasties, and captured southern soldiers, so there was no reason why they should not also have carried off their coins as well. When Murong Baiyao in huangxing

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3 (469) attacked Dongyang, he stole 150,000 copper cash.[4]

The northerners had, however, gone through a long period of warfare. Society and economy had received severe blows. The circulation of money had been impeded, and the natural economy had come to occupy a more important position.

The coin minted in taihe 19 was the Taihe Five-grainer. It was ordered circulated in all parts of the country. Thenceforth official salaries were to be paid in units of heavy silk discounted into copper cash at a rate of 200 cash per bolt. At the same time furnaces and coin workers were established in various places and permission granted for free coinage among the people so long as the purity of the bronze they used was maintained.[5]

In the Winter of yongping 3 (510) another Five-grainer was minted, but it did not circulate uniformly in all localities. In some places only old coins were used. In others even the old practice of "ripping apart of bolts of cloth by the foot to fill lacks with surpluses" was used.

There was probably still no problem involving instability in the value of money during the time of Emperor Xuanwu because the monetary economy was still not very well developed, but as it gradually advanced, and as war with the Southern Dynasties and despoliation of their peoples increased, private coining must have been stimulated.

Some Taihe Five-grainers are as light as 2 grams, and some of their inscriptions leave off the "mouth" element on the right side of *he*. By the end of the reign of Emperor Xiaoming at the latest, private coining had become rather serious. By then the price of copper had reached 80 *wen* per catty, and private coiners could cast 200 of their thin coins from a bit over 1 catty. The nominally 5 grain coin was actually less than 2 grains. One even encounters the epithets "wind-blown" [*fengpiao*] and "water-floating" [*shuifou*], applied to coins thinner than the old Pod-cash. If a string of these broke and they fell in the water, they might even float. A *dou* of rice cost almost 1,000 cash.[6]

At that point Gao Qianzhi advocated minting a Three-grainer. He reasoned that since warfare had not halted and the treasury was empty, minting small coins might fill up the treasury.[7] His brother, Gongzhi, called for minting large coins beginning with the new year period. A catty of copper could only be cast into 76 coins, and the price of copper was at least some 50 odd cash. If you added to this the cost of labor, tin and charcoal, then it would be unprofitable to scheme to coin them privately.[8] Yang Pei then advocated minting Five-grainers, and allowing both officials and private parties to produce them. Emperor Xiaozhuang took Yang Pei's advice and minted the Yong'an Five-grainer.

The aim in minting this coin was to raise the purchasing power of the money, and so not only were few of them minted, but heavy silk was also

[4] *Wei History*, 50, "Biography of Murong Baiyao": In Emperor Xianzu's huangxing 2 "Cui Daogu, the Inspector of Yanzhou, Liang Zou, and the general in charge of its defense, Liu Xiubao, appeared before him in bonds to surrender. Baiyao released and behaved ceremoniously to them all. He sent Daogu, Xiubao and their subordinates to the capital . . . and advanced against Dongyang. By Winter he had entered its western fortifications. In year 3, Spring, he took Dongyang, capturing Chen Wenxiu. In all he took over granaries holding 850,000 *hu* of grain, 3,000 *hu* of rice, 9,000 bows, 188,000 arrows, 22,400 swords, 3,300 helmets and a like number of sets of armor, 5,000 catties of copper and 150,000 coins. Within the city were 8,600 households and 41,000 individuals. There were over 300 Wu-Man barbarian households."

[5] *Wei History*, 110, "Treatise on Food and Money."

[6] *Wei History*, 58, "Biography of Yang Bo": "Of the coins then used, most were privately minted, and they were thin and small. If the wind blew them into the water, they would float. A *dou* of rice ranged up to 1,000."

[7] *Wei History*, 77, "Biography of Gao Chong": "Now the crowds of goblins do not rest, and there are ramparts in all four quarters. Taxes are vexatious. Daily expenses are 1,000 *jin*. Savings are being steadily eroded, and wealth is all but used up. . . If small coins are minted, wealth can be increased. . . I now advocate this minting to make up for the dearth of exchange. The Five-grainers can be kept in use as well."

[8] *Wei History*, 77, "Biography of Gao Gongzhi."

sold off to absorb money from circulation. But as each bolt sold for only 200 cash, and the market price was 300, this measure did not constrict the coinage, but rather stimulated private coining, which caused lack of uniformity in the weights of Yong'an Five-grainers, and increased the incoherence of the coinage.

Generally speaking, the purchasing power of Northern Wei's money was relatively stable. What oscillations occurred were small, transient movements. This was because Northern Wei did not mint either large denomination coins or especially light and small

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coins. In order to uphold the value of their coins and the sovereign power of the government, the authorities kept working on systems to halt private coining.

After Emperor Xiaowu had been driven out by Gao Huan, and had fled to Chang'an, Northern Wei split into Eastern Wei and Western Wei. The two states were constantly at war with each other, and this further encouraged private minting.

For example, though the Yong'an Five-grainer continued in use during Eastern Wei, there were many private coins with names like Yongzhou Green-red, Liangzhou Thick, Constrained-cash, Auspicious-cash, Heyang Rough, Heavenly Pillar and Red-halter, all of which were probably Yong'an Five-grainers, but which we now have no way to distinguish from each other.

From Jizhou north then, textiles rather than coins were used. Successive good harvests in the yuanxiang and xinghe year periods of Emperor Xiaojing pushed down the price of grain to 9 cash per *hu*.[9]

At the beginning of wuding (543), men were sent to the prefectures to collect copper and bad coins to be reminted into Yong'an Five-grainers, but before long private coining had again reduced weights. In wuding 6 (548) standard weights were set up at the gates of all prefectures, commercial towns, commanderies and districts. No coin was to be allowed to pass through unless it weighed 5 grains, or 100 coins weighed 1 catty 4 ounces and 12 grains, but "crowds of officials and advisers" pleaded for a delay in the promulgation of these standards because grain was expensive, and this delay was granted. Before long, Eastern Wei fell to Northern Qi.

Northern Qi minted the Changping Five-grainer in tianpao 4 (553). This coin was finely made, its size was up to the standard, and so its value was relatively high, but because official gifts were not kept within limits, taxes must have had to be increased, and so the histories say that even before the Changping Five-grainer had been issued, private coining of it was flourishing, and within a year or two excesses were being committed.

Killings could not be halted. A rise in the price of copper caused private coiners to lose profit and reduce the numbers of their coins. During the ganming and huangjian year periods (560), however, private coining again became severe. Coins circulating in Ye (northern Henan) bore such names as Red-flesh (also called the Red-rim), Green-wrought, Fine-eyebrow and Red-raw. Thus, Henan contained variant coins which were light, thin, and adulterated with lead and tin. A number of different coins were in circulation in Qingzhou, Qizhou, Xuzhou, Yanzhou, Liangzhou, Jingzhou and Hezhou.

Emperor Wucheng was still more wasteful. Under Emperor Houzhu the situation became further aggravated. In the palace a skirt was valued at 10,000 in ingots, and a mirror was 1,000 *jin*. To burn a night's worth of oil at the Great Buddha of Jinyang's West Mountain required 10,000 basins. The labor for constructing Empress Mu's Great Precious Grove Temple cost 100 million.[10] These extravagant expenditures required merciless taxation.

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[9] *Investigation of Literary Remains*, "Investigations of Field Taxes, 2."

[10] Northern Qi expenditures were very large. Upon his ascent of the throne, Emperor Wenxuan gave gifts to the Wei clan of some 10 million, something rarely encountered during the Northern and Southern Dynasties, and only seen among the Northern Dynasties. The imperial house's wastefulness was extreme, and naturally this made the people's burdens heavier. This could not help but give rise to private coining.

When Wenxuan assumed the throne he sent down an edict stating: "Recently, manners and morals have become lax. Loiterers daily become more numerous. The good and bad fortune of families is coming to depend on the search for the unusual. Expenses for weddings and funerals, carriages, clothing, luxurious food and drink are exhausting people's annual income to meet daily expenses. Moreover, even slaves and servants wear gold and jade. The clothing of serving girls and boys is resplendent so as to begin with a great display, and later to use those who go before one as models of beauty." (*Northern Qi History*, 4, "Annals of Emperor Wenxuan.")

As for waste in the palace, there were things rarely seen in the course of history: "Maidservants kept in the palace were all enfeoffed as lords of commanderies. Over 500 palace ladies consumed precious clothing of jade. One skirt was worth 10,000 in ingots. A mirror was worth 1,000 *jin*. Competitions were cunning, and what was put on in the morning was spoiled by evening. Under Emperor Wucheng, waste by the princes was as great as waste by the Emperor. The size of the palaces and gardens was increased. The Stopping-military-cultivating-civil Terrace

In wuping 6 (575) taxes were levied at market entrances, on ships, carts, mountain and marsh products, salt, iron and inns.[11] As a consequence private coining became still wilder, using pig iron alloyed with just a little copper to mint coins.[12] In Xuzhou city, the Five Grade Temple had 100 bronze statues stolen.[13] This must have been connected with private coining.

Western Wei carried out recoinages on two occasions: The first was in datong 6 (540). The second was in datong 12. Although the histories do not clearly explain the nature of these two issues, they could not have been ordinary

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issues, which would have simply continued year by year.

These must have been recoinages involving some degree of monetary reform, and weight reduction must have been involved, at least on the second occasion. A monetary war with Eastern Wei could also have been involved. The relations between these two governments were very much like those between Three Kingdoms Wu and Shu-Han.

Western Wei had three emperors, and after twenty years had its power usurped by Yuwen Tai, who set up Northern Zhou [in 557]. Northern Zhou and Northern Qi were very nearly contemporaneous with each other and with the Southern Dynasties of Liang and Chen.

This was the time of greatest confusion for Chinese money. In the south were Chen's Five-grainer and Six-grainer; in the north was Qi's Changping Five-grainer.

Yuwen Tai established a prefectural militia system which allowed a large number of those who served as soldiers to engage in no productive activity except military training, and to pay no taxes. Emperor Wu, Yuwen Yong, placed still more emphasis on this institution, and this increased Northern Zhou's military strength, but also must have increased government expenditures. Therefore, immediately upon taking the throne, Yuwen Yong minted large denomination coins which depreciated the currency. He first minted a Spade-spring with a face value of 5 Western Wei Five-grainers. This amounted to a weight reduction.

Within the boundaries of Liangzhou and Yizhou a variety of old coins were in circulation. In the commanderies of Hexi, gold and silver coins of the western frontier were officially used.

After thirteeen years (in 574), a value-10 Five-agents Large-spade was minted which was almost the same weight as the Spade-spring. This amounted to a weight reduction to one-tenth the former value. The history says that it "brought in much of the profit of the merchants."[14] This was precisely the aim of the ruling class, but the next year illicit coining appeared along the frontiers, and the weights of coins were probably further reduced, since some surviving Five-agents Large-spades weigh as little as 2 grams. The authorities soon banned the Five-agents Large-spade, and would neither accept it nor pay it out at the excise tax stations. Only the Spade-spring was accepted at the tax offices, but it was not paid out again, and later was abolished.

In daxiang 1 [580] the Perpetual-circulation-myriad-states coin was minted. It weighed only 6 grams, but each was equated with 10 Five-agents Large-spades or 500 Five-grainers. If we assume a weight of 2 grams for the Five-grainer, this amounted to a weight reduction to 1/166th of the former level. Of course this evoked private coining, and the private coins were as light as 2 grams.

Hence, though the aesthetic quality of the three Northern Zhou coins is very high, contemporaries did not place any value on them for use. A number of places used textiles. Even gold, which had not been much used for a century, again became an instrument for making payments. In some places western gold and silver coins were used.

Yang Jian unified the the Northern and Southern Dynasties and put into effect a policy of monetary constriction. A relatively long period of sustained peace allowed domestic production to increase so that "granaries and treasuries were overflowing," and "textiles accumulated until they could have encircled the southern walls."[15] Probably for these reasons, the many years of oscillation in money's value

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finally ended.

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was built. For the ladies in waiting of the court there were built the Mirror Palace, Jewel Palace and Tortoiseshell Palace. They were colored and engraved in ways wondrous for those times. . . To burn oil for one night at the Great Buddha of Jinyang at West Mountain used 10,000 basins to illuminate the interior of the edifice. In addition, for . . . Empress Mu's Great Treasure Grove Temple . . . labor expenses were reckoned at 100 million." (*Northern Qi History*, 8, "Annals of Youzhu.")

[11] *Northern Qi History*, 8, "Houzhu."

[12] *Sui History*, 24, "Treatise on Food and Money." *Universal Statutes*, "Food and Money, 9."

[13] *Northern Qi History*, 46, "Upright and Benevolent Officials: Biography of Su Qiung."

[14] *Investigation of Literary Remains*.

[15] *Universal Statutes*.

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5. The Value of Sui Money

Sui's mandate lasted for thirty years after it unified China, a period divided equally between the reigns of Yang Jian and his son Yang Guang. These two periods of fifteen years represent distinct epochs in the history of the monetary economy.

Yang Jian opted for a policy of constriction. Hence he was able to stabilize the value of money, which had oscillated during the last years of the Northern and Southern Dynasties, and was able to establish a prosperous nation.[1] Yang Guang opted for an inflationary policy. In both military and economic terms, China under Emperor Yang was an expansionist country, even more so than under the First Emperor of Qin or Emperor Wu of Han.

Not everyone would agree that the policy of Yang Jian was constrictive. The fact of the matter is that prior to kaihuang 9 [589] the whole country was still at war, and imperial gifts were still very generous. It is said that at the time of the pacification of Chen Kaixuan, the rewards for merit "of piles of textiles extended to the southern wall. Over 3 million *duan* were expended for gifts."

On the other hand, the monopolies on wine and salt were abolished and the length of labor service was reduced. How can this be called a policy of constriction?

This thesis can only be justified by noting Yang Jian's reduction in personal and palace expenditures. The result of Han Emperor Wen's reduction of expenditures was that "the treasuries were full of goods and wealth." The consequence of Sui Emperor Wen's reduction of expenditures was that "the treasuries were all full." The historians even say that "among those who planned for the wealth of the state in ancient and modern times, none was like Sui."[2]

Naturally, even under Yang Jian's rule, the circulation of coins was not entirely stabilized. Though a Five-grainer which was up to the standard (1,000 coins weighing 4 catties 2 ounces) was adopted at the beginning of kaihuang, there were many different coins in circulation, and private coining was prevalent.

In kaihuang 3 [583], 4th month, the border excise stations were ordered to each keep a hundred coins as standards. Coins brought in from the outside would have to undergo inspection, and only those which were up to the standard would be allowed in. Those not up to the standard would not be taken in, and would have to be reminted.

Within two years, the earlier Changping Five-grainer, the Five-agents Large-spade and Perpetual-circulation-myriad-nations coins had all been taken out of circulation. From kaihuang 5 on, the Sui Five-grainer was probably the only remaining important coin, but coins minted then were often alloyed with pewter, which was an inducement to private coining.

The number of coins put out by the official mints also gradually increased. For example, in kaihuang 10, Yang Guang was permitted to establish five furnaces for casting coins in Yangzhou. In kaihuang 18, Yang Liang was granted permission to set up five furnaces in Bingzhou. On the pretext of a coin shortage in the south, Yang Guang asked to establish coin smelters at Ezhou's Baiding Mountain. Yang Xiu also set up five furnaces at Yizhou. The coins put out by these smelters were not necessarily up to the standard, which would have made private coining more intense, and further worsened the quality of coins.

Nevertheless,

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the fiscal policy of that period must still be considered to have been stabilizing. Ever-normal Granaries were in every locality, and these conserved provisions to meet demand. There were also frequent inspections in all localities of the ready cash at inns and markets. None but official coins would be accepted by the officials. As a consequence, during the reign of Yang Jian, the value of money was for the most part stable.

After Emperor Yang took the throne [in 605], expenditures greatly expanded. For example, to build the Eastern Capital required 2 million labor servicemen each month. Cutting the Grand Canal used 7 million men and women. During the Imperial Progress to Jiangdu, the vessels were lined up bow to stern for over 200 *li*. The repair of the Great Wall required raising another million men.

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[1] *Tang History*, 48, "Treatise on Food and Money": "After Zhou had pacified Qi, the prefectural treasuries were full. Emperor Wen of Sui was frugal in all matters, and made no unnecessary expenditures. At the beginning of kaihuang, his advisers drew analogies to the hoards of grain and rotting strings of cash of the Han Dynasty's Emperors Wen and Jing."

Su Dongpo said: "Since the time of Han there had been none to compare with Sui in the increase of population and the abundance in the treasuries and granaries. Their taxation methods should be examined. And yet, scholars believe they did not follow the Way in obtaining the Empire, and lost all in the following generation because of unprecedented licentiousness." (*Investigation of Literary Remains*.)

[2] *Investigation of Literary Remains*, "Investigation of State

A number of these were constructive works of engineering. In particular, the digging of the Grand Canal solved the problem of how to transport food from south to north, and viewed over the long run provided benefits. But to engage in all these projects simultaneously was more than the nation's fiscal resources could bear.

Emperor Yang's extravagant ambition seems to have been to both establish a great empire and simultaneously give great encouragement to foreign trade. The adoption of this policy owed much to the advice of Pei Ju. Foreign wars used up much money, and measures used to attract barbarian merchants to China also required hundreds of millions for expenses in welcoming and seeing them off.[3] This encouraged depreciation of the currency.

The greater part of the fall in money's value was caused by private coining. To attempt to escape the burden of such large government expenditures[4] the people could only turn to casting coins, and bad coins at that.

At first 1,000 cash still weighed 2 catties, a reduction of 52 percent. Later, they came to weigh only 1 catty, a reduction of 76 percent. Finally, they resorted to use of clipped iron plates and slices of leather pasted over with paper.[5] When Li Yuan entered Chang'an, the people were using ring coins of which 80-90,000 would only fill half a *hu*.[6]

Naturally, prices shot up. In daye 6 (610), the season for tilling and planting was missed, most fields were left to go wild, and there was a famine. Grain became expensive, especially on the northeast frontier. By the end of daye 7 [611] several hundred cash were required for 1 *dou* of rice.[7] By the end of Sui, at the time of Zhu Can's uprising in the Xiang-Deng region, one *hu* went for 10,000 cash.[8] In Luoyang at the end of Emperor Gong's yining 1 (618) it required 10,000 cash for 1 *hu*.[9]

The higher went prices, the heavier became the people's burden. Minting coins was already against the law, and there was nothing else for many people to do but go into the hills as "bandits." From daye 6 [610], 1st month, several dozen "bandits" had been raising trouble at the Establish the State Gate of the capital, and their numbers increased thereafter year by year. At first, there were no more than several thousand such men, who could have been pacified at one blow. Later their number grew to several tens of thousands, and then to over 100,000. They even sacked commandery seats. They could no longer be defeated, and the dynasty subsequently fell.

During the several centuries from Wei and Jin to Sui, China was politically fragmented,

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and institutionally it was in as chaotic a state as was possible. There are very few records of prices, and most of those that do exist are exceptional prices. Coin weights varied by place and time. There were no fixed standard measures. Hence, even if we had data on normal prices, we could not compare them with prices of earlier or later periods.

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Requirements, 1."

[3] *Sui History*, 67, "Biography of Pei Ju": "In addition, because there were many precious goods at the western frontiers, Pei Ju was ordered to go to Zhang Ye and supervise the market where the merchants and barbarians made exchanges, to entice them with profit, and order them to court. Thenceforth, intercourse continued with the various parts of the western frontier. The prefectures and commanderies through which the foreign merchants passed were wearied by their welcoming and sending off, the expense for which ran into the hundreds of millions."

[4] *Northern History*, 12, "Basic Annals of Sui," latter part: "The government's punishments were loosened. Bribery was carried on in the open, and none dared say anything about it. It was even seen on the streets and roads. The Six Armies never rested. Labor service became vexatious. Those who went, did not return. Those who stayed, went bankrupt. Men starved and ate each other. Cities fell into ruins and emptied. The Ruler empathized with none of this. There were Imperial Progresses to the east and west, and there was no fixed imperial residence. All made contributions, but none received any recompense. Several years worth of land tax was illicitly collected."

[5] *Sui History*, 24, "Treatise on Food and Money."

[6] *Tang History*, 54, "Treatise on Food and Money."

[7] *Comprehensive Mirror For Illumination of the Prince*, 181. Dong []a's *Relief of the People Book* says it was in year 10, i.e. 614.

[8] *Taiping Broad Record*, 267, "Zhu Can."

[9] *Comprehensive Mirror For Illumination of the Prince*, 184, yining 1, 12th month, day yiwei: "In the eastern commanderies, a *dou* of rice was 1,000 cash."

3.3 Monetary Studies

1. Monetary Theory

For long periods during the more than three centuries of Jin and the Northern and Southern Dynasties no coins were produced at all. At other times, there was extensive circulation of depreciated currency. At first glance these two phenomena would appear to be inconsistent, but in fact they occurred because at the philosophical level there were several opposed theories clashing with each other. On one side were the bullionists and nominalists; on the other side were the objectivists.

The Chinese bullionists were much like the sixteenth and seventeenth century European bullionists and mercantilists, except that the

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Europeans valued gold and silver, while the Chinese valued bronze cash. Both supposed that metal coins were the best form of wealth, and so the greater their quantity the better.

Although the bullionists and nominalists differed, they were alike in their denial that the quantity of money could influence its purchasing power. The bullionists considered a coin's value to reside in its metal content. In other words, the metal itself was an object of value. If the metal was used as money, its value could not change so long as the coin's size was not reduced. This theory had a positive significance because of its opposition to the reduction in weight of the medium of circulation.

If copper cash were to be the main store of value, then this theory would be reasonable, because the money's use as a store of value could produce a moderating effect, keeping the quantity of money from becoming too large or too small. In China, however, copper cash was not the main store of value. Gold and silver were. Particularly after its weight had been reduced, no one would use copper cash as a store of value. Hence the quantity of copper cash in ancient China could, given unchanging demand on the market, influence the money's purchasing power. In the aftermath of a weight reduction, the situation would be still more serious, producing an inflation.

The nominalists considered the value of money to be a legal rather than an economic question. Even if the coinage was lightened, one need only ascribe to it a certain nominal value, and this value would not change. This theory amounted to a legalistic defense of a policy for reducing the weight of the currency.

The objectivists and the nominalists resembled each other in that they both considered coins to have no value, but for this reason the objectivists advocated the abolition of these valueless coins and the use instead of grain and silk, which do have value.

Those who took this position were often also quantity theorists. For the objectivists, value came entirely from the practical, from things which could feed the hungry and clothe the cold. There is an historical background to this point of view. In ancient times exchange was inconvenient. Commodities could not be transported very easily. At times, if there was a famine in one area,-no matter how much money was available there, it could not buy food. In addition, the instability of the money itself made some people antipathetic to it. Though objectivism arose under conditions of monetary chaos, it was a backward theory not in accord with the needs of the age.

The above theories each in turn controlled Chinese monetary thought and policy from the last half of the third to the end of the sixth century. The fact that though coins were still used during Jin, they were not minted, was for the most part the result of the influence of objectivists.

To some extent this was also the result of the influence of negative ideas rejecting the world of that time. Such

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ideas were displayed in Ma Rong's "On Life's Importance in the Empire," Bao Jingyan's "On the Lack of a Ruler," and still more so in Lu Bao's "On the Spirit of Coins."

Lu Bao had no particular point to make on monetary theory, but was merely displaying his disgust at the power of money. He perceived the phenomenon of inequality between rich and poor in the society of that time. On the one side there were wasteful rich households like those of Shi Chong and He Ceng. On the other side there were those surrounding them, who depended on their influence.

Hence he said: "Those with more money are placed in front; those with less money stand behind." If one had money, "to danger one can bring repose, to death bring life; to the noble bring low status, to the living cause death."

He did not in any sense advocate the abolition of coins. In fact he even says some nice things about money: "It accumulates like a mountain. It flows like a river. There are times when it may be active. It may flow into storage and be preserved. It may be conveniently exchanged in the market without suffering loss."[1] Hence we cannot view him as an ob-

[1] According to Lu Bao's "On the Spirit of Coins": "The cash is fundamental. It has the form of both male and female: Within it is square. Outside it is round. It accumulates like a mountain. It flows like a river. There are times when it may be active. It

jectivist. The expression "Elder Brother Kong Fang" which he created not only epitomizes his attitude toward money, but also has enriched the Chinese language's store of vocabulary.

During the yuanxing period of Eastern Jin's Emperor An (403), Huan Xuan, while in office, publicly advocated the abolition of coins in favor of grain and silk. Kong Linzhi (369-422) opposed this. Kong made no new contribution to monetary theory, but merely quoted Sima Zhi, who had said that coins not only enriched the state, they could also reduce punishments. His own discourse merely emphasized the explanation that grain and silk ought not to be used as money.[2]

Nevertheless, though he quoted Sima Zhi, his view of money's nature was not necessarily the same as Sima Zhi's. If indeed Sima Zhi had said that the making of coins could enrich the state, this could be explained two ways: A literal explanation would take money as wealth in itself. To make coins would be to create wealth. This would be a bullionist view. The other explanation is the same as Kong Linzhi's: "According to the Sage King's regulations, commodities without use are employed to circulate useful forms of wealth."[3] That is to say, the government employs valueless money to take over objects of value from among the people, and because of this the state is enriched. Kong Linzhi agreed with Sima Zhi only on the one point of restoring the use of coins.

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may flow into storage and be preserved. It may be conveniently exchanged in the market without suffering loss. Difficult to injure, it has long life. Without lack, it is like the Way. Hence it can be immortal, for the ages

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a spirit of treasure. Look upon it as an elder brother. Call it Kong Fang [Literally, "Round Square," a reference to the shape of a coin, but which can also be taken for the name of a member of Confucius's family, the Kongs. EHK]. If you lose it, you are poor and weak. If you gain it, you are prosperous and strong. Without wings, it flies. Without legs, it walks. It displays a solemn countenance. It unloosens a mouth hard to open. Those with more money are placed in front; those with less money stand behind. Those placed in front are the rulers and elders. Those behind are the ministers and servants. The rulers and elders have their coffers overflow, and still have a surplus. Ministers and servants are poor and exhaust their resources, and yet still do not have enough.

"The *Odes* says 'Ah, the rich man. Alas this lonely one.' The reason why a coin is also called 'spring' [*quan*] is because there is no distance it does not go, no gorge into which it does not penetrate. The urban gentry talk themselves to exhaustion, and weary of hearing pure talk. Facing it they sleep. See my elder brother! There are none who do not look upon him with veneration. Those whom Cash helps are lucky, and invariably gain profit. What need is there to study books to afterward gain wealth and noble status? Formerly, Duke Chang delighted in speculation. The founder of Han overcame him at Ying'er. Lord Wen took off his clothes and was given brocades. Sima Xiangru married well, and was rolling in pelf. Official honors and fame are all the result of Cash. Speculation leads to emptiness, so how could one gain substance from it? Though Ying'ers are few, to reach them is closely related [to Cash].

"Looked at this way, it may be said to be a miraculous thing. Without virtue, one is honored. Without power, one flourishes. One pushes the golden gate, and enters the purple door. From danger, one can gain repose; from death, life; the noble can be brought low; the living caused to die. For this reason, you cannot be victorious in a struggle without Cash. You cannot pull out of a narrow strait without Cash. Without Cash you cannot get loose from a grudge. Without cash, your questions go unanswered.

"A scarlet woman in Luoyang, a gentleman on the street, both love our elder brother, all without exception. If he takes one by the hand, embraces one, from beginning to end, no matter how clever one's plans, no matter what one's age, vassals will converge on one's establishment, and one's gate will be like a market. There is a proverb, 'Cash has no ears, yet summons demons.' For everyone these days, Cash is everything. Hence it is said: 'If the army is not bribed, the soldiers will not have arrived. If the army of rewards is bereft, the soldiers will not have left.' If an official is without a middleman, it is best that he return to the fields. Even if he has one, but lacks our elder brother, it is no different than burying one's wings and wanting to fly, or wanting to walk without legs." (*Jin History*, 94, "The Recluses: Biography of Lu Bao.")

[2]*Liu-Song History*, 56, "Biography of Kong Linzhi": "The Eight Policies of the 'Great Plan' [chapter of the *Book of Documents*. EHK] takes money as secondary to food. But how can one not use exchange wealth to gain one's needs? If exchange cannot be used, then commoners who work for cash will be hindered from earning a living. One may warn against this. . . If grain and silk are used as treasure, they will be diverted from their primary functions of providing clothing and food. If they are now divided up to make money, the harm caused will be extreme. Moreover, labor's fruits will be destroyed in the hands of merchants, and plows will be abandoned in the midst of the furrow. These abuses are clear from former times. Hence Zhong Yu said people watered grain to seek profit, and thinned out heavy silk to accumulate capital. The Wei regulations punished this severely, but were unable to stop it." [Translation adapted from W. Vissering, *On Chinese Currency*. Leiden: Brill, 1887, pp. 67-68.]

[3]*Ibid.*: "According to the Sage King's regulations, commodities without use are employed to circulate useful forms of wealth. Then there is no expense from destruction or loss, and the hard work of transportation is reduced. These coins are what was used to replace tortoise and cowry, and down through the

During Liu-Song of the Southern Dynasties, such intellectual clashes became sharper and influenced actual monetary policy. For example, in the time of Emperor Wu, there were people who felt that if the quantity of coins diminished, the state would not have enough, and wanted to have the government buy up all the copper held by the people to use for casting coins,[4] which, of course, is a bullionist viewpoint.

Fan Tai (355-428) opposed this. He said:

> What is now causing distress is that there are still too few people engaged in agriculture; that the granaries are not full; that transport is unsatisfied. Those who use food as capital are numerous. A family without a private accumulation will find it hard to avoid disaster. Not many goods are being traded. That which formerly was expensive, is now cheap, and all kinds of goods have come together in price. They are reckoned
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> the same. . . Now articles which must be supplied are destroyed, and because coins are not bestowed, those who supply goods are not requited for their labor. In practice,both Ruler and people are harmed. In reality, those who are harmed are numerous, those who enjoy benefits from this are few. (*Liu-Song History*, 60, "Biography of Fan Tai.")

Apparently Fan Tai was not a pure objectivist. His denial of value to money probably refers to use value, not exchange value. He seems to suppose that money's intrinsic purchasing power is unchanging. What changes is the object of this purchasing power. He denies that the state does not have enough because there are few coins. It lacks goods because production is insufficient.

In yuanjia 24 (447), because the coins were being lightened by illicit coining and clipping, the Prince of Jiangxia, Liu Yigong [the fifth son of Emperor Wu. EHK] offered a proposal to use large coins at a face value of 2. His view may be said to have been a form of nominalism. He supposed that no matter what the weight of a coin, so long as it was given the face value label of 2 by law, its value would be doubled. Shen Yanzhi gave theoretical support to this proposal. He said:

> Tortoise and cowry circulated during high antiquity. Round coins and knives rose from the time of Zhou. All were used to accumulate wealth, to transmit profit, to fulfill the needs of the state and enrich the people. . . If large coins are used at double value, then it will be a reality [treasure?] which the state's tradition will find it hard to undermine [destroy?] and families will win a twofold profit. Do not wait to add laws. Make the fundamental decision. Issue one order, and the masses will be beautifully united. . ." (*Liu-Song History*, 66, "Biography of He Shangzhi.")

He Shangzhi opposed this position. He said:

> The rise of round coins and cowry was based on their value as commodities, and what they would actually exchange for. How could their quantity be falsely increased? If the quantity was less, then wealth was lightly demanded. If the quantity was greater, then goods were heavily demanded [or: abuses were light. Peng]. Though the quantities differed, there was no difference in practice [i.e. in real prices. EHK]. So if one is used to stand for two, would this not be to vainly worship an empty price?" (*Liu-Song History*, 66, "Biography of He Shangzhi.")

His position was basically close to that of Fan Tai, but he had gone a step further. Fan Tai had supposed that the quantity of money did not influence its value. He Shangzhi was a quantity theorist. He recognized that an increased quantity of money would cause prices to rise. Fan Tai used the irrelevance of the quantity of money as the reason for opposing increased minting. He Shangzhi took the bad effects of an increase in the quantity of money as the reason for opposing the increase.

This statement of his was linked to money's two most important functions. His remark that it "was based on their value as commodities" refers to its function as a measure of value. His reference to what it "would actually exchange for" would seem to refer to its function as an instrument for purchase or intermediary of exchange.

The conflict between the objectivists and bullionists became exacerbated during the time of Emperor Xiaowu. Zhou Lang advocated the abolition of metal coins. He said:

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> Agriculture and sericulture are in fact the destiny of the people and the basis of the state. If one of these is insufficient, then the proper ceremonials will not flourish. If they are to be emphasized, then metal coins should be abolished, and grain and silk should be used for rewards and salaries. . . . Everywhere from the Huai north, 10,000 bolts should be the market denomnination. From the Yangtze south, 1,000 *hu* should be the commodity unit. . ." (*Liu-Song History*,82, "Biography of Zhou Lang.")

Nevertheless, at that time the doctrines of the

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ages have not been abolished."

[4] *Liu-Song History*, 60, "Biography of Fan Tai": "At the time, many who discussed affairs supposed that if the coinage diminished, the state would not have enough for its use. They wished to entirely buy up the people's copper to make still more of the Five-grainers."

bullionists occupied a superior position. By xiaojian 3 (456), clipping of coins was causing the copper cash to become thinner and smaller by the day. The Right Executive of the Secretariat, Xu Yuan, put forth an argument in favor of bullionism. He said:

> That expensive money profits the people was first recorded in the Five Rules of Government. They began to cast the round coins, and by law made the Nine Treasuries. The people were enriched, the state realized its aims, and the teachings were established brilliantly. . . As the years stretched on, loss and disorder were frequent. Flood and fire, clipping and destruction occurred. Daily and monthly there was melting down and destruction. The coins grew thin and the people impoverished. Public and private were both in difficulties. If there is not a reconstruction, there will be great impoverishment. I say we must follow the ancient statutes, take in copper, and cast it well. Erase punishments for those who pay fines. This is all recorded in past regulations. Now we ought to use copper to buy off punishments, with the amount to vary in accord with the crime. (*Liu-Song History*, 75,"Biography of Yan Jun.") [Translation somewhat adapted from W. Vissering, *On Chinese Currency* (Leiden: Brill, 1877), p. 73.]

What he opposed was reduction in weight, supposing that if only coins could be kept up to a standard, there would be no problem. On that occasion the government accepted his advice to cast coins, but later illicit coining and clipping again reduced their weight, and the alloy was adulterated with lead and tin, thereby causing a great fall in the value of coins.

At that point Shen Qingzhi (386-465) brought forth another bullionist theory:

> Formerly, the Qin coins were too heavy. Han Emperor Gaozu, suffering from this, sent out a general order for the people to mint them. They were recast into Pod-cash. But then money was lightly demanded and goods heavily demanded. This again spoiled things. Taizong allowed free coinage. Jia Yi criticized this. The mountains [he said] were fully exploited, there was much copper, and profit was heavy. The people all around were competing to manufacture the agricultural tools and weapons which were used in former times, and there would perhaps be great harm from this. Emperor Wen did not, however, accept this advice, and coins made by the people circulated. Hence it was possible for strings of useless cash to fill the treasuries, and the Empire became wealthy.
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> Now plows and weapons are not used. Minting of coins has long since been abolished. Metal from melted down coins has mostly been made into implements. Achieving merit is difficult, and profit is thin. The wealth of Wu and Deng [two Han principalities which produced many coins] is gone. Farmers are not accustomed to their tasks, but are not relieved from the suffering of the plow. Now there is a dynastic revival . . .but yet the granaries and treasuries are not full. The reason both public and private are in want is solely a matter of coins.
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> I venture to suggest we ought to let the people cast coins. Coin bureaus should be opened in the commanderies and districts. Allow households which wish to cast coins to reside within these bureaus. The miscellany of styles would be homogenized. The various counterfeits would all be removed. The officials would collect and wall these off, storing them as an eternal treasure. . ." (*Liu-Song History*,"Biography of Yan Jun.")

Shen Qingzhi devotes himself entirely to a defense of the early Han policy of free coinage. Though his free coinage scheme has restrictions, it approaches modern standards for free coinage in that it calls for maintaining standards and the collection of expenses, but he supposes that the more coins that are made the better it would be, because "if casting coins is forbidden, copper will be turned into implements, and if minting is inaugurated, implements will be melted down into wealth." This would suggest that using copper to cast tools was a kind of waste, and that coins were the only valuable objects.

He did not realize that what created wealth and low prices at the time of Emperor Wen of Western Han was that production was increasing, while feudal coins were not being issued. It was not because
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there were many coins in the treasuries, but because there were few coins in the markets.

The view of the Prince of Jiangxia, Liu Yigong, was completely contradictory to that of Shen Qingzhi. He rebuts Shen Qingzhi point by point, but he reaches no independent conclusions.

Yan Jun was in basic agreement with Shen Qingzhi's proposal to open offices for casting coins, but did not approve of using all the copper for that purpose, and leaving no copper for the manufacture of implements. He said:

> I truly agree with the plan presently being discussed for opening offices for free coinage, but worry that mining will be halted for everyday implements. Copper would then be lessened in supply, and implements would become very expensive. Should implements go to a price of 1,000, then coins would be reduced by half, and making them would be without profit. Even though free coinage was ordered, it would not be done. ("Biography of Yan Jun.")

He seems to have recognized that a reduction in the weight of the copper coins would be sufficient to stimulate some degree of rise in prices. He opposed Shen Qingzhi's proposal to permit temporary circulation of the light coins banned the previous year,

because such light coins would be certain to induce private coining, causing such large coins as the Five-grainer and Half-ouncer to be withdrawn from circulation. Nor would the government be able to increase taxes because it permitted light coins to remain in circulation, and so this could not resolve the government's fiscal difficulties. He said:

> If small things must circulate, and a policy not in accord with public coinage is adopted, big profits will be made, and there will be no limits to dishonesty. Private minting and coin clipping cannot be banned by laws. The Five-grainers and Half-ouncers will all be used up within a year. If wealth is not supplied, the large coins will have been exhausted. . . Now, if the small coins are allowed to circulate, the officials will gain no benefit from taxation. Even if the masses supply the revenues, the officials' poverty will not be relieved. ("Biography of Yan Jun.")

Some people at that time advised casting Two-grainers, an obvious reduction in weight, which he also opposed. He raised three objections to this:

> It will not relieve the poverty of the officials, but great evils will arise among the people. The goods of the empire will crumble away. To set up a stern prohibition in vain will make it hard to avoid deep profits. In just a year or two the corruption will be beyond redemption. This is one grave objection.
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> Now each time copper is smelted down and cast, a net profit of 100-200,000 is obtained. Even if double this is obtained, this cannot happen before the end of the next year. If taxes rise in coin, expenses for daily needs will be cut off and not supplied for several months. Though there be authority to collect aid, how can this relieve the government's poverty? This will allow evil people to give free rein to their mistaken schemes. This is a second grave objection.
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> The people warn against a change in the large coins. All fear an approaching new prohibition. This is bound to give rise to unrest on the markets. Before a distant profit has arrived, suffering and wickedness will have come. Rich merchants will gain their ambitions. Poor people will be enmeshed in afflictions. This is a third grave objection. ("Biography of Yan Jun.")

Though these men fought over methods, they were all essentially bullionists. They supposed that money was wealth. Shen Qingzhi expounded this position clearly, and neither Liu Yigong nor Yan Jun contradicted him. Yan Jun even acknowledged that restoration of light coins was because of a "desire to cause the Empire to have abundant wealth."

During Southern Qi times, Kong Ji sent up an "Argument for Casting Coins to Equalize the Currency." He advocated casting Five-grainers which were up to the standard weight.[5]

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This was a time of contraction in the medium of circulation, and the quantity of money in circulation was inadequate. He said:

> Within the borders of the three Wu states, there are floods year after year, but the price of grain does not rise. This is because the coins of the Empire are few, and not because grain is abundant and cheap. This cannot but be observed. (*Southern Qi History*, 37, "Biography of Liu Jun.")

He opposed the nominalists, saying "those who deprecate copper and love labor say that coins are useless implements used for exchange, and wish to make them lighter and more numerous so as to economize labor and ease its accomplishments. They do not consider in detail the trouble which would come from this."

Shen Yue (441-513) of the Liang Dynasty also discussed monetary questions. To begin with, he acknowledged that food and money were both important. He said: "Those things which a man accumulates during his life are called food and commodities. Commodities are used as circulatory

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[5] *Southern Qi History*, 37, "Biography of Liu Jun": "In jianyuan 4 [482], at the request of the court, Kong Ji submitted 'An Argument for Casting Coins to Equalize the Currency.' It was extremely broad in scope. In essence it stated . . . From the casting of the Han Five-grainer to Emperor Wen of Song was over 500 years. Systems had fallen and risen generation by generation, but the Five-grainer had not been changed. It is clear that its weight by law was in accord with what was correct for obtaining goods. I feel we ought to open mints, direct contributions in metal, and engage in smelting and minting on a large scale.

"A coin weighing 5 grains is in accord with the Han laws. The treasuries will be full. There will be reserves for the state's use. If salaries are limited and taxes are low, then the people's families will have enough. Recently those who have been engaged in illicit minting of new coins have all been engaged in clipping coins, and do not mint large coins. . . Those who sell grain all lose their goods vainly. Illicit coiners buy new coins still more cheaply. . . If the officials mint and spread coins among the people, this will stop the clipped coins, the small and light and broken and rimless coins from circulating. Official coins which are small will be weighed against the official grains and ounces, and melted down to make large ones. They will profit the poor and virtuous people and close off fraudulent roads for the wicked.

"When the coinage has been equalized, distant and near places will be treated uniformly. The masses will be happy in their employments. The markets and roads will be without conflict. Clothing and food will be abundantly produced." [Translation adapted from Vissering, *op. cit.*, pp. 80-81.]

money. Food is man's Heaven." He was merely recognizing reality, but seems not to have approved of this state of affairs. He believed that the growth in the circulation of commodities was derived from human desires. In ancient times human desires were few, and so the production of commodities was for the producers' own consumption or for saving, and since goods were not exchanged, money had no great use.

Later, commerce developed. Farmers left the fields to follow trade. Wealth was produced not for consumption but to be sold for money, to be exchanged for precious and rare articles. This then began to influence agriculture. "Though coins be a foot in length, they did not relieve hunger even in the years of Yao. . . Though the treasuries be full of of rotting strings of cash, the granaries may not be full. A household may store up money, and yet develop few good fields."

Therefore he advocated the abolition of money and sole reliance on grain and silk. He argued, "If a thousand bolts are used as the monetary unit, abuses will be difficult to commit. If 10,000 *hu* is used as the market unit, it will not be easy for it to go beyond the township. This will cause those engaged in secondary occupations to restrain themselves, and bring wandering foodstuffs back to where they belong."[6] He appears to have believed that the flaw in money lies in its easy portability, which gives rise to a number of malpractices. In this respect he was carrying on the teachings of Chao Cuo.

There were also debates on money during Northern Wei. These were initiated by the two brothers Gao Qianzhi and Gao Gongzhi. Before the minting of the Yong'an Five-grainer, Gao Qianzhi called for minting small coins. He felt that this could lead to increased prosperity.[7] This was a nominalist idea.

His brother, Gongzhi, advocated minting large coins, because small coins would evoke private coining and price increases.[8]

In his call for the casting of Three-grainer coins, Gao Qianzhi discussed the origins of money, saying "The establishment of coin money was for the sake of bringing surpluses and scarcities into contact, to make exchange convenient." This might make his position seem different from that of most nominalists, but he probably meant by "establishment" the establishment of money by the ruler or by law.

2. *The Birth of Numismatics*

The practice of writing history flourished during the several centuries from Jin to Sui, but unfortunately the majority of those works have since been lost. Among the surviving histories, aside from the one in Wei Shou's (506-572) *Wei History*, there are no other treatises on economics. A partial explanation for this is that during these centuries the monetary systems were in great disorder, and most historians could not make sense of them. The main rea-

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[6] *Universal Statutes*, "Food and Money, 8," quotes Shen Yue:"Those things which a man accumulates during his life are called food and commodities. Commodities are used as circulatory money. Food is man's Heaven. . . Formerly, pure-minded men were not poor. Their tastes were few and thin. That which they received to maintain themselves varied according to circumstances. An individual plowman thus had enough to live decently. If a housewife was diligent in her weaving, then her family would be clothed. Though there was trading on the road, exchange of goods was rare. Increase in the supply of tortoise and cowry was cheapened by meritorious works.

"But circumstances changed, and many evil practices arose. Labor was confused and made harsh. Men left their old haunts and followed the career of merchant. Merchants and artisans became lax. Secondary occupations spread and saturated life broadly. Goods which circulated did not return as their makers had intended. Thereupon, men competed to obtain rarely encountered goods. From afar nameless goods were stored up. Brilliant gems and feathers, though without legs, rode quickly. Elaborately carved rhinocerous horn flew without waiting for wings.

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The Empire was in an uproar, and all abandoned the fundamental activities to carry on business. The harvest of abundant years was equivalent to the harvests of many years together. Famines reduced the stores of agricultural families.

"Though coins were over a foot in length, they did not relieve hunger even in the years of Yao. Though cowries were piled as high as mountains, belief in them will not relieve thirst even in times like those of the Shang founder Tang. To believe otherwise is a serious error.

"Hence we ought to immediately abolish coins as money, and solely rely on grain and silk so as to make people understand that labor is the sole way to earn a livelihood. Without this there is no other solution. If a thousand bolts are used as the monetary unit, abuses will be difficult to commit. If 10,000 *hu* is used as the market unit, it will not be easy for it to go beyond the township. This will cause those engaged in secondary occupations to restrain themselves, and bring wandering foodstuff back to where it belongs. Over the course of time human affairs prosper and decay. Even if the treasuries are full of rotted strings of cash, the granaries may not be full. A household may store up money, and yet may develop few good fields. . . ."

[7] *Wei History*, 77, "Biography of Gao Chong." Cf. subsection 3.2.4, note 7, of the present work.

[8] *Wei History*, 77, "Biography of Gao Gongzhi."

son, however, is that historians were still not sufficiently impressed with the importance of monetary questions. The other histories could, however, have had economics treatises which have not survived.

Of course there might be other reasons for such lacunae. For example, when Fan Hua was writing the *Former Han History*, he had not yet reached the treatise sections when he was executed by Liu Yilong (Emperor Wen of Song). This has caused a number of difficulties for later students of monetary history, and has left a great void in the store of historical materials dealing with Chinese money.

This makes Wei Shou's *Wei History* unique among the histories of that time. The *Wei History*'s "Treatise on Food and Money" lies within the economic history genre. It is divided by topic, with the last 1,590 characters devoted solely to the monetary history of Northern and Eastern Wei. On the surface, monetary history would appear to have been separated out from other economic questions, but in fact this is not the case, because questions concerning the garrison fields, herding, land taxes, weaving, mining and smelting, marketing and salt policy had already been dealt with in earlier sections. It would have been repetitive to weave them in again into monetary history.

Gaps in the monetary history of this period can to some extent be filled in by the contributions of the newly born discipline of numismatics.

Coins emerged at about the same time in China and in Greece, but coin collecting and the science of the study of coins --i.e. numismatics-- appeared first in China. Numismatics is the study of the shape, manufacture of, inscriptions and images on coins.
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Chinese coins only have inscriptions. They lack images. A section of the *Historical Records* "Treatise on the Balanced Standard" deals with coins, but cannot be characterized as numismatics, because Sima Qian did not study the coins themselves. The significance of numismatics in economic terms is that it is linked to the study of money. In cultural terms, it is acknowledged to be a part of archeology.

Actually it concerns itself with the modern as well as the ancient. Hence when modern man calls numismatics the study of ancient coins, he is, strictly speaking, not accurate. Of course, over the long run of a country's history, ancient coins bulk ever larger among all a country's coins, and so to call numismatics the study of ancient coins is no great error.

Numismatics appeared earlier in China than the study of bronze and stone inscriptions, but later on was subsumed within that discipline [akin to the West's paleography. EHK]. To study monetary history it is clearly necessary to study numismatics as well, and indeed monetary history should include information from numismatics. It is for just this reason that monetary history is not entirely subsumed within economic history. In other words, economic history is unable to embrace all of monetary history. Monetary history has its independent aspects. With one leg it stands within the realm of economic history; with the other it stands within the territory of cultural history.

Numismatics was a new science in China during the fourth century. In Europe it was not until a thousand years later that people came to consider it legitimate to collect and study coins. Thereafter this branch of science gradually took on importance there because it contributed important materials to the study of the history of fiscal policy, economics, epigraphy, the fine arts, mythology, religion, popular customs, geography and systems of measures. There are countries, like ancient Bactria and Fergana's Kushan (Yuezhi) Dynasty, for an outline of whose history we depend entirely on their surviving coins, because of the absence of any documentary sources. For some other countries, like ancient Carthage, aside from coins, hardly any other things survive.

For China, however, numismatics has a different significance. Coins are not required to explain or provide lists of Chinese monarchs. Chinese rulers have always regarded history as important, and particularly for their own histories, have provided an abundance of written records. Coins can still serve, however, to correct the many errors in the documentary sources. Numismatics' function in China lies in both the economic and cultural spheres. It can help us understand the economic life of the people during each period, and its subject matter in large measure is a reflection of the development of Chinese culture.

There are certain prerequisites for the appearance of numismatics. One of these is that the coins of the time in question be capable of evoking interest, so that an interest in collecting them and studying the subject arises. China's Warring States period
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coins and ancient Greece's coins fulfill this prerequisite, and yet numismatics did not appear during those times.

This is because though numismatics embraces the coins of all epochs, including coins still in circulation, its chief interest is in coins which are no longer in circulation. The Chinese of the Warring States period and the ancient Greeks only treated coins as instruments for making purchases, and not as specimens to be kept for study.

Coins existed in an extraordinarily large number of varieties in Northern and Southern Dynasties

China. Coins produced ever since Three Kingdoms times could still be seen much later. There were large and small coins, public and private coins, southern and northern coins, ancient and modern coins, male and female coins, coins which were in circulation and coins not in circulation, coins in formal use and token charm coins, all of which easily evoked people's curiosity.

Coin collecting was perhaps already being practiced within the ruling class. For example, the Palace Vestment Repositories of the Southern Dynasties seem to have had collections of various sorts of coins. Private citizens eventually imitated this practice.

It may seem hard to understand why numismatics should have appeared at a time when most historians were not writing treatises on economics. Actually, this is easy to explain. The money of this period circulated in a very complex fashion which most historians could not clearly understand. No one who had not specialized in such problems could handle them adequately.

The earliest work to deal with coins was *Mr. Liu's Record of Coins*. We do not know who this Mr. Liu was, nor when he lived. It could have been no later than the Xiao-Liang, because Gu Xuan, who lived during Xiao-Liang, quotes him. The *Sui History* "Treatise on Classical Books" refers to a *Liu Can's Coin Illustrations Notes*, and this may be the same as the *Mr. Liu's Record of Coins* referred to by Gu Xuan. Liu Can (484-550) lived during the Qi and Liang periods.

Gu Xuan only cited four coins from Liu: a Two-grainer, a Star-moon coin, a Four-five coin and an Eight-star coin. Except for the Two-grainer, none were coins in formal use. We cannot conclude from this that all of the coins recorded in *Mr. Liu's Record of Coins* were either made for display or were charms, but we have no basis for giving this work a higher evaluation.

The second work dealing with coins was *Gu Xuan's Coin Catalog*. This book is also cited in the *Sui History* "Treatise on Classical Books," which says that it had one scroll of coin listings and one of coin illustrations. Both have since been lost. Hong Zun of Southern Song very much emphasizes the importance of this work, saying that ancient coins "as the years went on, were for the most part buried and lost. Gu Xuan of the Liang was the first to make them into a book. All coins, from the time when they were first made, large and small, heavy and light, had their classifications, so that those who came after could have an idea of how they looked." These few phrases not only sketch out the main contents of *Gu Xuan's Coin Catalog*, they treat it as China's first numismatic work.

As Hong Zun had seen *Mr. Liu's Record of Coins* and *Gu Xuan's Coin Catalog* (since he quotes from both), and in the preface of his *Record of Coins*

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only emphasizes the importance of *Gu Xuan's Coin Catalog*, and does not devote a word to *Mr. Liu's Record of Coins*, this perhaps shows clearly that the latter work was not worthy of being quoted.

The *Record of Coins* cites thirty-four coins from *Gu Xuan's Coin Catalog*, ranging from the *Yi* (or Treasure) money to Xiao-Liang's coins, with most coming from or circulating during Xiao-Liang. Among those recorded are the Tianjian Five-grainer, the Public-female cash, a Five-grain iron cash, the Great-auspicious Five-grainer, the Great-circulation Five-grainer, the Great-fortune Five-grainer, the Female-cash, the Immature-cash, Facing-wen, Five-grainer (without metal signific), Dingping-one-hundred, Taiping-hundred-cash, Tortoise-back cash and wave-pattern cash. Most of these were formally circulated coins, and a goodly number were in circulation during Gu Xuan's lifetime. In this respect, Gu had made a valuable contribution.

At that time it was probably not yet known how to distinguish coins by type. The author merely set out what he had seen and heard. He did understand the importance of noting a coin's size and weight, and there are the beginnings of discussion of variant forms. For example, he cites seven or eight variant forms of the Taiping-hundred-cash, and the attached drawings of the coins closely resembled the actual coins.[1]

However, for the Great-auspicious, Great-circulation and Great-fortune coins he had only seen clay molds rather than the coins themselves. There were other errors, as for example taking the Han-xing for the Pod-cash referred to by Ban Gu, and the Summons-form Five-grainer for a coin of Liu Bei's. These errors influenced later historians and numismatists, and for more than a thousand years went uncorrected.

Numismatics has special importance for those who study monetary history. It does not amount merely to some fragmentary opinions on monetary theory, but rather is a written account of the study of coins. Nor is it like the treatises on economics in most official histories, which are based merely on copying out material from government files with some slight revision. Rather it is based on the study of the coins themselves. It fills the gaps in general histories, and corrects their errors.

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[1] *Record of Coins*, caption below the item "Tortoise-back cash."

For example, different works give different sizes for the Immature-cash. Du You's *Universal Statutes* says it is 1.5 *fen* across. The *Book Hall of the Original Tortoise* says it is 1.5 *cun*, while *Gu Xuan's Coin Catalog* makes it 8.5 *fen*. Of course Gu Xuan's statement is the more reliable, because it is based on study of the actual object.

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3.4 Credit And Credit Institutions

There were no particularly novel developments in the credit trade during Jin, or at least none that can be detected from the documents. Credit accommodation was entirely dependent on private loans.[1] The government may have made loans as one type of relief measure, and also made grants of plows and oxen.[2]

During the Northern and Southern Dynasties, the credit trade enjoyed considerable progress, both its deposit and loan-granting aspects becoming more developed than previously.

In ancient times deposit was a most undeveloped aspect of the credit business. By deposit is meant a type of savings from which the supplier of funds makes a profit. There had been savings in China since antiquity, but never for-profit, because the officials and rich men of feudal era China kept their wealth entirely secret, and would not lightly inform others of it, so that at times even their own families did not know that it existed.[3] Hence we cannot call such hoards genuine deposits, nor can we say there was a credit trade in existence then.

Prior to the Northern and Southern Dynasties, the main form of savings by Chinese officials and men of wealth was the hoard,[4] sometimes buried in the earth, sometimes hidden inside walls. The *Huainan Zi* contains the statement, "families which excavate hoards must suffer calamity."[5] In addition, people also employed money boxes. This method was similar to burying wealth, and as the quantities involved were so small, it has very little importance in the history of credit development.

By the time of the Northern and Southern Dynasties, there are instances of wealth in coin being lodged with relatives and friends. This deposit or consignment[6] sometimes resembled a trust, and the person receiving it could not use it for his own profit. Its mere preservation was a moral obligation.[7] Since there was no question of taking interest or of charging for storage, we cannot say that this was a proper business. If the man who received it could have taken this sum and put it to profitable use, then it would have become a genuine deposit.

The histories say that Tao Yuanming would often place ready cash on deposit at a wine shop, and then from time to time go and take it out in the form of wine.[8] This is very nearly like the modern layaway account.

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[1] *New Words for the Generation*, "Frugality, 29": "Wang Rong's daughter was marrying Pei Wei, to whom Wang loaned several tens of thousands of cash. When the daughter returned on a visit, Rong displayed his displeasure, and she hurriedly repaid the coins and made her excuses." This story is also in the *Jin History*, 43, "Biography of Wang Rong." Cf. subsection 3.2.1, note 15 of the present work. *Record of Qi Jokes*, "Wu Daozong of Dongyang Commandery": "In yixi 4, in Dongyang Commandery's Taimo District, Wu Daozong had lost his father in youth and lived alone with his mother, having never married. On one occasion Daozong was off collecting debts when the neighbors heard clattering noises from inside his house. They could not find his mother, but there was a black-spotted tiger in her room."

[2] *Jin History*, 47, "Biography of Fu Xuan": "In taishi 4 . .. he sent up a message saying . . . old soldiers holding official oxen, obtained 60 percent from [?] officials and 40 percent from gentry. Those who held private oxen paid the same as those who obtained them from the officials. Not long after such grants were made, the hearts of the masses were pacified. Now there has suddenly been a reduction [in subsidy?], so that those who receive government oxen, do so at 80 percent from officials and 20 percent from gentry. From those with private oxen and without oxen, the officials get 70 percent and gentry 30 percent. People are losing their homes, and must be unhappy. In my view, tenant soldiers holding official oxen should pay 40 percent from officials and holders of private oxen should pay the same as those who get them from officials. This the soldiers of the Empire would welcome with joy, happily produce grain, and the harm from land abandonment will be obviated."

[3] Cf. subsection 3.1.2, note 18 of the present work, which quotes an example from the *Jin History*, 95, "Biography of Wei Zhao."

[4] *Jin History*, 99, "Biography of Yin Zhongwen": "Emperor Xuan was defeated by Liu Gu, and he accompanied Xuan's flight to the west. He buried all his precious goods in the earth, but all of them turned into dirt."

[5] *Huainan Zi*, 18, "Instructions Among the People."

[6] *Southern History*, 5, "Basic Annals of Qi," latter part: "Lady Pan's licentiousness was known far and near. Her father, Baoqing, indulged in lewd pleasures along with his children. The rich all accused them of crimes. Fields, houses and wealth, were all coveted by them. It was even said that they hoarded funds consigned to them, and did not repay them."

[7] *Chen History*, 9, "Biography of Ouyang Wei": "When Shizu succeeded to the throne . . . at first the Inspector of Jiaozhou, Yuan Tanyuan, secretly sent 500 ounces of gold to Wei, ordering him to give 100 ounces to the Hepu Grand Administrator, Gong Wei, and 400 ounces to his son Zhiju. No one else knew about this. Wei was subsequently defeated by Xiao Bo, and all his wealth was exhausted. Only the gold which he had been sent remained. Danyuan also subsequently died. Wei then nevertheless delivered the gold as he had promised. Everyone then sighed with admiration that he took his promises as seriously as this."

[8] *Liu-Song History*, 93, "Biographies of Recluses: Biography of Tao Qian."

As for lending, among the people the practice of borrowing was known as putting-out obligation [*chuze*][9] or as raising a loan [*judai*][10] Such borrowing

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had always been based on personal credit, secured only with a tally or receipt. Once the receipt was destroyed, the obligation to repay was ended. There was also purchase on credit, which seems to have been rather common, especially in Liu-Song times.[11]

The temples and monasteries of the Northern and Southern Dynasties were important sources of credit. Most of the rulers and the members of the governing class then were Buddhists, and the temples and monasteries were not only numerous but prosperous. At first, because the ruling classes believed in Buddhism, their members used a wide variety of methods to support the temples and monks and nuns, so as to assure their good fortune in the future life. The monks and nuns received the privilege of avoiding taxes and labor service. This made it impossible for most people to compete with them, and allowed them to accumulate wealth easily.

Second, everyone from emperors and princes to commoners made contributions to the temples and monasteries.[12] Such contributions were sometimes in land and sometimes in coin.

For example, when the Northern Wei Emperor Xiaowen established the Dazhongxing Temple, he gave it 100 *qing* of paddy fields.[13] Emperor Wu of Liang enslaved himself to the Tongtai Temple several times, and each time was ransomed by his high officials for 100 million cash.[14] As a consequence

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[9]*Liu-Song History*, 81, "Biography of Gu Kaizhi": "Chuo's private wealth was very abundant. Most of the people in the township were in debt to him. Whenever Kaizhi attempted to forbid this, he was unable to halt it. Later, in charge of Wu Commandery, he admonished Chuo, saying 'I have often forbidden you to put out obligations [*chuze*]. You must give thought to how the poor will have no place to live. There are several things people have not exhausted in their intercourse with you, and when I am in the commandery I will inspect them for you. In the future, how can you obtain them? Where are all the receipts?' Chuo was greatly pleased, and brought out all the receipts in a large chest to give to Kaizhi. Kaizhi burned them all up. Word spread far and near that those who had incurred obligations to the Third Lord need not repay them, because all the receipts had been burned. Chuo was full of remorse and sighed for days."

Northern Qi History, 11, "Biographies of the Six Princes of Emperor Wenxiang": "Prince Wu of Lanling, Changgong . . . was rewarded for his military accomplishments. He commissioned Jia Huwei to buy twenty concubines. Just one of them bore an obligation receipt for a thousand in gold. When near death, he burned them all."

[10]*Northern Qi History*, 22, "Biography of Li Yuanzhong": "His nature was humane and benevolent. . . His home was plain, and his wealth in real things. The people of his family had frequently engaged in raising loans [*judai*] in the township to seek profit. Yuanzhong burned each of the tallies, and excused people from their obligations. The people of the township much venerated him."

[11]*Liu-Song History*, 61, "Biography of Yigong, Prince Wenxian of Jiangxia": "During the daming period, contributions of wealth were abundant, but often still insufficient to match expenditures. The masses' goods were bought on credit [*sheshi*]. If they lacked coins to make repayment, there were those among the people who made excuses for those who had sought coins. After they stated their case, they would revert to the original text."

Liu-Song History, 81, "Biography of Liu Xiuzhi": "Xiuzhi followed his uncle, Muzhi, to Danyang. . . He then bought goods from commoners on credit. When he did not return the coins, he was cursed on the streets."

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[12]*Southern Dynasties Buddhist Temples Record*, "The Ayuwang Temple Buddhist Temple": "From the tatong era of Liang . . . to Emperor Xiaowu's taiyuan 9 . . . for sixteen years, Emperor Xiaowu raised the monks' temple by three stories. This had been begun by Emperor Wu of Liang. They first bored into the earth for four feet to obtain a dragon cave and the gold and silver bracelets, hairpins and various other precious articles which former men had given as alms. These were present to a depth of nine feet."

Southern Qi History, 38, "Biography of Ying Zhou": "The monks of the temples of Changsha were prosperous. They cast gold into the shape of dragons, and buried several thousand ounces in the earth. The story was handed down over time under the title of the yellow iron below, but no one had seen them until these dragons were taken to meet military expenses."

Southern Qi History, 41, "Biography of Zhang Rong": "Emperor Xiaowu began the Xin'an Temple. Officials gave many coins and much cloth to it as alms. Rong alone contributed 100 cash."

Southern Qi History, 53, "Biography of Yu Yuan": "Emperor Ming . . . used an old residence for the Xianggong Temple. The expense was great, and there was much extravagance. . . When the Grand Administrator of Xin'an, Chao Shangzhi, was dismissed from his commandery and returned to have audience, the Emperor said, 'Have you gone to the Xianggong Temple? I set up this temple as a way to gain great merit.' Turning aside, Yuan said 'Your Majesty founded this temple with the coins obtained by the masses through selling their children and making servants of their wives. If the Buddha were to learn of this, he would lament exceedingly. The guilt for this is as high as the Buddha's image. What merit can there be in it?'"

[13]*Mr. Shi's Comprehensive Mirror*, 5.

[14]*Liang History*, 3, "Emperor Wu," contains under datong

the temples and monasteries became great landlords and masters of wealth.

It is not hard to understand how the temples, having accumulated so much wealth, should have used it to make loans for profit. In ancient times, the temples of Babylon[15] and Europe[16] also engaged in this sort of activity. The power of the Church in Europe during the Middle Ages was sometimes greater than that of the state. It not only received voluntary contributions from all sides, it openly collected a tithe --a tax of one-tenth-- from the people. As a consequence the Church in Europe was a great landlord and master of wealth.

Third, the wealth of the temples and monasteries and their authority as creditors were extremely secure and dependable. The monks and nuns had proclaimed in many ways that their temples were places too holy to suffer intrusions, so that superstitious people would dare not pillage them of their wealth.

Nor would people dare repudiate their debts to the monks, since they believed that anyone who stole from a temple or repudiated a debt to it for as long as a day and a night would have to pay interest of 37 percent, that by the end of the next day and night interest would have to be paid on the accumulated interest as well as the principle, and that in his next incarnation he would become an ox or horse in retribution.[17] One day as an ox would requite 8 *wen*, one day as a horse would requite 7 *wen*.

Usury in goods had appeared even before Northern Wei had begun to mint coins. This was the result of the so-called monks'-peace grain. During the reign of Emperor Wencheng (452-465) people who contributed 60 *hu* of grain annually to the monks were permitted to become monks'-peace households, and the grain they contributed was called monks'-peace grain.

During bad years it was used for famine relief, and sometimes was put out at loan, to be repaid during years of good harvest. Later, however, these loans turned into a form of usury. Once loaned out, such money had to be repaid regardless of flood or drought. Sometimes the interest exceeded the principal, or it was transformed into receipt-certified indebtedness.[18] This became a form of exploitation of debtors. Northern Wei temples and monks also safeguarded valuables for rich men.[19]

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Since the monetary economy of the Southern Dynasties was well developed, temple loans must have been very numerous.

Southern Dynasties temples have a special significance in the history of Chinese credit. They were the inventors of pawnbroking. Pawnbrokerage was China's earliest credit institution. Pawnbrokers extended credit to people in return for pledged collateral.

Though we cannot prove that temples were the creators of pawnbroking, the two earliest known pawnbrokers were both temples. One was Southern Qi's Zhaoti Temple. Chu Cheng once spent 11,000 cash at that temple to redeem Chu Yuan's white sable coverlet, which Emperor Taizu had given him.[20]

1: "The Imperial Carriage visited the Tongtai Temple where a great conclave was being held. There he enslaved himself, and the high officials used 100 million cash to redeem him." *Ibid.*, taiqing 1, "3rd month, day gengzi. Emperor Gaozu visited the Tongtai Temple, where a great conclave was being held, and enslaved himself. The high officials paid 100 million cash to ransom him."

[15]Two thousand years B.C. the temples of Babylon engaged in the banking trade. A surviving clay tablet records a loan made by a female temple attendant. This tablet served as a kind of promissory note.

[16]The temples of ancient Rome carried on the gold smelting trade on behalf of private individuals. During the Middle Ages people in Europe frequently entrusted money to the church for safekeeping. Some of this money was in the form of deposits which could be withdrawn at any time. During the twelfth and thirteenth centuries the Order of Templars became a kind of churchly bank, carrying on a variety of banking activities.

[17]Chu Jiaxuan, *Firm Gourd Continued Collection*, 4, "Thieves Frequently Taking Coins": "Zhuang Chun said: If a thief keeps even a single cash for one day and one night, the interest is 37 percent. By the night of the second day, interest will begin to be taken on the interest, and in his next incarnation he will pay by becoming an ox or horse. Therefore it is said that one lifetime's ease causes ten-thousand *kalpas* of anguish. If you yield up one *wen* of cash to the temple, one day and one night's length of good fortune are yours. The scriptures say that rebirth as an ox for a day repays 8 *wen*, as a horse for a day repays 7 *wen*."

[18]*Wei History*, 114, "Treatise on Relief for the Aged."

[19]*Ibid.*: "Prior to this, within a temple in Chang'an a monk was growing wheat, and an imperial attendant was pasturing his horses in the wheat. The Emperor [Taiwu] came in to observe the horses. The monk drank official wine, and followed the official into his residence, where the official saw a large bow, arrows and shield. Coming out, he memorialized on this. The Emperor angrily said that these were not things for a monk to use . . . and had his property inspected. Substantial wine-brewing vessels were found and goods deposited by local officials and rich men amounting to tens of thousands."

[20]*Southern Qi History*, 23, "Biography of Chu Cheng": "At Yuan's death, Cheng took 11,000 cash to the Zhaoti Temple to redeem the white sable coverlet Emperor Taizu had given Yuan. The fur and its ribbons were ruined. He also redeemed Yuan's

The other was Southern Liang's Changsha Temple. A man once brought a bundle of ramie grass to that temple's treasury as collateral-pledge for a cash loan. When the time for redemption of the loan came, 5 ounces of gold were found inside the ramie bundle. This gold had also been pawned at that treasury by someone.[21]

We can see from this story that goods as expensive as gold garments and as cheap as bundles of ramie could serve as pledges, a very broad range. Perhaps pawnbroking arose before the Northern Dynasties, or was an imported institution, one which was brought in along with Buddhism.

Although pawnbroking has been excoriated down through the ages as exploitation of the poor, its practitioners have frequently advertised themselves as performing a charity. Even during later ages which openly took up the worship of money, and when ordinary shops could undisturbedly hang out signs reading "ten-thousand in profit," pawnshops still used elegant and stately expressions like "broad aid" or "generous peace" as part of their names.

During an age when Buddhism was flourishing, like the Northern and Southern Dynasties, it was natural to believe that pawnbroking had as its goal the relief of the poor. During the latter part of the European Middle Ages, the Church also carried on the loan-making business. Christianity nominally opposed making loans at interest, but churchmen engaged in various forms of surrepetitious lending, lending grain, livestock and money. They claimed to be performing charity, saying that such loans enabled the poor to gain credit at low interest. In actuality, they were also displaying the spirit of usurious capitalist competition.

Sui unified the nation. With the Empire pacified, trade burgeoned. A variety of credit businesses spontaneously arose and flourished. According to the documentary sources, in addition to private lending[22] there were also government organizations which engaged in the extension of loans. These activities included the lending of funds held by public offices, or making loans at interest, or engaging in other activities to supplement the funds used by governmental organizations to make expenditures.[23]

These loans differed in nature from the credit extended by Wang Mang. Wang Mang's credit operations and the lending of seeds and plow oxen to the people by governments down through the centuries were basically all relief measures. Though interest was sometimes charged, the government's goal was not to obtain a profit. The practice of taking interest for use of cash from public offices was, on the contrary, directed exclusively toward making a profit, and payment of salaries was dependent on the receipt of interest payments.

In kaihuang 14 (594)

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this practice was banned, but in 597 permission was again given to make loans with public funds, but not to do so for interest.[24]

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armored headdress and rhinocerous hide, and the yellow ox Yuan often rode."

[21] *Southern History*, 70, "Biography of Zhen Fachong": "A bundle of ramie had been brought to the Changsha Temple treasury as pledge for cash. Later, when the ramie was redeemed, inside the bundle was found 5 ounces of gold wrapped inside a handkerchief. Bin returned it to the temple treasury. Agitated, the monk said that recently a man had pledged this gold for cash, and at the proper time something had kept him from returning to redeem it. Because the customer had found and returned it, he was offered half the gold as reward. Though repeatedly urged to accept it, Bin stoutly refused to do so."

[22] *Sui History*, 45, "Biographies of the Four Sons of Emperor Wen: The Prince of Qinxiao, Jun": "[During the time of Emperor Gaozu] his heir, Jun, turned profligate, and broke the regulations. He put out money at interest, and the people and officials suffered from this."

[23] *Sui History*, 46, "Biography of Su Xiaoci": "Prior to this, because there was not enough to meet expenses of the officials, a palace office was set up to receive interest on money. Xiaoci believed that competition between officials and people was not the way to prosperity, and sent up a request to abolish this office. He requested that officials be given office lands in proportion to their ranks. The Ruler approved of this." *Northern History*, 75, "Biography of Su Xiaoci" contains the same story.

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[24] *Sui History*, 24, "Treatise on Food and Money": Kaihuang 8 ". . . Prior to this, capital officials and the prefectures were given public office cash. Upon its repayment, interest was taken to meet public needs. In kaihuang 14, 6th month, the Board of Works Master of Writing and the lord of Anping Commandery, Su Xiaozi, suggested that in following this policy the officials were, as in the past, using public office cash to raise their own standard of living, and were only seeking after profit. They were disturbing the masses, and harming public morals. . . Thereupon he memorialized that all should be given land to farm, and that all taking of interest be banned. In kaihuang 17, 11th month, an edict allowed offices in the capital and external bureaus to use public office cash in the market, and for repayments to be used to raise living standards. Only the taking of interest was banned."

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4.0 MONEY OF THE TANG DYNASTY

4.1 Monetary Systems

1. Coinage

The Tang Dynasty's monetary system inherited the traditions of the Jin and Northern and Southern Dynasties. Coins and cloth constituted the primary moneys. Aside from its use as a store of value, gold was also at times used as a measure of value and as a means of payment. During late Tang and Five Dynasties times, silver gradually achieved a superior status.

The degree of the monetary economy's development may be gauged from the Tang Dynasty's salary system. In the early days, salaries were mainly in rice and in office lands. Salaries were still not paid in specified amounts of cash, but varied according to the amount of profit produced by public office cash in various bureaus. Obviously, the natural economy was still dominant.

It was not until the yonghui year period [650-656] that salary cash began to be paid in definite amounts, but even then only a portion was in cash. Another portion was paid in services, the so-called "guard room commoner servants" [*fangge shupu*].

It was only from the kaiyuan era [713-42] on that monthly salaries were paid entirely in cash. Even then, some salaries were paid in rice and office fields. During late Tang and Five Dynasties, there was a return to payment in goods.

Thus, we may say that during the entire Tang Dynasty it was only during the first half of the eighth century that there was a well-developed monetary economy. At other times, particularly during early and late Tang and during the Five Dynasties, the natural economy's weight was extraordinarily high.

There was a big change in the nomenclature of coins during Tang. Pre-Tang coins were practically all named after weights, even when their nominal and actual weights did not correspond. For example, the actual weight of Shu-Han's Value-hundred Five-grainer was far greater than 5 grains, and there were many light and small Five-grainers which were not up to standard. Nevertheless, even these preserved some vestige of their origins as moneys made from pieces of copper.

From the Tang Dynasty on, however, coins were no longer named after weights, and instead bore such labels as "treasure" [*bao*], "circulating or universal treasure" [*tongbao*], "original treasure" [*yuanbao*], or some other kind of treasure, following the name of a year period.

Use of the term treasure in coin names had a certain social significance.

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It symbolized the achievement of increased power on the part of money. Some ancient coins had been called treasure. Wang Mang called his monetary system the treasure money system, but his coins were only transient things. From Tang times on, in both name and reality, coins became a kind of treasure, and such treasure came to dominate human society.

The casting of year period names onto coins was not a Tang invention. This was already being done during the Six Dynasties, and the first coins minted by Tang were not year period coins. Nevertheless, later coins were almost all year period coins.

During the 289 years of Tang, according to the official histories, there were only three types of coins, but in fact there were seven or eight kinds.

The earliest to be minted and the most important type was the Inaugural Circulating Treasure of wude 4 (621). [Cf. Plate xl at end of this subsection] Before that year the Sui Five-grainer and other old coins were still in use.

The inscription of the Inaugural coin must be read first from top to bottom and then from left to right. By left to right, the Tang meant from the standpoint of the object itself, or as the order appeared to be on the coin mold. From the viewer's perspective, it would be read from right to left. The so-called Left-shoulder Inaugural, from the viewer's perspective, has the right end of the second stroke of the second character raised.

Because, however, the Inaugural was not a year period coin, some people read it clockwise from the top as "opening circulation original treasure" [*kaitong yuanbao*]. This reading of it was present during Tang times.[1] In modern times, surprisingly, some people still believe it should be read that way.[2]

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[1] *Tang History*, "Treatise on Food and Money," and Wang Pu, *Tang Collected Statutes*.

[2] Both the old and the new *Tang History* read it as *kaiyuan tongbao*, meaning Inaugural Circulating Treasure. The "Edict on Use of the Old Coins" of qianfeng 2 [668] 5th month, clearly refers to the "kaiyuan Spring Money" and "*kaiyuan tongbao*" (*Tang Major Collected Edicts*, 112, "Fiscal Profit"). Pei Yueqing, Li Linfu and Xiao [?][a] also refer to "coins of the circulating treasure . . ." (*Universal Statutes*, "Food and Money, 10"), but a note in the *Six Statutes of Tang* calls it the *kaitong yuanbao*. That work was compiled under Emperor Xuanzong, and was annotated by the Chancellor, Li Linfu. A work compiled under official auspices as this one was would of course have been trusted by writers like Tu You and Ouyang Xiu, but Li Linfu was not a trustworthy source, and the *Six Statutes of Tang* is much abridged. Although it is earlier than the *Old Tang History*,

However, the word *kaitong* has no meaning, whereas *kaiyuan* has very great political significance. The "Edict on Use of Old Coins" of qianfeng 2 mentions "*kaiyuan* spring money" [i.e. round coins. The chief hope of the founders of the dynasty was to inaugurate a new era. They even wanted people to believe that everything before themselves was not to be taken into account, that the past was all bad, and only the current dynasty was good. Therefore, though in later ages, others minted Inaugural Circulating Treasure, to match Tang's achievements was no easy matter.

The word *tongbao* means circulating treasure. Pei Yueqing and Li Linfu both speak of "coins, the circulating treasure . . ." The word *yuanbao* has no significant meaning.

The size of the Inaugural coin was patterned on that of the Han Five-grainer. Its diameter is 8 *fen*. It weighs 2.4 grains. Ten weighed 1 Chinese ounce. Thereafter the grain and *si* were no longer used as units of weight, and the *qian*, meaning the weight of one Inaugural Circulating Treasure cash or *qian*, became the key unit in the Chinese system of measures which thereby also changed over to a decimal system.

Not only were the Tang coins no longer named for their weights, but on the contrary, China's weights now came to be named after its coins. From Tang times on, the Chinese system of weights remained unchanged. A Qing treasury-standard *qian* was still equal to the weight of one standard Inaugural Circulating Treasure coin. A slightly thick and heavy Inaugural coin might weigh 4 grams, and even as much as 4.8 grams. We can only regard such a coin as having exceeded the standard weight. The *Six Statutes of Tang*
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says that originally 1,000 coins weighed 6 catties 4 ounces, and that later they weighed 7 catties, which would make each coin equal to 4.18 grams.

The Inaugural coin continued the style of the Northern Wei and Sui coinages. Its outer rim was the same as those of the Northern Wei Five-grainer, the Yong'an Five-grainer and the curved stroke Sui Five-grainer. The inner and outer rims on the coin's reverse resembled those on the Sui Five-grainer.

The second type of Tang coin was the qianfeng 1 (666) Qianfeng Spring-treasure. [Plate xli,1] This was a formal year period coin. It carried a face value of 10 Inaugural coins. It had a diameter of 1 *cun* and weighed 2.6 grains, that is, less than 1.1 *qian*. Actually, though, there are some which weigh as much as 7 grams. This coin was abolished before it had circulated for a year.

The third type of coin was the Qianyuan-cash minted during the qianyuan year period [758-760].

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the *Old Tang History* was not some fabrication, but rather was assembled from the writings of such Tang authors as Wu Jing and Wei Shu. Wu Jing's *Tang History* was completed during the kaiyuan era, and has survived almost intact. There must be a reason when a later work does not correspond to an earlier one. The name in the *Six Statutes of Tang* could have been the result of a copyist's error, or it could be that because there were originally two ways of reading the inscription current among the people and the annotator wanted to stress that the current year period (i.e. kaiyuan) was not adopted for the coin's name, he intentionally adopted another way of reading it.

The Song writers made a mistake in reading this coin, and this caused the way of reading Song coins to become non-uniform: The Original Treasure coins were read in straight lines, and the Circulating Treasure coins were read circumferentially, producing a non-uniform system.

Over the last thousand years Chinese historians have disagreed over this question, but each has gone his own way, without debating the others.

Conflict has, however, also arisen within the Japanese numismatic world. Okudaira Masahiro and Mikami Koya believe it should be read *kaitong yuanbao*. Nakagawa Kinrei, Nakamura Fusetsu and Hamamura Saburo read it as *kaiyuan tongbao*. These writers give an additional reason, that their own dynasty's twelve coins are all read circumferentially. This would be a strong reason for reading the Chinese coin the same way, because Japan's *Wado kaiho* coin was patterned after the Inaugural coin, and is of the same period. However, the Japanese reading of the Inaugural coin inscription was probably
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influenced by the reading common among the people in China then. Actually, of those twelve coins, there are only two which are read as *tongbao*, and not one is read as *yuanbao*.

Chinese numismatists still favor the reading *kaiyuan tongbao*, and this Chinese reading is more plausible, since *kaiyuan* means to inaugurate a new era, and the word *kaitong* is rather colloquial. *Tongbao* means to circulate treasure, which is more appropriate than the meaning of *yuanbao*. There is a reference during Northern Wei to "great Wei's circulating money [*tonghuo*]" (*Wei History*). Northern Zhou had its Perpetual-circulation [*yongtong*]-myriad-states coin. Both of these coins used the character *tong* to mean circulation.

Among Chinese coins, aside from the pre-Qin ring coins, which were read circumferentially, as were the Sun-Wu Large-spring coins of denominations from 1,000 upwards, all other coins were read in straight lines. This was true of Wang Mang's Spring coins, Shu-Han's Value-hundred Five-grainer, the Taiping-hundred-metal, the Dingping-one-hundred, Latter Wei's Taihe Five-grainer, the Yong'an Five-grainer, Northern Qi's Changping Five-grainer, several Northern Zhou coins, as well as the Southern Dynasties' Large-*huo* and Six-grainer. Hence, just in terms of this tradition, the Tang coin ought also to be read as

[Plate xli,2-6] There were two issues of Qianyuan-cash. One was the Qianyuan Heavy Treasure 10-cash coin minted in qianyuan 1 (758). The other was the 50-cash Qianyuan Heavy Treasure minted in Qianyuan 2. The outer rim on the reverse of this coin forms a double ring, and so it is called the Double-wheel Qianyuan-cash. A thousand of the 10-cash version weighed 10 catties, making each coin weigh 1.6 *qian* (5.97 grams).

A thousand of the Double-wheels weighed 20 catties,[3] twice the weight of the 10-cash coin. In fact, however, the Qianyuan-cash come in various sizes and weights. Some are small, and as light as 1 gram. These must be the result of weight reductions and private coining.

The Inaugural coin inscription was intended to be read in straight lines, but among the people they were read circumferentially as *kaitong yuanbao*. When the Qianfeng Spring-treasure was minted, the popular circumferential reading order was followed. Because this eventually came to be viewed as incompatible with the traditional practice, the Qianyuan Heavy Treasure was read in straight lines.

The word *zhongbao*, meaning "heavy treasure," had significance going back to early times. In his "On Passing Through Qin," Jia Yi has the sentence "does not love precious objects, heavy treasure and fertile soil." The text of an edict of taiyuan 3 of the Eastern Jin Emperor Xiaowu contains the words "coins are the state's heavy treasure."

Quite a few of the Qianyuan Heavy Treasure have survived. The small ones in particular are second in number only to the Inaugural coins. They were probably still being minted and used after the An-Shi Rebellions.

The Qianyuan-cash have blank reverses, though there are specimens with downward facing crescent moons below the holes on their reverses, or flying birds or clouds or dots in that position. There are also some with clouds above the hole.

Contemporary with the Qianyuan-cash were two large coins minted at the time Shi Siming was occupying Luoyang. [Plate xli,7-8] These were the Obtain-one Original Treasure and the Obey-Heaven Original Treasure, both with a face value of 100, and weighing around 21 grams. The latter was a renamed version of the former. Both were occupation coins or coins for military use.

During the dali year period the Dali Original Treasure appeared. [Plate xli,9] This coin was not finely made. Although the histories record a coin being minted in dali 4

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(769),[4] they do not specify which coin this was.

Judging from their construction. the Dali coins very much resemble private coins. It stands to reason that as the value of coins then was very low, while the price of copper was very high, profit-seekers would concentrate on melting coins down to make implements. Why would they have wanted to melt down implements to make coins?

However, the Green Shoots and Land and Head cash tax were first collected in dali 1. The Green Shoots cash was set at 15 cash per *mu*. The Land and Head cash was set at 20 cash per *mu*. Since there was little ready cash, people had to mint privately, but because the price of copper was too high, they did not mint much.

The inscriptions on Tang coins were supposed to be read in straight lines. During the qianfeng era this pattern was temporarily broken, and coins were read circumferentially. Subsequently the norm was restored, and it would not not have been reasonable to violate it again. Because the Dali coin is read circumferentially, it would not seem to have been an official issue. Private coiners, however, for the most part imitated old coins, and would not have minted an entirely new coin. Hence this is a problem still awaiting resolution.

Jianzhong Circulating Treasure [Plate xli,10] seem to have been minted during the jianzhong period (780-783). These were even smaller and lighter as well as now being rarer than the Dali coins. There is mention in the histories of coins being minted at the beginning of jianzhong,[5] and this coin may have been the one in question, but this coin could also have been privately minted, because it was in jianzhong 1 that Yang Yan's Double Tax was put into effect.

This measure entirely monetized taxes. Where were the peasants to obtain so much ready copper

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kaiyuan tongbao.

[3]The *Old Tang History* and *Universal Statutes* say that a string weighed 20 catties. The *New Tang History* and *Investigation of Literary Remains* make it 12 catties. Twenty catties seems more plausible.

[4]*Daizong Veritable Record*, dali 4, 1st month, day dingyou: "The commissioner number five in charge of minting coins in the Guannei Circuit sent word asking that the two supervisors of Jiangzhou use the copper ore on the north side of the Fen to set up five more mints. This was assented to."

[5]*New Tang History*, 54, "Treatise on Food and Money": "At the beginning of jianzhong the Attendant Gentleman of the Ministry of Households, Han Hui, because the amount of smelted copper in Hongyai, Shang zhou was large, asked that the abolished inspectorate [i.e. mint] of Luoyuan be restored, that seven furnaces be set up, and that 72,000 strings of cash be minted annually. Each thousand cash would cost 900 to make. Emperor

cash? Aside from selling agricultural products at cheap prices, they could only engage in private minting. In jianzhong 2, the Salt and Iron Commissioner, Bao Ji, described the private minting going on in all prefectures.[6] The price of copper was very high then, and not many coins could have been minted. Moreover, the private coining during dali and jianzhong was not entirely of coins bearing those two era names. Most of it must have been of Inaugural coins.

The histories say that because Li Xilie's rebellion had been put down, the Supervisor of Measures, Zhao Zan, asked in jianzhong 4 that the tutenag of Lianzhou be utilized to mint 10-cash large coins.[7]

Numismatists have treated a well-made large Inaugural Circulating Treasure with an inscription identical to ordinary Inaugural coins as this tutenag metal 10-cash Inaugural,[8] but that type of Inaugural is more than 1 *cun* in diameter, and weighs around 0.5 treasury ounces, which is rather too big. Moreover, it is not made of tutenag metal. In construction it more nearly resembles a Southern Tang coin. Moreover, other histories say that after Zhao Zan had given further thought to this proposal, he became uneasy about it, and never carried it into effect.[9] In the past no numismatist has paid attention to this document.

There is, however, an Inaugural Circulating Treasure of the same size and contruction as a Qianyuan 10-cash coin. Only two such coins have been discovered, blackened with age and covered with verdigris. Perhaps a small number of trial coins were minted then, but we cannot tell for sure.

In huichang 5 (845) of Emperor Wuzong a new Inaugural coin was minted. During the previous century, Inaugural coins had frequently been minted, but these had no inscriptions on their reverses, whereas the Huichang Inaugural did. [Plate xlii] These coins were minted from melted down bronze images, bells and other objects from the Buddhist temples which had been abolished all over the country.

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At first, the Regional Commandant of Yangzhou, Li Shen, cast the character *chang* on the coin's reverse as an abbreviation for the huichang year period, and reported this to the authorities. Later the government issued orders that all localities minting coins schould use their local place names.

It would seem that the small Qianyuan Heavy Treasure was still being minted during or after the huichang year period, because some of these coins have prefecture names on their reverses. These, however, are extremely few, and their production was probably limited to the two commanderies of Yuzhang and Danyang.

An old catalog records that in Emperor Yizong's xiantong 11 (870), the Guiyang Inspectorate minted Xiantong Mysterious Treasure.[10] This was probably a trial minting, limited to one place. Surviving examples are extremely scarce.

Naturally, the Inaugural is the most important of the Tang coins. It is not only the most important Tang coin, it also enjoys a special importance in the whole of Chinese monetary history. Aside from the abovementioned innovative role it played in China's monetary system and the influence it exerted on China's system of measures, it is second in importance only to the Five-grainer in terms of the volume of money circulated. It was the main coin during the several centuries of the Tang Dynasty, and after Tang it continued to circulate for over a millennium. Moreover, in size and weight, it remained a model for later standard coins.[11]

Dezong assented to this."

[6]Zhang Junqing, *Crowds of Books Investigated*, latter collection, 59, "Bronze Coins," quoting the *Collected Statutes*.

[7]*Tang Collected Statutes*, 89.

[8]Hong Zun, *Record of Coins*, 3, "Inaugural Large Coin." However, Dai Xi, *Collected Words on Ancient Coins*, expresses doubts about this.

[9]*Book Hall of the Original Tortoise*, 484, "Section on Records of Nations: Expenditures": "In jianzhong 4, Li Xilie was chastised. . . Because ordinary taxes were insufficient for needs, Zhao Zan requested that the tutenag of Lianzhou be utilized to mint large coins, one of which would be equivalent to ten, so as to control supply and demand. He also requested that large fields be set up. . . An edict accepted his suggestion. Can reviewed his calculations, himself decided it would not be practical, and held the project in abeyance. All was done as normally, with taxes on bamboo, wood, tea and lacquer."

[10]*Record of Coins*, quoting an old catalog.

[11]Jiang Zhaoshu, *Rhyming Stone Studio Jottings*: "When I was young, I saw an Inaugural coin mixed in with Wanli era [Ming] coins. Its rim was regular, its calligraphy robust, and it was streaked with green and red, elegantly antique. The reverse bore a fingernail mark, said to have been left by Lady Yang in the wax mold in the shape of a crescent moon. In tianqi 3 [1623] the Southern Board of Works Gentleman, Bai Zhaoguang, undertook minting. He suggested the old coins of a former dynasty not be used along with a contemporary prince's system. Because the circulation of coins was being obstructed, they ought to all be destroyed so as to meet state needs. The Grand Minister of Works, believing it was possible to do so, strictly prohibited the people from using the Inaugural coins in trade. All those in existence were to serve as waste copper, and were to be returned to the furnaces for recasting. Though Lord Bai took a short-term

The Tang Inaugural's evolution may be divided into two stages. The pre-huichang Inaugural may be called the ordinary or old Inaugural; the post-huichang version may be called the Huichang or new Inaugural.

There are very many variant forms of the Inaugural coin. Most of these variants are determined on the basis of the strokes of the characters of the inscriptions and the dots and crescent moons on their reverses. [Plate xl] For example, characters may be large or small. The character *yuan* comes with raised left-shoulder [*zuotiao*], right-shoulder [*youtiao*] and double-shoulder [*shuangtiao*] variations. On the reverses, sometimes the crescent mark is omitted, or the number and placement of the crescents varies. Some also bear dots, suns or clouds, or dots and crescents together, and are called pregnant dots [*yunxing*]. Such minor differences fill the various coin catalogs.[12] Numismatists, however, often miss the forest for the trees. Very few organize systematic categories, and so their analyses are rather shallow.[13]

Ordinary Inaugural coins may be divided into three broad categories. The first comprises those with blank reverses. The second comprises those bearing upward facing crescents above the holes on the reverse, and also the small number bearing downward facing crescent marks. The third category includes various sorts of Inaugural.

The first and second types can also be distinguished solely on the basis of their obverses. On the great majority of blank reverse Inaugurals, the first stroke of the character *yuan* is especially short, the top of *tong* is also relatively short and its opening large. There are also differences in the characters *tong*, *kai* and *bao*. Differences in width of rims, thickness of coin and even in fineness of construction are not an important basis for making distinctions. Both types include thick and thin coins, and ones with broad and narrow rims. Both types include

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very regular examples, and both include specimens which are not very finely made, and even some which are extraordinarily light and small.

Past numismatists liked to take the width of the outer rim as a distinguishing criterion. This is inappropriate, because the width of the outer rim is not necessarily related to the mint and coin mold, but rather was the result of the extent of the artisan's filing down of the edge. Some coins even suffered clipping of their edges by their users in the course of circulation. As a consequence, coins produced from the same mold often have rims of varying widths.

On the basis of these categories, a number of finer distinctions can be made. For example, within the first category may be included coins bearing either large or small characters, wide reverse rims or attached rims. Left-shouldered Inaugurals may also be placed within this category, but the strokes on their inscriptions are somewhat different, and it might be more appropriate to assign them to the third category. However, as the Left-shouldered Inaugural is sometimes extraordinarily finely made, it would seem to have been minted during mid-Tang.

The significance of the division of Inaugural coins into categories lies in the greater ability this affords us to aid in resolving the problem of dating. As a result of such analysis, it would seem that the blank reverse Inaugurals were the first to be minted, and we may say that before the An-Shi rebellions, the government mints seem to have mainly turned out blank reverse Inaugurals.

There are several reasons for this conclusion.

First, prior to Tang, coins did not bear crescents, whereas from Tang on this was very common.

Second, the Qianfeng Spring-treasure was still blank reverse.

Third, Japan's *Wado kaiho* coin had a blank reverse, and it was an imitation of early Inaugural coins. If the Inaugurals of that period had crescents on their reverses, then the Japanese coin would also have born them. The Japanese coin was minted in 708 or earlier. The newer version began to be minted in 720 or 721, so it is obvious that up until then the Inaugural coins were probably still blank on their reverses.

Fourth, most of the silver Inaugurals I have seen have blank reverses. Those with crescents are relatively rare. Some gilded Inaugurals have crescent reverses, but the gold does not have an old look to

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view to regulate profit, he caused a coin which had circulated for more than 800 years to be melted into smoke and embers, which is deeply to be regretted."

[12]Weng Shupei, *Collected Investigations of Ancient Coins*, contains quite a few variants.

[13]Fang Ruo, *Additional Record on Coins*, "Investigations of the Inaugural Coins." The author of this work divides Tang Inaugural coins into two categories: First, all those with elegant inscriptions and thick rims, regardless of the shapes of their strokes or if they have points or crescents, are supposed to be early Tang Inaugurals. Second, all those with rims like the first type, but with the last three characters of the inscription not evenly proportioned, and bearing different crescents on their reverses, are supposed to be mid-Tang Inaugurals. Such a categorization clearly does not correspond with the facts. It is hard to believe that early Tang private coins would all have fine inscriptions and thick rims. The author also denies that the crescent was a nail impression, and believes that the dot and crescent were supposed to represent the disks of the sun and moon.

it, and was applied later on. I have never seen a solid gold Inaugural, but surmise they too would have blank reverses. Minting of gold and silver coins must have occurred during times of fiscal abundance, peace and prosperity, and there is much in the written record concerning gold and silver coins of the kaiyuan and tianbao eras.

Although the crescents on Inaugural coins are most commonly atop the hole, they are sometimes below it or on either side of it, but these are not often seen.

Calligraphy also varies. There are very few that are finely made. These were probably made later and should be relegated to the third category. In addition, there is one with an elongated crescent, which some have called a claw mark to distinguish it from the others. This claw mark not only appears on any of the sides of the hole, but also at any of its four corners.

Inscriptions come in large and small characters, and rims are wide or narrow. Sometimes the curve of the claw mark faces inward, and sometimes outward. In calligraphy, however, there are some common features. At first glance it seems to resemble that of the short topped *yuan* Inaugural, but more detailed examination reveals differences. Finely

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made ones are not numerous and, one suspects, were minted somewhat later.

Above I have merely distinguished between blank reverse and crescent Inaugurals in terms of their chronological order. Some distinguish a large character version of the blank reverse Inaugural as the first to have been minted, but there is no reliable evidence for this. These questions may be resolved by future excavations.

Some have inscriptions resembling those on the Qianfeng Spring-treasure, and these were probably minted after Qianfeng times. Since there are so many of the short topped *yuan* Inaugurals, and they are so uniform, I believe they must have been minted by the government furnaces during the long reign of Emperor Xuanzong [Ming Huang].

The Qianfeng Spring-treasure and Qianyuan Heavy Treasure have a definite value as reference points in dating Inaugural coins. The word for treasure, *bao*, on the Qianfeng Spring-treasure is long and narrow, its legs extending below the level of the inner rim. The signific for cowry at its bottom is rectangular, and the two horizontal lines inside it are rather short. The character *bao* on the Qianyuan Heavy Treasure is quite different. These differences may allow us to discern the chronological order of the Inaugural coins.

There are several more points which must be made in order to understand the chronological order of the blank reverse and crescent Inaugurals:

First, the crescent Inaugural coins are somewhat more numerous than the blank reverse ones. From wude 4 [621], when the Inaugurals were first minted, until the tianbao [742-56] disturbances was a period of some 130 years. From the tianbao disorders until huichang 5 [845] was less than 90 years. If all the coins minted before the war were blank reverse, then the quantity of such coins should have been the greatest. But we can't say that blank reverse coins were no longer minted after the war. Even among huichang Inaugurals, those without crescents are in the majority.

Second, there are some crescent Inaugurals which are finely made and heavy. It is not possible that all of them could have been minted after the war. Judging from the construction of the Dali and Jianzhong coins, the postwar coins were of very poor quality.

The problem posed by the first point may be resolved as follows: The number of coins minted at the beginning of Tang was extremely small, particularly during the zhenguan years [627-650] when the natural economy was dominant and prices were extraordinarily low. Large-scale minting did not begin until kaiyuan and tianbao times during the first half of the eighth century. In addition, a portion of the blank reverse Inaugurals could have been melted down privately during the war to mint Qianyuan Heavy Treasure.

I would explain the problem raised by the second point as follows: Though prewar Inaugurals were mainly blank reverse, this generalization holds only for the products of the official mints. Inaugurals from irregular or gift mints or those dating to after the monetary reform might have already begun adding the crescent. For example, in wude 4, in addition to the capital, coin minting inspectorates had already been set up in Luozhou, Bingzhou, Yuzhou and Yizhou. In addition, the Princes of Qin and Qi were granted three furnaces each, and Pei Ji had been given one furnace. Of these, only the coin inspectorate in the capital may be said to have been a genuine official

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mint.

It is questionable whether the various prefectural and gift furnaces' coins were identical to those minted by the central government. It is possible that some of them used the crescent as a hall mark. After the Qianfeng Spring-treasure lost out and there was a return to minting the Inaugural, a mint mark could have been added. Something similar might have occurred after quianyuan times.

I believe the crescent had already appeared before the war, and that it originated some time during

the first half of the eighth century.

The *Six Statutes of Tang* notes that a thousand of the old Inaugurals weighed 6 catties 4 ounces, and that "those recently minted mostly weigh 7 catties." The notes to the *Six Statutes of Tang* were compiled by Li Linfu at the beginning of kaiyuan [713] under imperial commission. Evidently the early Tang Inaugural, which weighed 1 *qian*, that is 2.4 grains, had increased in weight by the time of Emperor Xuanzong. This state of affairs could not have undergone any change during the flourishing years of the kaiyuan and tianbao eras. There are some very finely made and heavy Inaugurals bearing crescent marks which weigh more than 1 *qian*. Such coins could not have been minted after the wars. They must have been minted during kaiyuan-tianbao times.

Then why was the crescent mark added? To answer this we must look further into the crescents and dots on coins.

Historians and numismatists have been debating the origins of the crescent for centuries, but there is one point on which there is general agreement: that the crescent was first made by an empress's fingernail. It is said that when the wax model was first presented, the empress stuck one of her fingernails into it, and the coin makers dared not erase it. As a consequence, it remained on the coin reverse. What everyone has argued about is which empress's nail mark it was.

The most common theory[14] is that it was the Wende Empress. Others say it was the Taimu Empress Dou.[15] There are even people who say it was Imperial Consort Yang.[16] This last theory is, of course, fascinating, and so the Ruzhen-Jin Dynasty poet Li Junmin wrote the couplet:

> Golden pin falls all unseen,
> Inaugural's scar in hoards obtain.

Chen Qinian also has a couplet which goes:

> There was the Inaugural coin mold,
> A thread-like scar impressed on it.

There are even some who have investigated further, and say that when the Inaugural coin was first minted, Empress Dou had already died, and Empress Wende had not yet taken her place. Naturally, Yuhuan had yet to be born, and so this could not have been the nailmark of Consort Yang.

These people evidently suppose that the crescent was present from the beginning. Others say that the later Qianyuan, Hanyuan, Zhouyuan and Songyuan coins all bore crescents, and that the crescent appears on all sides of the holes of Inaugural coins, and so could hardly have been made by one nail digging into the mold. Such statements betray intellectual confusion.

In fact, not every Inaugural coin bears a crescent, and the quantity of Inaugurals minted during the several centuries of the Tang was very large, so that the crescent could have first appeared either in early or mid-Tang times. In other words, even if the crescent was originally the nail mark of an empress, it could not have been made by Consort Yang.

Moreover, the nail mark story

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refers only to its origins, after which it was imitated by later ages. Hence if some of these nail marks were Consort Yang's, others could have been from the nails of workers in the mints. The question is, since the coins also bear other sorts of markings, are these crescents nail marks?

The reverses of ordinary Inaugural coins also bear cloud designs as well as crescents, dots, and dots and crescents or sun and moon marks. There are several kinds of cloud designs: large clouds, small clouds and three-lobed clouds, which are more decorative and drawn with finer lines.

On Qianyuan coins, in addition to crescents and lobed clouds, there are also flying birds, and so flying birds may also have occurred on Inaugural coins, though none have been discovered. Lucky birds and auspicious clouds are often found on Tang objects. For example, these two things can be seen on Tang mirrors, no doubt for their significance as symbols of good fortune. For such symbols to be found on coins, however, is as rare as the feathers of a phoenix or the horn of a unicorn. Even coins with dots or suns are not numerous.

The crescent, however, is quite common. This shows that the crescent cannot be viewed the same way as those clouds and birds. That down through the ages literary men and historians have treated this crescent as the nail mark of an empress does not prove that it did not come instead from some Chinese popular custom and was not something the Chinese people could not understand. Hence we

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[14] *Chats With Guests Record*. Zheng Qian, *Pure Collection*. Li Rihua, *Purple Peach Studio Miscellaneous Compendium*. The *Comprehensive Mirror* quotes Xue Dang's *Chart of the Sagely Movements*.

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[15] Wang Guanguo, *Grove of Scholarship*. Ling Fan, *Tang Administration Essential Record*. Zhang Shumin, *Painted Plaster Record*. Jiang Zhaoshu, *Rhyming Stone Studio Jottings*. Cf. note 11 above.

[16] Liu Fu, *Blue Jade Record*. Wang Shu *Wilderness Guest Collected Conversations*, quoting Xu Pengnian.

should not put any obstacle in the way of some other explanation, as for example that it was the result of foreign influence.

The new moon had a symbolic meaning in certain foreign countries. The upward facing crescent moon, with its two horns pointed up, stood for progress and success. This is easy to understand, since the new moon always gradually waxes, and finally must become a full moon. The Greeks, for example, used this symbol. The Corinthian *stater* silver coin sometimes bore a new moon.

Examples of stars on coins are rather more numerous. Stars occur on the coins of Greece, Rome and Carthage. There is a Roman silver coin whose reverse bears a large new moon. Above and on both sides of the moon are five six-pointed stars. There are also coins bearing a new moon embracing seven stars.

Of particular importance is a silver coin of the Persian Sassanid Dynasty's King Kosru II (590-628), on the sides of the obverse and reverse of which are stars and moons, placed as they are in the pregnant dot design on Inaugural coins. Later, Persia was conquered by Arabia, and the early Arabian empire coins retained this symbol. Moreover, Islam formally adopted the new moon as a religious emblem. In addition, stars and the moon were Indian caste symbols. The Turks of Central Asia are also said to have employed the new moon symbol, but we do not know when that custom arose. It was probably the result of Islamic influence.

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Ever since the Northern and Southern Dynasties, China had been engaged in very complex relationships with the western frontiers. Much in China had been affected by foreign influence. Western frontier gold and silver coins had circulated in China during the Northern and Southern Dynasties. This is recorded in the official histories. These were probably Byzantine gold and Persian silver coins, because at that time Byzantium mainly used gold coins, and Persia mainly used silver coins. This has been confirmed by modern excavations. The Tang Dynasty's relations with Persia, the Arab Muslim Empire and the Turks were especially close, and so the moons and stars on Inaugural coins could have been influenced by them.

The paths by which western coins could have influenced Chinese money were very numerous. In addition to the circulation of foreign money in China, several other paths were open. The first was the coming to China of the member of the Persian royal family, Bilussu, and his followers. At the beginning of Tang, Sino-Persian relations were very close. Not only did Bilussu come to China, his son, Ninissu, also lived in China for a good many years.

The Chinese decorative arts received influences from the late period of the Sassanid Dynasty. The coins of Persia and the Muslim Empire then all bore stars and moons, and some of these circulated into China. In modern times large later period Persian silver coins have been unearthed in Wuhe xian in Xinjiang. Among these are some 281 *die'erhengmu* coins of Kosru II.[17] Such silver coins have also been excavated in Turfan.[18]

The second entrance route could have been through the influence of An Lushan. An Lushan was a Tatar from Liucheng in Yingzhou, originally surnamed Kang, whose mother was later remarried to someone surnamed An, so that he too took on that surname. Practically all those bearing the surnames An or Kang were from the western frontiers. Kang was short for someone from Kangju or Kangguo [i.e. Sogdiana], and An for someone from Anguo, or Parthia. Some even suspect that An Lushan was a Persian.[19]

The Chinese histories say he was a Tatar, that he understood six languages, and had worked as an international merchant, and so he would as a matter of course have run into various sorts of foreign coins. In tianbao 3 [744] he served as Regional Commandant of Fanyang, and gradually determined on starting a rebellion. He built fortifications north of Fanyang, recruited soldiers and heaped up grain. He may well have minted coins privately as well.

In tianbao 9 (750), Emperor Xuanzong permitted him to set up five mints in Shanggu Commandery, thereby ceding him special formal authority to mint coins. Each of these mints then produced 3,300 strings annually, so that the total for all five mints was 16,500 strings. By the end of tianbao a total of at least 100,000 strings could have been turned out. These coins might have born crescent marks, and those first minted could have been very fine and heavy. Later, most of Shi Siming's Obtain-one Original Treasure and Obey-Heaven Original Treasure bore crescent marks.

This hypothesis would not only explain the origin of crescent marks on coins, but would explain why we have coins of Shi Siming, but not coins of An Lushan.

If, however, the crescent marks arose in this way,

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[17]Cf. *People's Daily*, August 8, 1959.

[18]Cf. Huang Wenbi, *Turfan Archeological Report*, plate 52.

[19]Kuwabara Tozo, *Western Frontier People Who Travelled To and From China During Sui and Tang* (Chinese translation by He Jianmin of the original Japanese editions of *Chinese Studies Collection* and *Compendium on Western and Eastern Civilization*, Chinese translation published by Zhonghua shuju).

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they must have already been imitated by other mints before the An-Shi uprisings, and already have become quite prevalent. Otherwise it would have been necessary, illogical though that would be, for others to only begin to imitate the rebels' coins at the time war with them was going on, since the Qianyuan coins frequently bear crescents.

Therefore, the crescent must have symbolized good fortune or have served as a religious symbol, and so could have been used by both sides. If the crescent was employed because it connoted progress and success, then both sides could have adopted it, particularly in time of war.

I put forward the thesis that the crescent was the result of external influence merely as a possibility, and we cannot say that the problem has been resolved. In fact, further questions remain.

First, on most foreign coins, stars and moons occur together in what Chinese numismatists call the pregnant dot pattern. Sometimes only stars and not crescents are present. Yet Inaugural coins with the pregnant dot pattern are not common, and judging from their construction, must have been minted during late Tang. Those bearing only dots are also few in number. Aside from those with blank reverses, the great majority bear only crescents. If they had been influenced by Persian and Arab Empire coins, they why did stars and crescents not appear together, rather than crescents alone?

Second, the stars on foreign coins are radiating light: The stars on ancient Greek coins are eight-pointed. Carthaginian coin stars also had eight points. The stars on ancient Egyptian coins have six points. Roman imperial coins also have stars with either six or eight points. Persian and Arab coin stars have six points. Medieval Indian coin stars were five pointed. Only those stars and moons which served as symbols for India's castes were exactly like the pregnant dot pattern on Chinese coins. Inaugural coin stars were, however, without rays, and Inaugural coins bearing only these dots are exceedingly rare.

All of this weighs against the foreign influence thesis.

We might say in rebuttal that these differences in the shapes of stars may just represent different ways of looking at things, and that the representation of these differences in art showed the substantiality of the Chinese imagination and the European depiction of outward appearances. Expressed abstractly, the Chinese would speak of influences, the Europeans of consequences.

This, however, would not account for why the Chinese coins tend to bear only crescents. Only on one kind of silver coin of the Roman Caesar Augustus is there a lone new moon. There is one other Eastern Roman small bronze coin on which is a crescent resembling the mark made by a fingernail, similar to the crescent on Inaugural coins, but that foreign coin is rarely seen, and so it would have been hard for it to have influenced Chinese coins. I am not very familiar with the coins of Central Asia contemporaneous with Sui and Tang, and so do not know if the crescent is a common symbol on such coins. Hence I cannot yet say that the crescent on the Inaugural coin is definitely not an empress's fingernail
[303]
mark. There have been still stranger things in history.

To sum up, the crescent must have appeared before the An-Shi disorders, and by then must have already achieved a certain currency, as it became still more common during and after the conflict.

For the third kind of Inaugural coin, the situation is quite complex, but these coins are not numerous.

Their common trait is that their construction is irregular. A minority have blank reverses, but the great majority have crescents or dots and crescents. The crescents are below or on either side or at the corners, or arranged askew, or nearly straight, rather than only being placed at the top of the hole.

The stroke variations on the obverse inscriptions are quite complex. Some belong to the first category, some to the second category, and some constitute a separate category of their own.

For example, the Left-shouldered Inaugural resembles the first category and the Double-shouldered Inaugural belongs to the second category. I suspect that these two coins were minted during the tianbao year period, and this would, of course, point to their origins. First of all, there are very thick and heavy ones, each weighing 1.2 of the contemporary *qian*. Such heavy coins could not have been minted postwar. Second, the first stroke of the character *yuan* on these coins is relatively long, much like the Qianyuan Heavy Treasure.

This third category includes a number of privately minted coins, most of which were probably minted after tianbao but before huichang. They would have been minted during dali and jianzhong in particular. The Green Shoots Tax and Land Head Cash were promulgated in dali 1 [766]. The Double Tax was promulgated during the jianzhong [780-805] period, greatly increasing the number of places where coins were needed.

It was just as Lu Zhi had said: "Grain can be obtained by tilling the soil; cloth by weaving. As for coins, they must be minted by the officials."[20] Bo

Juyi wrote: "Private families are without coin furnaces; ordinary flat land lacks copper mountains. It would be reckless to put into effect the Spring and Summer Tax, and annually collect bronze cash."[21]

Under the pressure of such situations, however, people had no choice but to resort to private coining. Of course most such private coins were Inaugurals. They could also have been Dali and Jianzhong coins, but because copper was hard to obtain, the quantity of privately minted coins was not great.

There is one type with crescents above and below the hole on the reverse. Some Dali Original Treasures are also made this way, so probably that type of Inaugural was minted during the dali period. There is another type with crescents on all four sides of the hole, which I surmise was also minted during this period. The Double-crescent Inaugural also has crescents on both sides of the hole. In some cases the two crescents are back to back. In others they face the same direction.

There are also coins with pregnant dots above or below the hole, or with a single large dot below the hole. Some say these Inaugural coins were minted by the Guiyang Inspectorate during the reign of Emperor Xianzong, because their obverse inscriptions resemble the character *gui* on the reverses of Huichang Inaugurals. In fact the Double-crescent Inaugurals do not constitute a single variant type.

I have above characterized the types of ordinary Inaugural coins only on the basis of their forms, and distinguished only a few main variants, with the chronological sequence of some indicated. To view them solely in terms of chronological order
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would be a mistake, because after the tianbao era there is no doubt that blank reverse Inaugurals were still being minted contemporaneously with those bearing crescents atop their holes. The most that can be said is that there were probably no dots and crescents on coins minted during early Tang, or at least that they were not common.

As for whether there were local variations among the coins minted by the various coin inspectorates, and what these local variations might have been, we have barely touched on that problem here. I am afraid that only after many excavations have provided fresh material will clues sufficient to solve this question have been furnished.

There are Inaugural coins made of iron. Most come from Sichuan, and their period cannot be determined. Their forms are those of Tang Inaugurals. It is said that during Tang copper cash were not circulated in Fanzhen and Weibo (modern Daming, Hebei), and that for a time iron cash were minted and circulated there.[22]

The Huichang Inaugurals are easy to recognize because all of their reverses bear inscriptions. In quantitative terms, not only can the Huichang Inaugurals not compare with the crescent-bearing Inaugurals, they are also much rarer than the blank reverse Inaugurals.

In modern times a hoard of ancient coins was excavated at Xiungyue City on the Liaodong Peninsula, among which were 827 Tang Inaugurals. Of those, 801 were ordinary Inaugurals. There were only 26 Huichang Inaugurals.[23] Ordinary Inaugurals were thirty times more numerous than Huichang Inaugurals. Of ancient coins excavated in Dingxian, Hebei, 389 were Inaugurals, and ordinary Inaugurals were thirty-five times the number of Huichang Inaugurals.[24]

Not all prefectures and commandaries minted coins at that time. Judging solely on the basis of reverse inscriptions, there seem to have only been some twenty prefectures which minted coins, and not all of them used the prefecture name. For example, Yangzhou only used the character *chang*. Though some coin catalogs claim that some coins bear a *yang* on their reverses, I fear these have been recut, and that no genuine ones have as yet been discovered.

There are seventeen subtypes of coins using prefectural names: *dan, ping, xiang, xing, run, yue, fu, xuan, hong, e, guang, gui, yan, dan, yi, jing* and *liang*. [Plate xlii,2-23] In addition, the character *jing*, meaning capital, was used for the capital prefectures, and *luo* for Henanfu, *jing* for Jiangling, and *lan* for Lantianxian. Some say that the *dan* with the fewer strokes referred to Danzhou, Hebei; others that it meant the Danyang Inspectorate in Yangzhou. Both are mistaken. Danzhou was in Yichuanxian, Shaanxi.

It is very hard to decide about *gui*. There was a Guiyang Inspectorate in Binzhou, Guiyang Commandery, but there was also a coin inspectorate in Guizhou (in modern Guangxi). Judging from the documentary sources, the reverse inscriptions were all names of prefectures, and so it must be Guizhou which was intended.

Most people say Guiyang Inspectorate was intended. Even *luo* could refer to Luozhou. Some say

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[20] *Old Tang History*, 319, "Biography of Lu Zhi."

[21] Bo Juyi, *Poems Presented to Friends*.

[22] *Natural and Man-made Products*.

[23] Kamada Maruzen, "Investigation of the Xiungyue City Excavation" [in Japanese], *Money*, no. 263.

[24] *Money*, no. 297, p. 1.

xing refers to Xingyuanfu, but Xingyuanfu would have been represented by *liang*, and so the Xingzhou which was part of Shunzheng Commandery must have been intended here.

Some say *run* stands for Zhexi; others say it was Zhenjiang. There is nothing wrong with either identification. At that time Zhexi was a regional administrative name, which embraced the three commanderies of Hang, Jia and Hu, as well as commanderies south of the Yangtze in Jiangsu. If there was a Zhexi
[305]
Investigative Commissioner, Runzhou would have been his administrative seat. The later Zhenjiang is at this location. Zhexi was a rich and fertile region in the south. During the huichang period, the most coins would have been minted here.

There is another coin whose reverse bears the character *yong*, which has survived in extremely small numbers, and which has not previously been noted in the coin catalogs. The significance of the *yong* is not clear. The histories say that when Emperor Wuzong abolished the monasteries, the Yongping Inspectorate official, Li Yuyan, requested that the Buddhists' bronze images, bells and other bronze implements all be confiscated for minting by Yongping.

These could, however, also be Ten Kingdoms coins, with the *yong* standing for the yongping year period of Former Shu's Wang Jian, since such coins have been found in Sichuan, and the calligraphy of the *yong* is very similar to that of the *yong* on the Yongping Original Treasure. Probably Wang Jian at first minted Inaugural coins, and later went on to mint the Yongping coin.

In addition, some coin catalogs say that there were *qin*,[b] *shu*,[c] *min*[d] and *bing*[e] coins, but I have never seen the actual coins, and cannot judge their genuineness. They could have been recut. Nevertheless, any prefecture then could have minted coins, and there may be others which have yet to be discovered.

The histories say that it was not until huichang 5, 7th month, that the order came down to mint new coins, and that the order was not carried out until huichang 6, 2nd month. They also say that when Xuanzong [r. 847-860] ascended the throne, the new coins were reminted as models. Since Wuzong died in huichang 6, 3rd month, and Xuanzong assumed the throne before his predecessor's coffin, the Huichang Inaugural coins were minted for no more than ten months altogether. If that was the case, their quantity could not have been very large, and they should not have held much importance in the history of Chinese money.

In fact, however, this is not the case. A rather large number of Huichang Inaugurals have survived, and though they are far less numerous than ordinary Inaugurals, that is because the latter are so numerous, having been produced over the course of two centuries.

If the standards for minting coins had not changed, and if it is true that ordinary Inaugurals are thirty times more numerous than Huichang Inaugurals, then the latter would have had to have been in production for seven years for so many to have been produced. The Huichang Inaugurals are both fairly numerous and exist in a number of variant forms. For example, the coins of Yuzhang Commandery come in variants having the character *hong* on their reverses both above and below the hole, as well as on both sides of it. Moreover, some from the same locality have things reversed. The character *hong* itself is sometimes large and sometimes small, and there are various crescent marks.

The other coins also all come in a number of variants. Even the extemely rare *yong* coin has large and small *yong* variants, with that character placed either above or below the hole. This all goes to demonstrate that the Huichang Inaugurals simply could not all have been turned out within a few months. It is perhaps true that Xuanzong overturned the policies of Wuzong, but he must have continued to mint his coins. It is possible that during the forty or fifty years from Xuanzong on, the coins minted were all of this type.
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Ancient Chinese bronze vessels had alloys of fixed proportions. The statement that "metal comes in six alloys"[25] refers to the six different proportions of copper and tin in alloys suitable for different objects, but none of these were used in making coins.

Prior to Sui and Tang there was no standard for the fineness of metal in coins. During the flourishing years of Han, the mountain-coin-minting method was employed. That is, the copper was used as it was extracted from the mine to mint coins, without alloying it with any other metal in particular. Therefore, the composition of the alloy varied by locality and even on each occasion when minting took place.

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[25] *Record of Investigation of Artisans* explains this statement as follows: "In six part metal, tin has one-sixth. This is called bell and tripod alloy. In five part metal, tin is one-fifth, and this is called the ax alloy. In four part metal, tin is one-fourth, and this is called halberd alloy. In three part metal, tin is one-third, and this is called sword alloy. If, in five part metal, tin is two-fifths, it is called sharp killing arrow alloy. If copper and tin are in equal proportions, this is called mirror speculum alloy." In fact, however, the alloys in ancient vessels do not fully accord with these specifications.

By Sui times the practice of minting coins alloyed with pewter was already in use, but apparently there were still no definite rules for alloys.

It was not until Tang times that there were such rules. During the kaiyuan and tianbao eras [713-756], the raw materials required for each furnace were: copper, 21,220 catties; pewter, 3,709 catties; black tin, 540 catties. This would be enough to mint 3,300 strings of cash. If each coin weighed 1 *qian*, then meltage and wastage must have been 23.5 percent, which would seem to be excessive. Generally speaking, the alloy used for coins then was 83.32 percent copper, 14.56 percent pewter and 2.12 percent black tin.

Hence the statements by some people that Inaugural coins contained nearly pure copper are inexact. A good many Inaugural coins may not even have had as much as 80 percent copper, since though a minority are finely made, they have a blue-white color, or even an ash-blue color. Historically, there has been a popular belief that if an Inaugural coin is melted down, it will exude mercury, which one can use to calm a child's tantrums. Actually, what comes out is pewter rather than mercury. This shows that the alloy of Inaugural coins is not 100 percent pure. If various kinds of Inaugurals were assayed, we might be able to determine which were the ones officially minted during the kaiyuan and tiaobao eras.

I have seen no records dealing with the number of furnaces devoted to minting coins prior to Tang. For Warring States times, we can only infer the number of mints from the place names on the knives and spades. From Han on, place names no longer appeared on coins, and so even this basis for inference is lacking. Of Sui dynasty mint locations, in addition to the capital, Chang'an, we know only of Yangzhou, Bingzhou, Ezhou and Yizhou, which had a total of 25 furnaces for casting coins. We have no way of telling how many places in the whole country minted coins, and how many mints there were in total.

It is not until Tang that such material is available. The histories state that during the tianbao era there were 99 mints in the country. There were 30 in Jiangzhou, ten each in Yangzhou, Runzhou, Xuanzhou, Ezhou and Weizhou, and five each in Yizhou, Dengzhou and Binzhou, three in Yangzhou [*yang* here combining the water signific with the sheep phonetic], and one in Dingzhou.

Some 327,000 strings were minted annually.[26] Actually only 11 prefectures were minting coins. During the huichang period, only 22 or 23 prefectures were minting coins.

If we compare these figures with those for Europe, we can discover that the right to mint coins was far more centralized in China than in Europe. In the
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sixth and seventh centuries, within the boundaries of present day France alone there were several hundred places with mints. If we were to place stars at locations where minting of coins was occurring, then the map of France for that time would look like the sky on a summer's night.[27]

The inscriptions on Tang coins reflect the evolution of Chinese calligraphy. Before Qin, inscriptions on Chinese coins were in large seal script; from Qin on, right down to the end of Sui, they were in small seal script. The perpendicular needle sealscript of Wang Mang's coins, the leak-leaf script of Liu-Song's Xiaojian coins, and the jade-chopstick sealscript of Northern Zhou's Spade-spring coin were all variations on small seal script.

The characters for "value hundred" on Shu-Han's Value-hundred Five-grainer were in clerkscript, and this is the earliest use of clerkscript on Chinese coins. Li Shou's Hanxing cash also used clerkscript, but these are exceptions.

The Inaugural coin consistently used clerkscript, or the squared off eight-part clerkscript. There is a tradition that the inscription was written by the famous calligrapher Ouyang Xun. From Tang times on, coin inscriptions were still sometimes in seal script, but that had become the exception. Therefore, in this respect too the Tang inaugurated a new age in Chinese monetary history.

In esthetic terms, the Tang coinage does not seem particularly notable. Though historians and numismatists down through the ages have praised the eight-part clerkscript of Ouyang Xun's inscription on the Inaugural coin, esthetically these coins seem inferior to certain coins of the Northern and Southern Dynasties.

Hence some students of the bronzemaking art believe that the Chinese artistic tradition in bronze was broken after Jin. They believe that if we put aside the bronze vessels of antiquity to merely consider bronze mirrors, it is clear that the decorative patterns on pre-Qin mirrors are the most beautiful, that the Han mirrors are also very good, but that the Tang mirrors are simply too vulgar to be considered.

Actually, in both shape and ornamentation, contemporaries considered the Tang mirrors to be the

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[26] *Universal Statutes*, "Food and Money, 10," and *New Tang History*, "Treatise on Food and Money."

[27] Cf. map in Arth. Sunle, *Deutsche Münz- und Geldgeschichte von den Anfängen bis zum 15. Jahrhundert* (1955), p.

most fashionable, because those decorative patterns had just come in from the west. It is merely because these designs have been seen too often in modern daily life that modern people have come to feel they are vulgar. Back in Tang times people no doubt looked upon Han mirrors as vulgar.

Coins and bronze mirrors are, however, two different things. Bronze mirrors had evolved from the simple to the complex, while coins evolved from the complex to the simple. Prior to Tang, coins varied enormously in size, weight and inscriptions. By Tang times, they had for the most part become standardized, and there were no further great changes for several centuries.

Culturally, this may have been a defect, but in economic terms it was an advantage. It would be incorrect to make a low estimate of the level of quality of the Tang coinage. Perhaps it is because their number is so great that people feel they are ordinary. Actually, such simple and vigorous large shapes reflected the unique features of Tang culture and art.

If one places the Inaugural and Xiaojian coins
[308]
alongside each other for comparison, one can see that the latter are slighter appearing and the former more robust looking. Looking at the artistic quality of the entire run of Tang coins, their weak point is the small number of changes they underwent, which is not to say that the Inaugural coin was not a beautiful object. If you hold a fine specimen of Inaugural coin next to the most beautiful of square-holed coins in Chinese history for comparison, the former need not be at all shamed. Particularly the blank reverse Inaugural with the especially short top stroke on the character *yuan*, has a round and delicate rim and vigorous calligraphy.

The high level of development of Tang culture caused its monetary culture to spread abroad to countries like Japan and Korea. It also influenced certain peoples of the western frontiers, like the Uighurs and Turks.

During the An-Shi disturbances, the Uighurs contributed an army to help the Tang imperial house put down the rebellion, and the Tang rewarded their ruler, Moyanchuo, with the title of Brave-Martial-Awing-Distant-Frontiers-Khan, and gave him Princess Ningguo in marriage.

His son, Khan Mouyu, minted a square-holed round coin with inscriptions in Uighur on both sides. One side reads "Noble and Virtuous Uighur Heavenly Khan Mouyu." The other side reads "preserve the state decree."

The Tujishi were a branch of the Western Turks. During the first half of the eighth century they minted several square-holed round coins with Turkish inscriptions.[28] Some bore inscriptions in both Turkish and Chinese. This coin seems to have been in circulation for a century or two.[29]

There exists a Gaochang Auspicious-profit coin which is somewhat larger than a standard coin, has a narrow edge and thick body, and weighs over 9 grams. Its inscription is in clerkscript. It is generally believed that it was minted by the state of Gaochang. Confirming this is the discovery in modern times of this coin in Turfan,[30] and so this belief may not be without basis, though these coins are not made like foreign coins, and it is difficult to fix their period. Some say it was minted by the Qu Dynasty.[31]

The founder of the Qu Dynasty, Qujia, succeeded Maru as the ruler of Gaochang during the Northern Wei period. His dynasty lasted for nine generations, or 144 years, ending in the early years of Tang. During this time Gaochang had much contact with China. The Tang imperial house gave them Princess Huarong in marriage, and granted to Qujia's grandson, Boya, the ranks of Official of the Imperial Banquets and Grand Protector of the Imperial Chariot. He lived at the Tang court for three or four years, and after he returned home, he ordered that hair braids be cut off.[32]

And yet the histories say that during the North-

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[28]In modern times many have been unearthed in the vicinity of Issiq Köl [i.e. Issiq Lake] within the borders of the Soviet Union. A. Bayanshidan, "Investigations of Turkish Coins" (Chinese translation by Zhang Tiexuan), *Shuowen Monthly*, no. 3.10). Sha Wan, *Historical Materials on the Western Turks* (Chinese translation by Feng Chengjun), p. 153, also mentions these coins. Turkish coins are also mentioned by Ed. Drouin, "Sur quelques monnaies turco-chinoises VIe, VIIe et VIIIe siècles," *Revue Numismatique* (1891). In 1906 the German, Le Coq, excavated in Turfan a Tujishi coin whose reverse depicted a bow.

[29]Bayanshidan says that this type of coin circulated between the fourth level of Tanlosi (eighth to ninth century) and the third level (tenth to twelfth century). Beginning in the tenth century, the coins of Ilek were replaced by *die'erhengmu*. "Investigations of Turkish Coins."

[30]Huang Wenbi, *Turfan Archeological Report*. Sitanyin, *Western Frontier Archeological Record*, however, only mentions Byzantine gold coins and Persian silver coins in Turfan. He does not mention the Gaochang Auspicious-profit coin.

[31]Zheng Jiaxiang, "Investigation of Gaochang Auspicious-profit Coins," *Encyclopedia of Ancient Coins*, latter collection, ten strokes, p. 303.

[32]*Sui History*, 83, "Account of Gaochang."

ern and Southern Dynasties period the field taxes of Gaochang were calculated in silver coins, and that those without silver coins were to pay in hemp cloth.[33] Evidently, they did not use Chinese-style coins. While on his way to India, the pilgrim monk Xuanzang passed through Gaochang, whose King Quwentai gave him 100 ounces of gold, 30,000 silver coins and 500 lengths of silk to pay his expenses during his twenty years journey to and from India.[34] Nor does the *Great Tang Western Frontier Record* say anything about Gaochang using Chinese-style copper cash. The silver coins mentioned by the histories must have been western-style silver coins, probably Persian ones.

Later, Tang relations with the Qu Dynasty turned bad, the dynasty was overthrown by Tang
[309]
and the prefecture of Xizhou established there.[35] Thereafter they could no longer mint their own coins, and so the Gaochang Auspicious-profit could not have been minted during that period.

The next earliest date which can be assigned to the Gaochang Auspicious-profit is the Five Dynasties-Ten Kingdoms period rather than the Northern and Southern Dynasties or Sui-Tang periods. The composition of its inscription somewhat resembles that of the Liu Yan Yong'an copper cash. The latter, however, is ascribed by some to An Lushan, and so these people also attribute the Gaochang Auspicious-profit to mid-Tang.

Gaochang was taken over by the Huigu at the end of Tang.[36] It served as their capital right down to Yuan times. If minted during this epoch, that would merely allow us to call it a Huigu coin.

The historians like to speak of Han and Tang together in terms of their national strength, military power and reputation abroad. They can be mentioned in the same breathy in monetary terms as well.

Beginning with yuanshou 5 of Emperor Wu, the Han Dynasty continued to use the Five-grainer for over three centuries, without making any fundamental changes in it. Beginning with wude 4, the Tang Dynasty continued to use the Inaugural Circulating Treasure for over two centuries, similarly without any fundamental change. These parallel historical developments were the consequences of the creation of superior monetary systems. Short-run changes and the problems of private coinage could not undermine these monetary systems' fundamental characteristics.

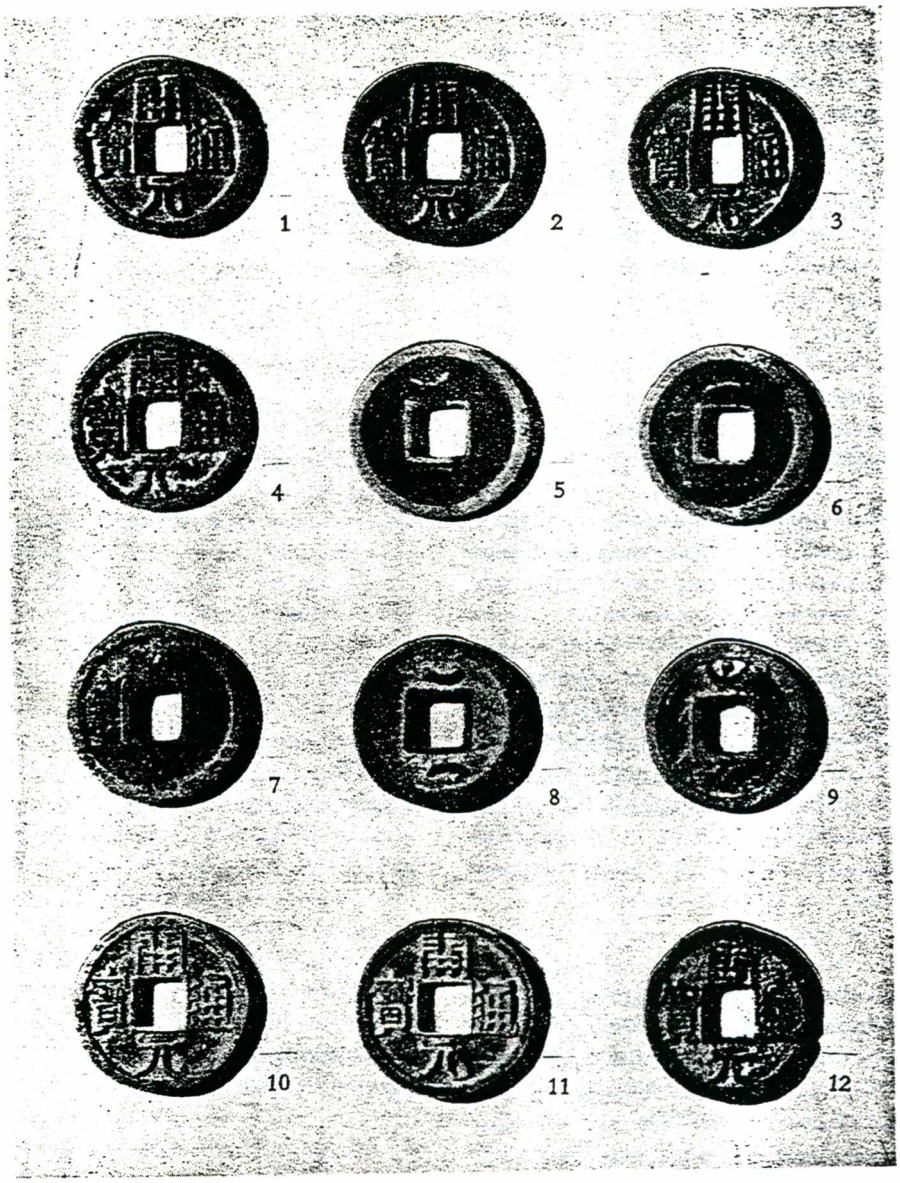
a 見 b 秦 c 蜀 d 閩 e 并

[33] *Zhou History*, 50, "Account of Gaochang."

[34] *Biography of the Great Mercy Temple Master of the Three Treasures of the Law*, 1, "Account of Gaochang."

[35] *Great Tang Western Frontier Record.*

[36] *Old Tang History*, 198, "Account of Gaochang."

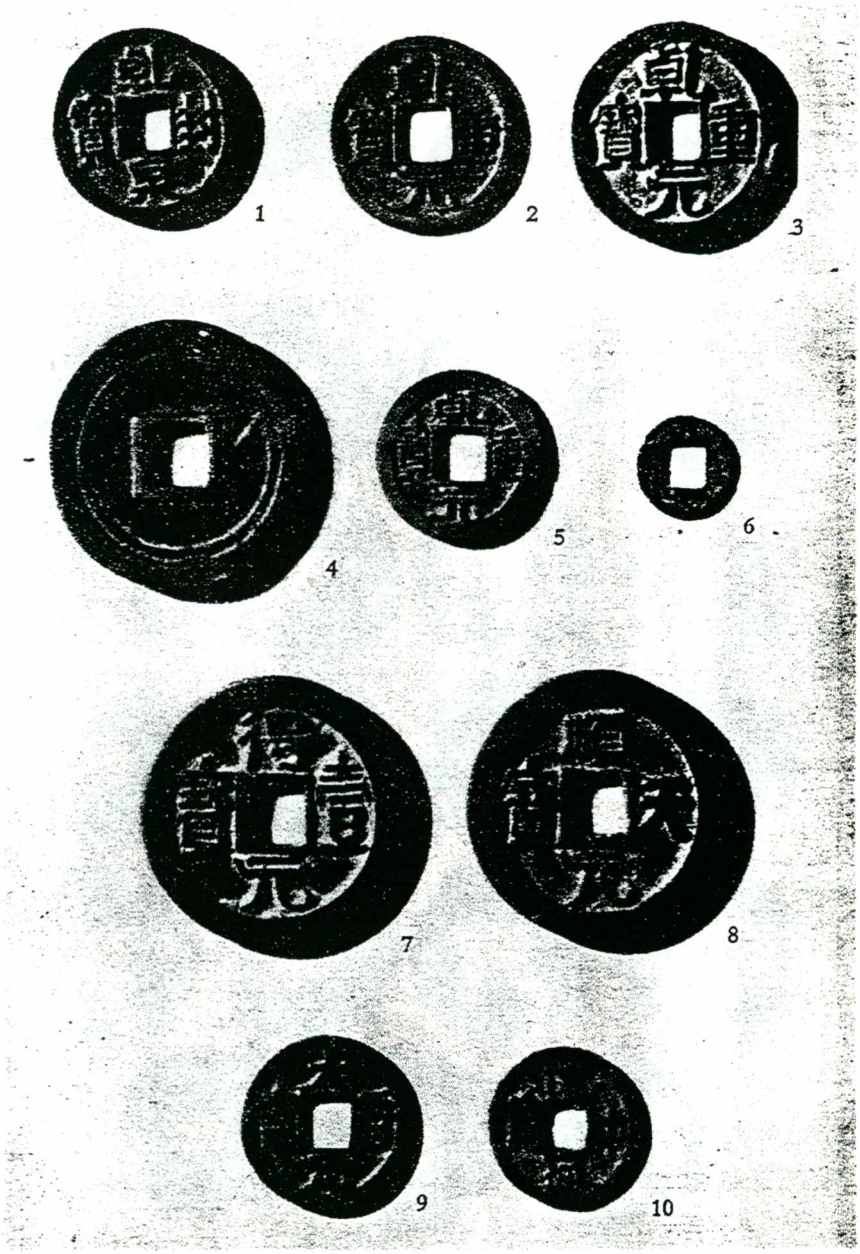


圖版四十　唐代的錢幣(一)

1.右挑短一元開元。 2.左挑開元。 3.雙挑開元。 4.大字開元。 5.開元錢背的仰月。 6.開元錢背的俯月。 7.開元錢背的星點。 8.開元錢背的上下月。 9.開元錢背的孕星。 10.鎏金開元。 11.銀開元。 12.鐵開元。鐵開元出於四川，大概是唐末到五代民間所鑄。

PLATE XL. TANG DYNASTY COINS (1)

1. Right-shouldered short-topped *yuan* Inaugural. 2. Left-shouldered Inaugural. 3. Double-shouldered Inaugural. 4. Large character Inaugural. 5. Upward facing crescent on Inaugural reverse. 6. Downward facing crescent on Inaugural reverse. 7. Dot on reverse of Inaugural. 8. Upper and lower crescent on Inaugural reverse. 9. Pregnant dot on Inaugural coin reverse. 10. Gilded Inaugural. 11. Silver Inaugural. 12. Iron Inaugural. The iron Inaugural comes from Sichuan, and was probably privately coined during late Tang or Five Dynasties times.

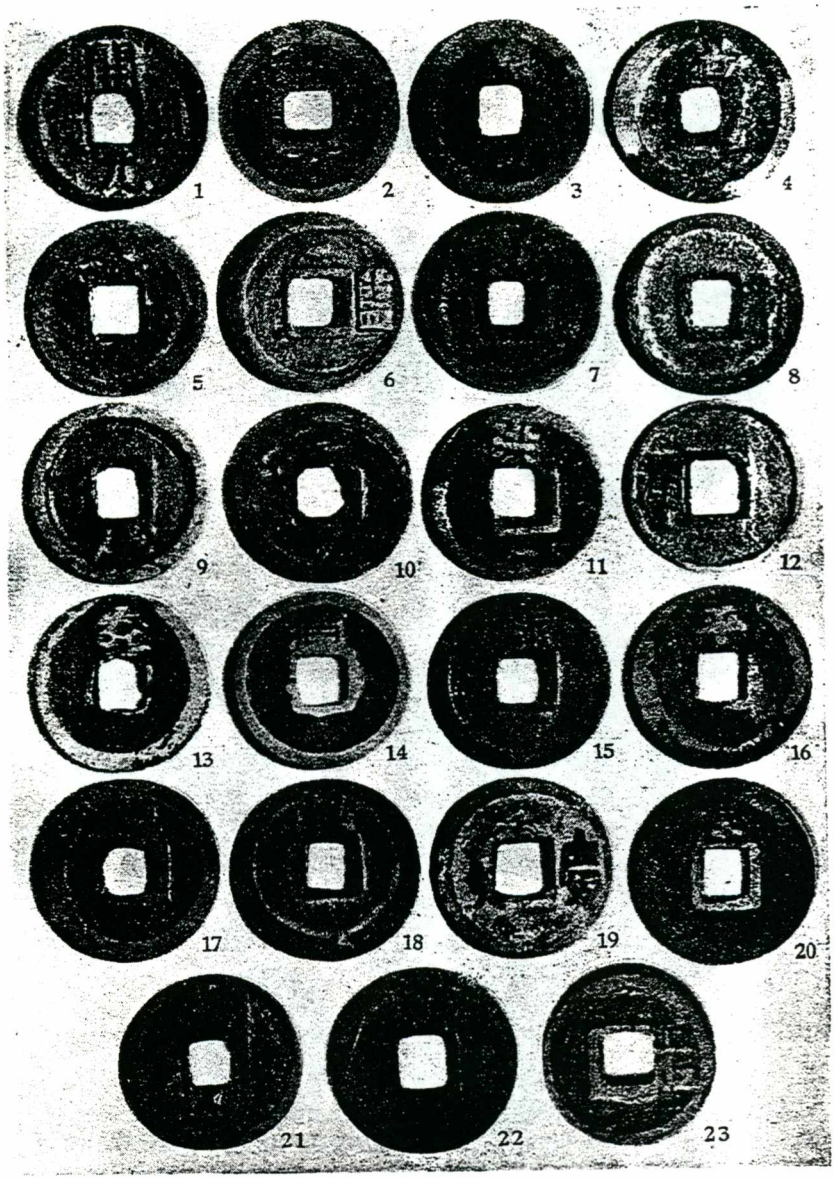


圖版四十一　唐代的錢幣(二)

1.乾封泉寶。 2.乾元重寶。 3.乾元重寶當十錢。 4.重輪乾元重寶之背。 5.小樣乾元重寶。 6.減重後的乾元重寶幺錢。 7.史思明的得壹元寶。 8.史思明的順天元寶。 9.大曆元寶。 10.建中通寶。

PLATE XLI. TANG DYNASTY COINS (2)

1. Qianfeng Spring-treasure. 2. Qianyuan Heavy Treasure. 3. Qianyuan Heavy Treasure 10-cash coin. 4. Reverse of Double-wheel Qianyuan Heavy Treasure. 5. Small Qianyuan Heavy Treasure. 6. Tiny Qianyuan Heavy Treasure after weight reduction. 7. Shi Siming's Obtain-one Original Treasure. 8. Shi Siming's Obey-Heaven Original Treasure. 9. Dali Original Treasure. 10. Jianzhong Circulating Treasure.



圖版四十二　唐代的錢幣(三)

1.會昌開元。2—23.會昌開元的背文:昌、京、洛、益、藍、襄、荆、越、宣、洪、潭、宛、潤、鄂、平、興、梁、廣、梓、福、丹、桂。

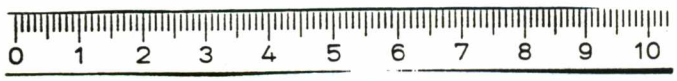


PLATE XLII. TANG DYNASTY COINS (3)

1. Huichang Inaugural. 2-23. Huichang Inaugural reverse inscriptions: *chang, jing, luo, yi, lan, xiang, jing, yue, xuan, hong, dan, yan, run, e, ping, xing, liang, guang, jing, fu, dan, gui.*

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2. *Coins of the Five Dynasties and Ten Kingdoms*

Coinage systems became extraordinarily complex during the chaotic period of the Five Dynasties and Ten Kingdoms, and most of the coins produced then are not mentioned in the history books. We must depend on the findings of numismatists and collectors down through the ages to fill in our knowledge of that period's coins.

To turn to the Five Dynasties, there is a Kaiping Circulating Treasure large coin resembling 5-cash coins, which could have been minted during the kaiping period (907-910) of Latter Liang, but these are extremely rare. The Kaiping Original Treasures I have seen are all fakes. A lead Kaiping Original Treasure small coin has been excavated in Guangdong. Its inscription is read circumferentially. This could have been minted when Liu Yin of the Lingnan region accepted the Liang calendar.

There is a Tiancheng Original Treasure small coin of Latter Tang, which is also not numerous. There is a Qingtai Original Treasure which is the same size as the Obtain-one Original Treasure, but whose inscription is read in straight lines.

At that time all coins were read circumferentially. Latter Jin's Tianfu Original Treasure, Latter Han's Hanyuan Circulating Treasure and Latter Zhou's Zhouyuan Circulating Treasure are all mentioned in the histories. [Cf. Plate xliii,1-3 at end of this subsection] The Tianfu coin's copper content is low and its inscription murky. The histories say that private coining throughout the empire was permitted from tianfu 3 (939), 11th month.[1] It was probably because there was a copper shortage then that the people were allowed free coinage, and so most of these coins which have survived would have been privately minted.

Fine officially minted specimens are very rare. Well-made Hanyuan coins are more numerous. These were minted from Qianyou 1 (948) of Latter Han. The Zhouyuan coins were cast from melted-down statues from Buddhist temples. When some officials disapproved of this, Emperor Shizong said, "I have heard that Buddha said that to care for the body is wasteful, and to be zealous in profiting men is to preserve their true bodies. To make illicit profit in the world is like wanting to flay them. Why then should these bronze statues be regretted?"[2] Superstitious people in later times, believing that Zhouyuan coins could cure illnesses or aid in giving birth, have cast imitations of them. That is why more of them exist. Their reverses bear a variety of dots and crescents, and there are many variant types, not all of them necessarily produced at that time.

Of the Ten Kingdoms, aside from Wu-Yue, Southern Ping and Northern Han, all minted coins.

The King of Chu, Ma Yin, minted several types of coins at Changsha. The histories say that because there was much lead and iron in Hunan, he took the advice of Gao Yu to mint lead and iron coins.[3] Ten of these were worth one copper cash.[4] It is not clearly stated what coin was minted. Modern numismatists treat a particular iron and lead Inaugural coin as this Chu coin.[5]

However, most iron Inaugurals come from Sichuan rather than Hunan. Iron and tin coins were also produced during the reigns of Empress Wu and Emperor Xuanzong, and so

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we cannot tell if a particular iron Inaugural is a Tang or a Shu coin.

There are lead Qianfeng Spring-treasure and Qianyuan Heavy Treasure. [Plate xlv,1-2] These could be Chu coins, but they could also be funerary coins. Most of Ma Yin's coins used the labels of Tang coins. In addition, a Tiansong Prefectural Treasure and a Qianfeng Spring-treasure large coin are Chu coins. The Tiansong Prefectural Treasure comes in bronze and iron versions. Both are large coins. Ma Yin had been given the rank of Tiansong Superior General by Emperor Taizu of Liang, and minted this coin in qianhuo 1 (911) to commemorate the event. Very few survive, and we cannot tell whether they were actually ever circulated. The Qianfeng Spring-treasure large coin also comes in bronze and iron variants. The iron versions are more numerous. They weigh 28 grams, and each was equated to ten small coins.[6] It is said that nine of them made up one string. They sometimes bear reverse inscriptions, such as *tian*, *song* or *tianfu*.

Southern Han's Liu Yan minted Qianheng Heavy Treasure bronze and lead coins, as well as Qianheng Circulating Treasure bronze coins. [Plate xliv,9-11] Liu Yan assumed the throne in zhenming 3 (917) in Fanyu. He called his state Great Yue, changed the year period to qianheng, and minted the Qianheng Heavy Treasure coin.

The next year, in the 11th month, he changed the state's name to Han, and resorted to minting lead

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[1] *Old Five Dynasties History*, 77, "History of Jin," 3, "Annals of Emperor Gaozu," 3.

[2] *Five Dynasties History*, "Basic Annals of Zhou," 12.

[3] *Comprehensive Mirror*, 274.

[4] *New Five Dynasties History*, "Chu Hereditary House," 6.

[5] The Japanese *Shōwa Coin Catalog* puts its example under the category of "Chu Coins."

[6] *Annals of the Ten Kingdoms*.

coins when revenues fell short of expenditures. Ten of these lead coins were equated with one bronze coin. Therefore, copper coins were still being minted while the state was called Great Yue.

We do not know the date of the Qianheng Circulating Treasure. Very few of them survive, and probably not many were minted. Perhaps they were minted in qianheng 1, and the Heavy Treasure and lead coins were minted at the same time. There are two types of lead coins. One has a blank reverse, is thin but large, and weighs 4 grams. It was minted in Guangzhou. The other bears the character *yong*, and was minted in Yongzhou, Guangxi. It is somewhat smaller and thicker, weighing 4.4 grams.

Wang Shenzhi of Min minted various Inaugural coins. In Liang's zhenming 2 (916), the tenth year of Wang Shenzhi's rule, he minted a small lead Inaugural Circulating Treasure in Ninghuaxian, Dingzhou.[7] Some had blank reverses. Others bore the character *min* or *fu*.[8] In Liang's longde 2 (922, year 16 of Wang Shenzhi) he minted a large iron coin with a diameter of 1 *cun*, a large and roughly drawn inscription, and with the character *min* above the hole on the reverse, and an upward-facing crescent below the hole.

There were also copper and lead large coins, the former sometimes bearing a large dot on its reverse above the hole.[9] Both types of reverses appear on the lead coins. Perhaps all copper, lead and iron large coins then had both types of reverse, but because only a small number have been unearthed, not all variants have as yet been discovered.

The iron coins are poorly made. There were 500 of them to the string, which was popularly called a "manacle" [*kao*].[10] Later, Wang Xi (originally named Yanxi) minted a Yonglong Circulating Treasure large iron coin in yonglong 4. In size and inscription it was almost the same as the earlier large Inaugural. Its reverse bore the character *min* and an upward facing crescent, and a dot on the side of the hole. One of the large Yonglong coins was worth ten small coins[11] and 100 lead coins.[12]

In tiande 2 (944), Wang Yanzheng minted Tian-
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de Circulating Treasure large iron coins, at a face value of 100,[13] but none of them has survived.[14] A Tiande Heavy Treasure bronze coin has been preserved. It is covered with iron rust, and its reverse bears the character *yin*, because when Wang Yanzheng was proclaimed Emperor in Jianzhou, he changed his state's name to Yin, and he only restored the state's original name of Min in the third year after that. These Min coins are all extremely rare.

Former Shu's Wang Jian minted the Yongping Original Treasure (911-915), the Tongzheng Original Treasure (916), the Tianhan Original Treasure (917) and the Guangtian Original Treasure (918). [Plate xliv,1-4] Wang Zongyan minted the Qiande Original Treasure (919-924) and the Xiankang Original Treasure (925). [Plate xliv,5-6] The Yongping Original Treasure is most rare, even rarer than the Inaugural bearing the character *yong*.

The Great Shu Circulating Treasure was probably minted by Latter Shu's Meng Zhixiang at the time he became Emperor of Great Shu in Chengdu (934). Meng Zhixiang died three months later, and so very few of these coins survive. They could, however, also have been minted by Meng Chang during the mingde year period. In guangzheng 1 (938) the Guangzheng Circulating Treasure bronze coin was minted. In guangzheng 18 an iron coin was minted, and it continued to circulate until guangzheng 25.[15] [Plate xliv,7-8]

Five Dynasties period Sichuan was isolated and relatively peaceful. Many literary men had fled there

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[7] *Annals of the Ten Kingdoms*, "History of Min."

[8] Ma Duanlin, *Investigation of Literary Remains*, notes that in Song Emperor Lizong's baoyou 3, 6th month, Inaugural coins were found in the creekbed of South Bridge Creek in front of the Shangkuixing Temple in Xianyouxian, Fujian. The local residents took them. The coin reverses bore either the character *min* or *fu*. Such coins have also been unearthed in modern times in Zhejiang.

[9] Not all large copper Inaugural coins are Min coins. Aside from this roughly drawn one which some consider to be a Tang coin, there is another with its inscription in thin-gold-style calligraphy, which I think was minted during the Yuan Dynasty.

[10] *Record of Coins*, quoting Tao Yue, *Record of Monetary Springs*, says that they were popularly called *kao-?-he*,[a] which posterity has not been able to explain. Later Japanese numismatists (cf. *Shōwa Coin Catalog*) read the last two characters as the three characters *lihefan*,[b] which they suggest is the phonetic expansion of the pronunciation of *kao*.

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[11] *New Five Dynasties History*, "Hereditary Houses, 8, Min." *Annals of the Ten Kingdoms*, "History of Min."

[12] *Comprehensive Mirror*, 282.

[13] *Annals of the Ten Kingdoms*, "History of Min."

[14] None of those recorded in the coin catalogs are reliable.

[15] *Annals of the Ten Kingdoms* states that in guangzheng 25, because garrisons were scattered widely, and there was not enough to cover the expenses of troop movements, iron coins began to be minted. The *Ten Kingdoms Spring-Autumn* states: "In guangzheng 18, 10th month, because many soldiers had been recruited, and there was not enough for their use, iron coins began to be minted, which circulated until guangzheng 25." Since the latter work is more specific, I have adopted its version.

as refugees, and so the cultural level was high, particularly in the fine arts. Several prominent artists appeared then. The rulers put much emphasis on the arts, and yet the coins produced were very crude.

Coin production was not the responsibility of those in charge of objects of art, and so it did not reflect the high artistic and technical level of the time, but merely the authorities' lack of concern about artistry in the making of coins. These small courts simply could not pay attention to such things.

Of the Ten Kingdoms, Southern Tang had the greatest variety of coins. Its territory was broad, it produced an abundance of products, and its cultural level was high. Some say that the Great Qi Circulating Treasure was minted when Xu Zhigao was enfeoffed as Prince of Qi (937). Only two of these coins have been found. There is also a Baoda Original Treasure which is generally considered to have been minted by Li Jing during the baoda period (943-957), of which only several have been discovered. Neither of these coins is to be found in the written record. In zhongxing 2 (959) the Perpetual-circulation Spring-money 10-cash bronze coin was minted. Not many of them survive either.

There is a large Inaugural Circulating Treasure which numismatists have taken for the tutenag 10-cash coin minted by Zhao Zan during the Tang, but its alloy and construction closely resemble those of the Perpetual-circulation Spring-money, except that it is bigger. This too could be a Southern Tang coin. It exists in larger numbers than the Perpetual-circulation Spring-money, but I have seen no record of it, and do not know its face value.

The three kinds of coins present in the greatest numbers and recorded in the histories are the Inaugural Circulating Treasure, the Tang State Circulating Treasure and the Great Tang Circulating Treasure [Plate xlv,3], all of which are small coins.

The Southern Tang Inaugural's inscription is small, and its outer rim is wide. These are the points which distinguish it from the Tang

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Inaugural. It comes in both seal script and clerk script versions, making a matched pair of coins. The later Northern Song matched pair coins were patterned on these Southern Tang coins.

The Tang State Circulating Treasure also exists in matched pairs of sealscript and clerkscript inscriptions. There is a 10-cash large coin version of the sealscript model. Since it is smaller than the Perpetual-circulation Spring-money, it is probably somewhat later than that coin.

There is no written account of the years during which these three small coins were minted. We know only that the Tang State Circulating Treasure and the Great Tang Circulating Treasure came after the Perpetual-circulation Spring-money. The Inaugural coins are larger, and perhaps somewhat earlier.

It is worthy of note that during this period the custom of using the state's name for the name of its coins apparently became prevalent. Latter Shu had the Great Shu Circulating Treasure. Qi had the Great Qi Circulating Treasure, and now the Southern Tang had a Great Tang Circulating Treasure.

Actually, at that time year-period coins had still not become fixtures, and state names on coins did occur.

A number of the histories state that Han Xizai requested the minting of iron coins. In houzhu 3 (964), these were issued and put into circulation. They also state that these iron coins were Inaugural Circulating Treasures.[16] And yet I have never seen any Southern Tang Inaugurals made of iron. The forms of the inscriptions on surviving iron Inaugurals are exactly the same as those on the Tang coins, and they come from Sichuan rather than the territory of Southern Tang.

Although no coins survive from Wu-Yue, according to certain of the histories,[17] Qian Hongzuo advised the minting of iron coins in Latter Jin's kaiyun 3 (946), though this was not done. Later, in Latter Zhou's xiande 4 (957), Qian Hongshu also made plans to mint coins. We do not know whether or not these came to frutition.

In modern times a hoard of large and small bronze and iron coins was unearthed in the north. Among these, the most important are several types of yong'an coin. There is a Yong'an-one-ten, a Yong'an-one-hundred, a Yong'an-five-hundred and a Yong'an-one-thousand, all four types appearing in both bronze and iron versions, except for the Yong-'an-one-thousand, for which there is no bronze version.

The iron Yong'an-one-thousand appears in large and small versions. The large ones [Plate xliii,4] weigh 70-80 grams, making this the heaviest pre-Qing coin. There have been various hypotheses on

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[16]The *Comprehensive Mirror Long Draft* states that "the coin's size was like the Inaugural's, as was its inscription, which used the sealscript style of Xu Xuan." The sources vary on the date of manufacture of the iron coins: Lu You's *Southern Tang History* and *Five Dynasties History*, "Southern Tang Hereditary House," both say that by jianlong 1 iron coins were already being minted, and that by qiande 2 they had been put out for circulation. *Record of Coins* quotes Qian Ruoshui's statement that it was not until jianlong 4 that Han Xizai requested the minting of iron coins.

[17]*Annals of the Ten Kingdoms*. *Old Five Dynasties History*, 77, "Jin History," 3, "Annals of Emperor Gaozu," 3.

the dates of these Yong'an coins. Some say they are pre-Liao.[18] Some say they are Western Xia coins.[19] Others say they were coins of Northern Liang's Quju Mengsun.[20] Still others say they are Southern Tang coins.[21] Some even attribute them to An Lushan.[22] Opinion may be said to be divided. Most modern writers link these coins to Liu Shouguang.[23]

Unearthed at the same location were an iron Five-grainer, an iron Monetary-spade and an iron Obey-Heaven Original Treasure. The iron Five-grainer was modeled on a Sui Five-grainer coin. The iron Monetary-spade used Wang Mang's coin as a model, except that the two characters for three-hundred were added atop its reverse. The iron Obey-Heaven Original Treasure was modeled on Shi Siming's coin, but one version has the character for hundred on its reverse, and another bears the character for thousand.

In addition, there is a Respond-to-the-Sage Original Treasure with the long form of the character for ten (*shi*)[c] on its reverse, a Qiansheng Original Treasure with the character hundred on its reverse, and an Yingtian Original Treasure with an abbreviation of ten-thousand []^{d} on its reverse. Perhaps there is a coin with the character for thousand on its reverse which has not yet turned up.

These coins were also probably minted by Liu Rengong and his son, Liu Shouguang, in Yuzhou. The histories say that Liu Rengong buried coins. He ordered his subordinates to collect all bronze coins and bring them to Da'an Mountain, where he buried them in a cave. When they had all been hidden away, he killed the workmen and covered over the **[316]** entrance.[24]

Judging by this account, the coins he hid must have been old coins of previous dynasties, rather than coins he had minted himself. Probably this tradition is inaccurate, because even if all the workmen had been murdered, others could have figured out the location.

The histories do mention that Liu Rengong minted iron coins.[25] Liu Shouguang had a year period entitled yingtian (the first year of which was 911), and so modern numismatists believe that the Respond-to-the-Sage Original Treasure, Qiansheng Original Treasure and Yingtian Original Treasure were all minted by Liu Shouguang.[26] They attribute the various Yong'an coins to Liu Rengong.

The coins of the Five Dynasties and Ten Kingdoms are as various as states then were numerous, but two characteristics all share may be discerned:

The first is the abundance of large coins. Aside from the extremely short period during the qianfeng and qianyuan periods when large coins were issued, the Tang Dynasty stuck to small coins. The range of face values from 10 or 100 up to 1,000 and 10,000 during the Five Dynasties and Ten Kingdoms was without precedent.

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[18]Weng Shupei, *Collected Investigations of Ancient Coins*": "When we investigate the year periods called *yong'an* since Tang and Song, we find that only Xia used the title *yong'an*. This came after its *qianshun* period, and lasted three years. Its first year corresponds to yuanfu 1. Xia used many iron coins. Are these all Xia coins? Those called One-hundred and One-thousand were referring to the amount to which they were equivalent. However, these coins have been unearthed in places like Xishan and Fangshan. If they are not the coins hoarded by Liu Shouguang at Da'anshan, they must be pre-Liao items. We cannot, after all, state that they are Xia coins."

[19]Ni Mo, *Outline of Ancient and Modern Coins*.

[20]Chu Shangling, *Record of Auspicious Metal I Have Seen*.

[21]Dai Xi, *Collected Words on Ancient Coins*.

[22]The modern writer Luo Bozhao advocates this thesis.

[23]Weng Shupei suspected they had been minted by Liu Shouguang (cf. note 18). Modern writers like Fang Ruo (cf. *Additional Record on Coins*, "Investigation of Yong'an Coins"), Zheng Jiaxiang (cf. *Encyclopedia of Ancient Coins*, latter collection, five strokes) both advocate this thesis.

[24]*Old Five Dynasties History*, "History of Zhou," 135, "Biography of Liu Shouguang."

[25]*Book Hall of the Original Tortoise*, "Coins, 3": "Changxing 1, 1st month. The Lesser Lord of Diplomatic Reception, Guo Zaihui, memorialized to ask for minting of new coins, with one equal to ten or one equal to fifty. He also brought in a coin catalog in one chapter, which retained in its charts an account of the minting of iron coins by the former Regional Commandant of Yuzhou, Liu Rengong."

[26]Hong Zun, *Record of Coins* quotes Dong Yu: "The coins of Liu Shouguang of Yuzhou on their obverse read Yingtian Original Treasure, and on their reverse read ten-thousand [long form of the character]." Actually the coins bear the abbreviated character for 10,000.

Modern numismatists believe these three coins constitute a set, and that all of them should be attributed to Liu Shouguang. Zhang Jiongbo, *Investigation of the Coins of the Five Dynasties and Ten Kingdoms*, takes this position, but he reads the character *sheng* ("sage") on the Qiansheng Original Treasure as *zhong* ("heavy"), and so mistakenly reads this inscription as "Qianyuan Heavy Treasure." (Cf. Zhang Jiangbo's "Investigation of the History of the Coins of Liu-Yan, Continued.")

Ding Fubao, in his *Outline of Ancient Coin Studies* and *Encyclopedia of Ancient Coins* also turns it into Qianyuan Heavy Treasure.

In 1960 Ma Dingxiang pointed out to me that it ought to be read as Qiansheng Original Treasure, and indeed it turned out that earlier writers had all read it erroneously. This is because the character *sheng* is not altogether clear. Nevertheless, if one

Second, is the large-scale use of low value metals, particularly the circulation of iron coins. There are only isolated examples of the use of iron coins earlier, as for example, Gongsun Shu's iron Five-grainer and Emperor Wu of Liang's iron five-grainer, both of which were small coins, compared to the Five Dynasties and Ten Kingdoms use of an iron coin with a face value of 1,000.

Nevertheless, during this period individual coins had no great importance, because they were all localized, with very narrow spheres of circulation. A number of them were minted in extremely small numbers, and were little more than symbolic objects.

a 鍾勉賀 b 力賀反 c 拾 d 万

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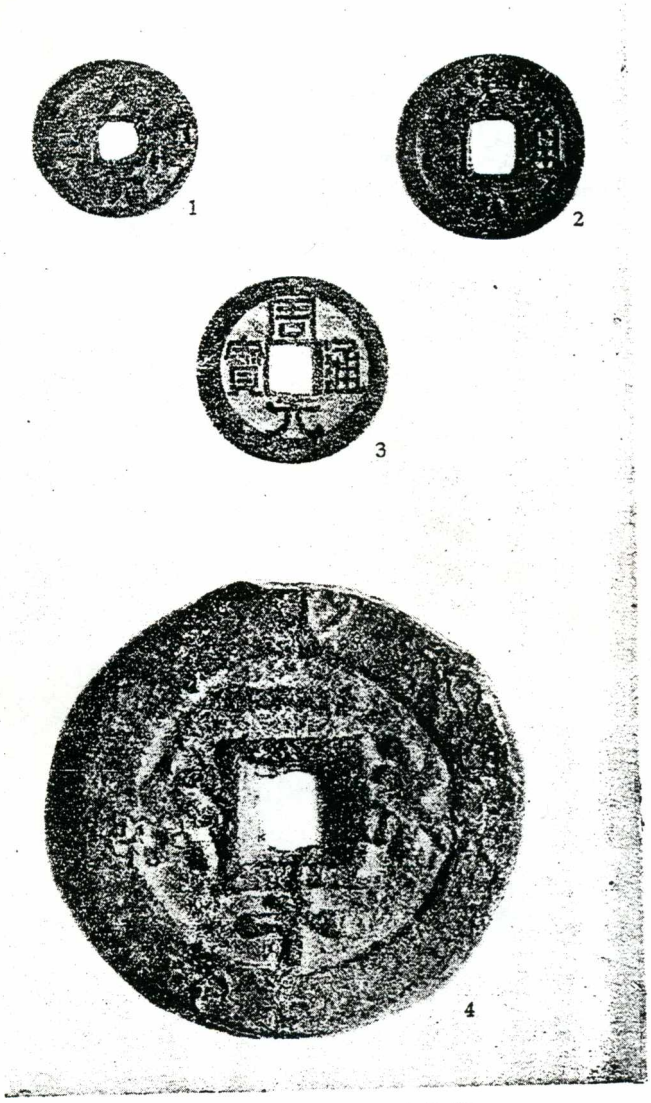
looks carefully, it can be discerned.

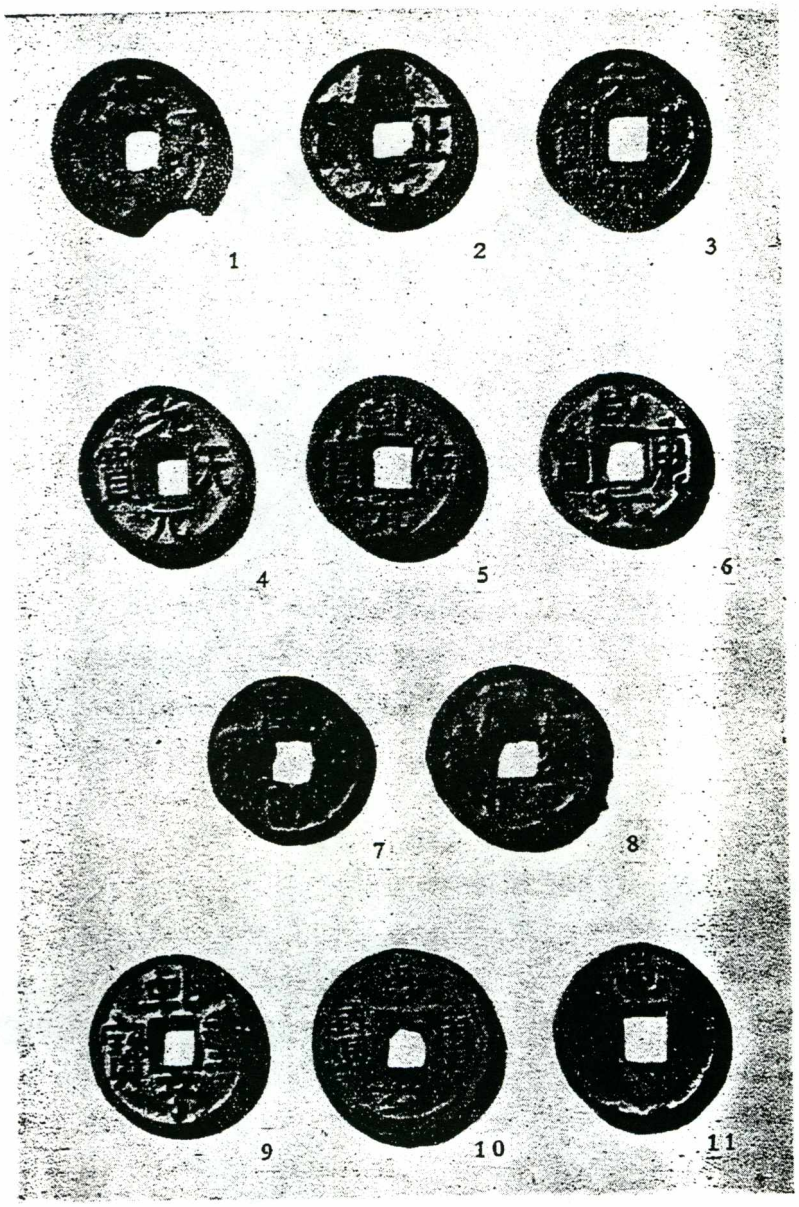


圖版四十三　五代的錢幣

1.後晉的天福元寶。　2.後漢的漢元通寶。　3.後周的周元通寶。
4.劉守光的永安一千大鐵錢。

PLATE XLIII. FIVE DYNASTIES COINS

1. Latter Jin's Tianfu Original Treasure. 2. Latter Han's Hanyuan Circulating Treasure. 3. Latter Zhou's Zhouyuan Circulating Treasure. 4. Liu Shouguang's Yong'an One-thousand large iron coin.



圖版四十四　十國的錢幣(一)

1.前蜀的永平元寶。 2.通正元寶。 3.天漢元寶。 4.光天元寶。 5.乾德元寶。 6.咸康元寶。 7.後蜀的廣政通寶。 8.廣政通寶鐵錢。 9.南漢的乾亨重寶。 10.乾亨重寶鉛錢。 11.邕州所鑄乾亨重寶鉛錢之背。

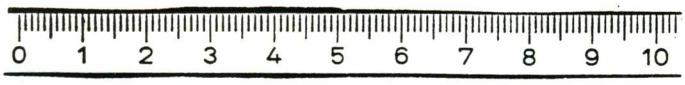
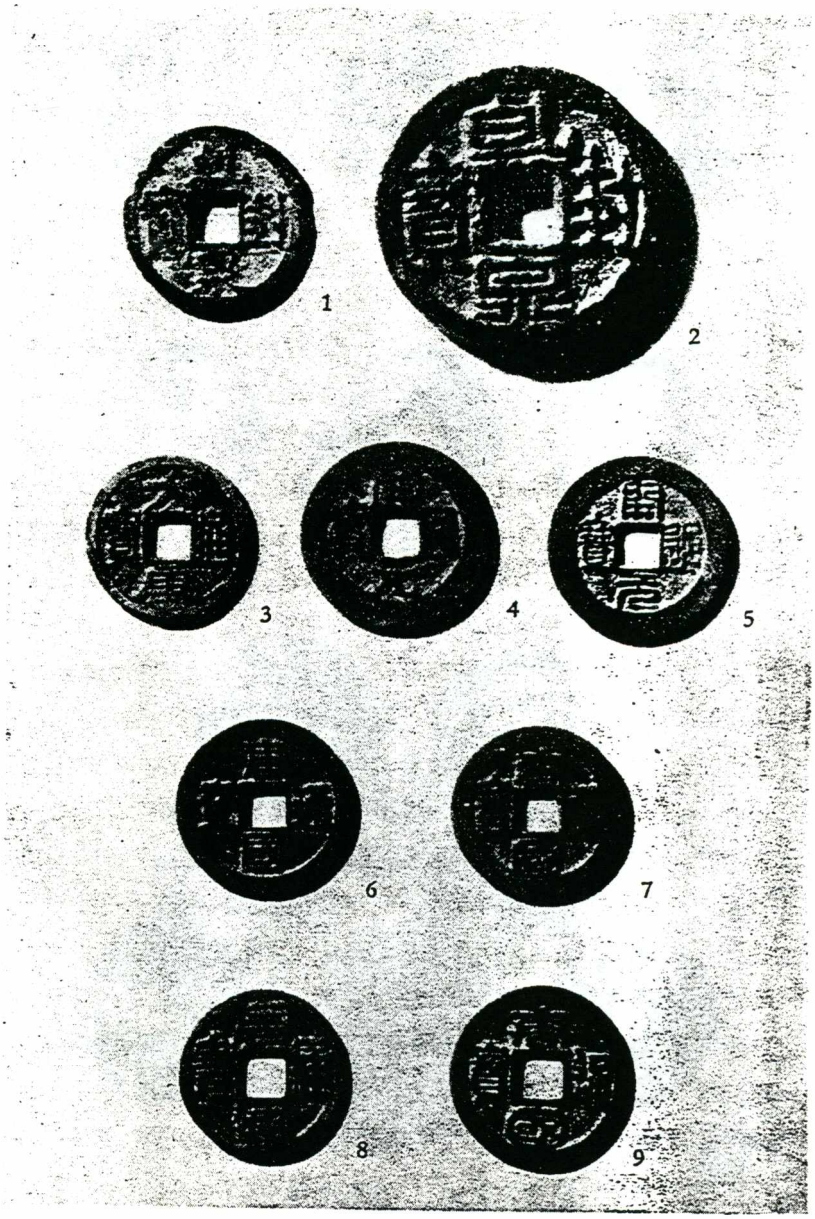


PLATE XLIV. TEN KINGDOMS COINS (1)

1. Former Shu's Yongping Original Treasure. 2. Tongzheng Original Treasure. 3. Tianhan Original Treasure. 4. Guangtian Original Treasure. 5. Qiande Original Treasure. 6. Xiankang Original Treasure. 7. Latter Shu's Guangzheng Circulating Treasure. 8. Guangzheng Circulating Treasure iron coin. 9. Southern Han's Qianheng Heavy Treasure. 10. Qianheng Heavy Treasure lead coin. 11. Reverse of Qianheng Heavy Treasure minted in Yongzhou.



圖版四十五　十國的錢幣(二)

1.楚的乾封泉寶鉛錢。 2.乾封泉寶大鐵錢。 3.南唐的大唐通寶。 4.隸書南唐開元。 5.篆書南唐開元。 6—9.唐國通寶。

PLATE XLV. TEN KINGDOMS COINS (2)

1. Chu's Qianfeng Spring-treasure lead coin. 2. Qianfeng Spring-treasure large iron coin. 3. Southern Tang's Great Tang Circulating Treasure. 4. Clerk script Southern Tang Inaugural. 5. Seal script Southern Tang Inaugural. 6-9. Tang State Circulating Treasure.

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3. Textiles

The Tang Dynasty monetary system was based on a dual coin-textiles standard. One might almost say that textiles were a full-fledged money. Though they could not serve as money abroad, textiles possessed various of money's functions for domestic use. Nevertheless, textiles remained commodities, since there were so many different kinds of them.

Official edicts mention very fine silk cloth [*ling*], gauze [*luo*], heavy silk cloth [*juan*], plain cloth [*bu*], raw silk [*si*] and cotton [*mian*]. In other written sources, the most frequently encountered are smooth fine silk [*jian*], heavy silk cloth [*juan*], very fine silk cloth [*ling*] and plain cloth [*bu*].

Actually, there may also have been other kinds of cloth. There seems to have been no definite price relationship among all these, and the exchange rate between them varied over time.

By and large, one may divide them into the two categories of heavy silk cloth and plain cloth. The former represented stuff woven from raw silk, and was used for large denomination payments. Plain cloth was stuff woven from cotton and hemp, and used by laboring people in general.

The Tang did not use cloth only for a short time, but rather over the whole course of the dynasty. In fact cloth's use extended back to the Northern and Southern Dynasties, and forward to Five Dynasties and Northern Song times. At the beginning of Tang, cloth was used more than coins. Later, the role of coins gradually bulked larger.

The most important function of cloth was to serve as a measure of value. During the zhenguan period [627-650], the price of rice was calculated in heavy silk cloth. At the beginning of zhenguan, a *dou* of rice was worth a bolt of heavy silk cloth.[1] This was among the people. In official circles, various forms of graft were expressed in terms of a heavy silk cloth standard. By this I mean the calculation of the value of bribes to requite acts of graft expressed in numbers of feet (*chi*) and rolls of heavy silk cloth.[2] Contracts involving debts were also calculated in numbers of rolls of heavy silk cloth.[3]

Textiles also sometimes served as a means for making purchases or as a medium of circulation. In kaiyuan 20 (732), the government formally ordered that market exchanges be permitted using very fine silk cloth, gauze, heavy silk, plain cloth and other goods, and not solely in coin.[4]

Two years later another order required that manor houses, bondservants, and horses be exchanged solely for heavy silk, plain cloth, fine silk, gauze, raw silk and cotton. Exchange of all other goods having prices of 1,000 cash or more could be made in terms of either cash or goods. Violators were to be imprisoned.[5] By zhenyuan 12 (796), another order required joint use of very fine silk, gauze, heavy silk, plain cloth and other goods along with coins in the markets.[6] In yuanhe 6 [812] it was further deter-

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[1] *Comprehensive Mirror For Illumination of the Prince*, 195, zhenguan 11, 8th month, quoting the words of Wei Zheng: "At the beginning of zhenguan, the Empire endured famine. A *dou* of rice was worth a bolt of heavy silk cloth."

[2] *Tang Penal Laws Outlines*, 4, "Graft": "All those who engage in graft shall pay it back in heavy silk cloth in accord with the price at the time of the offense." *Tang Penal Laws Outlines*, 11, "Law on Soliciting and Accepting Wealth from People": "Those who accept wealth from people and make solicitations for same, pretending to be local salt officials, are guilty of graft to the second degree. If more than a *chi* is involved, they will receive forty strokes of the bamboo. If a roll is involved, one degree will be added." *Tang Penal Laws Outlines*, 15, "The Old Law for Killing Official and Private Horses and Oxen": "If the horse is worth 15 rolls of heavy silk, the penalty is transportation for two years, as for a robbery." "Law on Killing Livestock by Dogs": "If family A's ox gores to death family B's horse, it is worth 10 rolls of heavy silk. Since the hide and meat of the gored animal are valued at 2 rolls of heavy silk, and the amount is reduced to 8 rolls, A will pay B 4 rolls of heavy silk."

Six Statutes of Tang, "Duties of the External Officials of the Ministry of Justice": "All those who have taken graft will have the amount weighed in silk." A note states: "The law permits the penalty to be calculated in terms of middle grade heavy silk cloth at the place in question. A notice of kaiyuan 16 states that those guilty of graft up to the amount of 550, will have the penalty collected according to the size of the offense."

[3] *Tang Penal Laws Outlines*, 26, "Law on Failure to Repay Debts Contracted": "Those who do not repay debts they have contracted to the amount of 1 roll or more, and delay for twenty days, will receive twenty strokes of the bamboo, and will have their punishment raised by one degree for each additional twenty days of default. Punishment will stop at sixty strokes. For each additional thirty rolls, the punishment will increase by two degrees, and a hundred rolls will increase it by three degrees. In all cases, complete restitution is ordered."

[4] *Book Hall of the Original Tortoise*, 501, "Coins," 3, kaiyuan 20, 9th month: "A regulation stated that very fine silk, gauze, heavy silk, plain cloth and miscellaneous goods were all to be circulated in exchange. If it is heard that markets are insisting on seeing cash, this would be deeply improper. Henceforth coins and goods are to be used together. Violators will be punished according to law."

[5] *Tang Collected Statutes*, 89, kaiyuan 22, 10th month, 16th day order.

[6] Huang Zongxi, *A Plan for the Prince*, "Plans for Wealth": "In zhenyuan 12 it was ordered that in local market exchanges

mined that public and private transactions worth more than 10 strings of cash could also be transacted with rolls and pieces of cloth.[7]

These measures would seem to have retained something of the flavor of barter, since various sorts of textiles were to be used at the same time, as well as miscellaneous goods. In fact, however, heavy silk and plain cloth were what was mainly employed. In the written

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sources there are examples of the use of heavy silk to buy firewood,[8] fish,[9] paintings,[10] falcons,[11] beautiful women[12] and jars.[13]

Textiles were most often used as instruments for making payments. Such payments included loans,[14] taxes,[15] salaries,[16] recompense for labor services,[17]

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very fine silk, gauze, heavy silk, plain cloth and various other goods be jointly used with coins."

[7] *Old Tang History*, 48, "Treatise on Food and Money," first part.

[8] *Shunzong Veritable Record*, 3: "Frequently there were peasants who came to the city to sell firewood carried on their donkeys. Those who encountered the eunuchs were called to the palace to sell their loads, which were exchanged for several *chi* of heavy silk."

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[9] *Cloud Mountain Miscellaneous Record*, 4, "Lowering of Prices": "During the kaicheng era prices were trifling. For those who buy fish in a hamlet, common folk pay half a *chi* of Tatar heavy silk, and gentry buy it for one stanza of the 'Joy to Heaven Ode.'"

[10] Li Chuo, *Stories of the Secretariat*: "The 'Wandering in the Western Park on a Clear Evening' was painted by Gu Changkang. . . During the yuanhe period, Xuan Suo and Zhong Yuan frequently wrote on *The Way and its Power*, and came into court together. Later, the middling-level aristocrat Cui Tanjun took it out from the Inner Court, and subsequently disposed of it among the people. Suo's son, Zhoufeng, came on business to the capital from the Jing River. One day someone was trying to sell this painting. Zhoufeng greatly admired it, and hurriedly bought it for several bolts of heavy silk."

[11] Zhang Du, *Record of the House of Xuan*, 10: "When Xue Hao was garrisoning Wei, a man of Ye Commandery had excellent falcons. One day a man came carrying a falcon. The man of Ye was informed and subsequently bought it. The falcon was brave of spirit, and of all the many falcons raised in the household of the man of Ye, none could equal it. He often took it out on his arm to play, but was unwilling to have it leave his hand. Later, an Eastern Yi barbarian saw it, and was asked 100 lengths of cloth for it."

[12] *Gathered Words of the Tang*, 4, "Righteousness": "Li Beihai, was aged seventeen, and carried off for 300 in smooth fine silk, and enrolled as a state beauty." Zhu Qiji, *Bewitching Fantasies*, "The Beauties": "To the left and right of [Wu Sansi] were beauties. It was said that old woman Song from Xiangzhou's Fengyang Gate was good at plucking the five-stringed lute, and had been a great beauty of the age. Sansi sent her a present of 300 pieces of cloth."

[13] *Tang State History Supplement*, first part: "There was a cart carrying pottery jars on the Sheng Pond Road, which got stuck at a narrow place on the road. The day was cold, and ice and snow piled up so high that it could neither go forward nor back. As the sun went down, the jingling of thousands of wind bells could be heard from the crowds of officials and private travellers. There was no way for those pressing from behind to get by. There was a guest named Liu Po who raised his whip, came forward and asked how much the jars in the cart were worth. The answer was seven or eight thousand. Po then opened his bag and took out fine silk to pay the amount. He then ordered his manservants to climb onto the cart, break open its ropes, and throw all the jars over the embankment. In a moment the cart had been made light enough to proceed. The crowd cheered and moved forward."

[14] *Legal Extracts Pearl Grove*, 57, "Loans": "A Tang woman of Wuyangxian, Dengzhou surnamed Mi had a husband who had earlier borrowed some heavy silk from a man from outside the district. Subsequently there was no one to return it to." Yu Ti, *Record of Unusual Things Heard*, "Li Kezhu": "Li Kezhu was Lord Chief Justice. When Emperor Zhaozong was in Huazhou, the magistrate of Dengxian, Cui Luan, had the people inform on those who lent heavy silk to the people."

[15] *Book Hall of the Original Tortoise*, 488, "Taxes." A regulation of yuanhe 6, 2nd month: "Those who owe taxes in cash may pay two-fifths in cash and the remaining three-fifths in bolts and pieces of cloth." *Six Statutes of Tang*, 3, "Office Chief of the Office of Funds of the Board of Census": "Gold, silver, valuables, and fine silk and gauze may all be paid in at discounted amounts."

Book Hall of the Original Tortoise, 488, "Payment of Wealth": "Peng Huitong was from Anzhou during the Tang. In zhenguan 18 Emperor Taizong was attacking Liaodong. Huitong asked to be allowed to give out 5,000 pieces of plain cloth to support the offensive. Emperor Taizong was pleased, and in a move comparable to Han's style of selection, honored him with the rank of *xuanyilang*.

Old Tang History, 84, "Hao Chujun": "There was a man named Peng Zhijun who sent up a petition during the xianqing era requesting that 20,000 pieces of heavy silk and plain cloth from his family be used to aid the army. An edict accepted 10,000 rolls of heavy silk, he was given special rank as *fengyilang*, and his act was publicized to the whole empire."

[16] *Tang Collected Statutes*, 92, "Payment in Coins and in Kind for Inner and Outer Officials," latter part, imperial order of changqing 4, 5th month: "In recent days We have heard that the price of rice in the capital city has been rather high. There must be some change so that the public aids the private. It ought to be ordered that the Board of Census give the officials salaries in kind. The half given in pieces and rolls of cloth should be re-

payments for expenses,[18] rewards,[19] rents,[20] and bribes.[21] The scope for its use was extraordinarily broad.

Because cloth was a measure of value and an important means of payment, it sometimes became an instrument for making purchases, and so it was inevitable that it could become a store of value.[22] To be a store of value is implied by the functions of serving as medium for making payments and purchases. Therefore, the cash balances used for purchasing daily requirements[23] and the money taken along on journeys[24] could be textiles.

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turned, and grain given out to officials, with each *dou* equated with 50 cash, and the cloth stored elsewhere." *Ibid.*, under taihe 7, 1st month: "The Executive of the Board of Census, Shou Jingxiu, memorialized that the salaries of civil and military officials from the ninth rank up should be paid half in cash and half in kind, with the latter to be in pieces and rolls of heavy silk and in raw silk."

[17]*Grove of Tang Words*, 5, "Supplemental Legacies": "Huangfu Shi . . . His lyric was over 3,000 characters long. Each character was 3 bolts of heavy silk."

Xiyang Miscellaneous Trays, 5: "At the end of tianbao, the magician Qian Zhicheng went to Luo, and then sold divinations by a pillar next to the Tianjing Bridge, each going for 10 bolts of cloth."

Li Zhao, *State History Supplement*, middle part: "In Chang-'an there was a wrangle over an inscribed stele. At this time Pei Jun's son believed it was an immortal design, and amassed ten-thousand bolts of fine and heavy silk to ask it from Wei Xiang. Handing it over, the latter raised his hands and said 'I would rather starve to death than do this.'"

Xue Yongruo, *Collected Oddities Record*, "Lord Diliang": "Lord Diliang was well-versed in medicine and drugs, and was especially clever with acupuncture. During the xianqing period he had to enter the passes, and on the road went through Huazhou. . . There was a large character placard which said: 'Anyone who can cure this child will be rewarded with a thousand bolts of heavy silk."

Gathered Words of the Tang, 1, "The Two Inspectors": "In longshuo 2, 9th month, a decree ordered that in their studies students should be ranked in order of their seniority. Those beginning their studies were all to carry out the ritual of presenting stipends to the teachers

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of three bolts of heavy silk each. Fourth gate students were each to present two bolts of heavy silk. Talented Scholars, Law Scholars, mathematicians and prefectural and district scholars were each to give one bolt of heavy silk."

[18]*Book Hall of the Original Tortoise*, 484, "Expenses," yuanhe 10, 11th month, day guihai: "An edict transferred 50 million bolts of heavy silk from the Inner Treasury to the Left Depository Treasury for the supply of the army." *Ibid.*, changqing 2, 1st month: "The Inner Court paid out 80,000 bolts of silk to aid in military expenses." *Ibid.*, kaicheng 1, 1st month: "The Salt and Iron Commissioner and Left Executive Linghu Chu requested that the dismissed Jiang Liangzi be given 13,700 bolts of heavy silk and returned to the Department of Ministries."

[19]*Old Tang History*, 93, "Xue Na": "At this time there was an edict stating that in the 2nd month the Emperor would personally take the field against the Tufan. When they heard this, Na and his colleagues attacked victoriously. Emperor Xuanzong was greatly pleased, and halted plans for a personal campaign. Wang Haibin and Zuo Jinwu were posthumously awarded the rank of Great General of the Guards, and rewarded in goods with 300 pieces and 300 piculs of grain. Their sons were named Loyal Heirs, and given the rank *chaosan daifu*."

Six Statutes of Tang, 12, "Orders of the Inner Palace": "In all court assemblies, those of fifth rank and above are given heavy silk and various goods like cloth, gold and silver in the palace courtyard. They will then contribute it."

[20]The Japanese monk Ennin, *Entering Tang in Search of the Law*, 4, huichang 7, intercalated 7th month, 17th day: "When the delegation reached Mizhou, within the walls of its district towns were mountains of rice and swift horses. We met a Xinluo man, Chen Zhong, whose boat was going to carry charcoal to Chuzhou. A freighter's rental rate was five rolls of heavy silk."

[21]*Old Tang History*, 123, "Li Xun": "Shi Ning used several thousand bolts of heavy silk to bribe [Dou] Can." *Grove of Tang Words*, 3, "Examination of Knowledge": "Pan Yan was a Hanlin Academician at the time of Emperor Dezong. He was extremely odd in his benevolence. His wife, of the Liu family, treated him as gently as a woman. The overseer of the capital was waiting upon him for some reason, but over the course of days did not get to see him, and so sent to his doorkeeper 300 of smooth fine silk."

[22]Li Rong, *Record of the Unique and Unusual*, middle: "Emperor Xuanzong once asked the Tang rich man Wang Yuanbao how much wealth his family had. The reply was: 'I request that one roll of smooth fine silk be hung from each tree on Your Majesty's South Mountain. When all the trees of South Mountain have been exhausted, my cloth would still not be used up.'"

[23]*Old Tang History*, 183, "Biographies of Imperial In-laws: Changsun Shang": "At the beginning of zhenguan he was expelled for plundering. Because he was an imperial relative, Emperor Taizong often ordered he be given heavy silk for his private expenses."

Taiping Broad Record, 343, "Precious Jade": "The wife said, 'For me to receive you, is not a matter of the distance involved. But you have become a man, and it is not suitable for you to stay here for long. You must hurry to respond to the imperial mandate. You have been ordered to have 100 bolts of heavy silk in a box. When it is used up, it will be replenished."

[24]*Taiping Broad Record*, 179, "Contributions, 2: Yan Jimei," quoting Wen Tingjun, *Master Ganxuan*: "When a certain fellow arrived in Luo, he knew no one, and settled down in a Qianghua Ward inn. At this time prices had soared, and he had in his purse only 5 of smooth silk, enough to whip a feeble

The units of measurement for textiles were the foot [*chi*],[a] the roll [*pi*],[b] the length [*duan*][c] and the piece [*duan*].[d] The roll was a unit for materials woven of silk. The length was a unit for plain cloth. One roll was probably 4 [*zhang*],[e] and 1 length was 6 *zhang*. We still do not know the size of a piece. Official documents often refer to bolts and pieces, and so there is a presumption that a definite size was involved. When documents use the piece as a unit, the quantities involved are always large.[25]

Nevertheless, the most commonly used unit was the roll. If only a numeral was used, and not the name of a unit, we may assume the roll was intended. For example "300 in smooth silk" means "300 rolls of smooth silk," the word for roll being implicitly subsumed within the noun for the commodity.

It is necessary to point out that Tang used cloth as a money or as a subordinate money not because of its superiority as money, but because of an insufficiency of coins, as an unavoidable expedient. This is somewhat different from the situation during the Northern and Southern Dynasties, when the coins were in a chaotic state and their value oscillated.

Nevertheless, there is a close relationship between Tang's use of textiles and the monetary systems of the Northern and Southern Dynasties. Ever since the beginning of that earlier period, the circulation of money had been in chaos. Most coins were inadequate in size. The Han Five-grainers of suitable weight had mostly been clipped or melted down.

In wude 4 [621] of Tang the Five-grainer was abolished in favor of sole reliance on the Inaugural Circulating Treasure. The supply of coins was, naturally, constricted by this move. Hence at the beginning of Tang a barter economy was especially evident. The earliest official salary system had payments almost entirely in goods, with the amount to be paid in coin being very indeterminate. It was not until the 650s that there was a fixed salary in coin, but even then first rank officials only received 8,000 cash per month, and even food and miscellaneous expense payments in coin came to a total of only 11,000 cash. This was far less than the 60,000 cash received by a 10,000 picul official of late Western Han times.

During the first half of the eighth century the quantity of coins minted gradually increased, official salaries in cash also increased, and the importance of the natural economy also gradually became reduced. Hence dual use of coins and textiles was legally mandated.

After the An-Shi rebellions, the quantity of coins was certainly not reduced, but because price levels had greatly risen, there was clearly an insufficiency of coins. By the yuanhe period [806-821], people were striving to hoard copper cash, causing the coin **[320]**
supply to become even more constricted. It was only then that the authorities ordered the joint use of textiles. This is why later writers have said that during Tang there were many places where the people used textiles, and few places where they used coins.[26]

In actuality, Tang did not just make use of textiles as media of exchange. In some places, even textiles were hard to come by, and the economy was placed entirely on a barter basis.

In changqing 2 (822), Wei Chuhou mentioned that the circuits south of the mountains (the present Hubei and Sichuan)

> do not use ready cash, and the poor people of the mountain valleys, make exchanges with local products. Since textiles are scarce, and foodstuffs vary by season, those who would buy salt might take to market a catty of hemp or an ounce of raw silk, or some wax, lacquer, fish or chicken, or some such petty item, depending on what was most convenient. If you now force cloth on them, even the vulgar will not be able to manage the cheap prices that result.[27]

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donkey's ear."

[25] *Old Tang History*, 189, "Confucian Scholars, first part: Ouyang Xun": "In wude 7 an edict commissioned Pei Ji and Chen Shuda to compile the *Belles Lettres Collectanea* in 100 chapters. When they memorialized to report its completion, they were rewarded with 200 pieces of heavy silk."

Old Tang History, 65, "Gao Shilian": "When the book [*Record of the Clans*] was compete, having 100 chapters in all, an edict was proclaimed to the Empire, and Shilian was rewarded with 1,000 pieces of goods." "An edict was received to give 1,000 pieces of goods to Wei Zheng and others engaged in compiling the work of scholarship *Essentials of Thought* in 1,200 chapters."

Old Tang History, 94, "Xu Yanbo": "In shenlong 1, he was transferred to the post of Lesser Lord of Imperial Sacrifices and concurrently made Compiler of the State History so as to compile the *Zetian Veritable Record* [of Empress Wu]. On its completion, he was enfeoffed as Viscount of Gaopingxian and rewarded with 500 pieces of goods."

[26] Huang Zongxi, *A Plan for the Prince*, "Plans for Wealth": "During Tang, the places where people used textiles were numerous; the places where they used coins were few. Before the dali period, aside from the far south which used silver, mixed use was made of gold, tin, cinnabar and elephant tusks."

[27] *Tang Collected Statutes*, 59, "The Commissioners of Funds."

Such circumstances were perhaps not limited to the circuits south of the mountains, and not even to the Tang period, but may have been a universal phenomenon among the poor people of the hills over the past several thousand years.

In his *Debates on Money*, Yuan Zhen states that from the mountains on south, gold and silver were used as money; that from the borders of Ba [Sichuan] outward, salt and cloth were used for exchange; in Guizhou, the Yangtze Gorges and Anhui, for the most part mercury, cinnabar, embroidered silk, kerchiefs and headgear were used for exchange.[28]

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4. Gold and Silver

The place of gold and silver in the Tang monetary system is a question in need of elucidation. The problem of gold is especially hard to treat clearly. Some treat all instances of the character *jin* --meaning both gold or metal in general-- in Tang documents as references to gold, and from this draw the conclusion that during Tang gold had taken on all the functions of a money.[1]

This amounts to saying that during Tang gold had become a full money. That would be inaccurate. Money's most important functions are to serve as a measure of value and as an instrument for making purchases or medium of circulation. During Tang, gold did not develop these two functions. When the documents speak of a certain number of *jin*, they frequently do not mean gold, but bronze cash.

In Han documents *jin* also sometimes means bronze cash, but at that time one *jin* seems to have specifically meant one unit of 10,000 cash, and 10,000 cash, at least at one time, was the value of one catty of gold. In other words, during Western Han, there was a legally fixed bronze cash price of gold. Hence one *jin* could represent one catty of gold, and so gold may be viewed as having developed then the measure of value function.

During Tang, however, one *jin* meant no definite quantity. Sometimes it meant one string or long

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[28] *Mr. Yuan's Changqing Collection*, 34 (Zhonghua shuju edition of the *Complete Works of the Four Treasuries* version).

[1] The Japanese writer Katō Shigashi in his *Studies of Gold and Silver Found in Tang and Song Times* has collected a great many references in Tang and Song documents to the character *jin*.

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He thinks that these prove that Tang and Song used gold and silver as money. For example, Zhang Yanyuan's *Record of Famous Painters Through the Ages* states that screens painted by such men as Dong Boren, Zhan Ziqian, Deng Fashi, Yan Liben or Wu Daoxuan were worth 20,000 *jin* apiece. Those of the second rank sold for 15,000. Fan paintings by others, like Yang Jidan, Tian Sengliang, Deng Fashi, Yuchi Yiseng or Yan Lide were worth 10,000 *jin* each. Katō Shigashi and a number of Chinese scholars say that the character *jin* here refers to one ounce of gold. This shows that they have insufficient knowledge of the body of prices in ancient China.

Not only does the character *jin* here not refer to one ounce of gold, it does not even mean one string of copper cash, but rather just one copper coin. In those times 20,000 cash could buy 10 or 20 hectoliters of rice, which was the monthly wage of a Teaching Assistant of the Directorate of Education. If it had meant one string, then even the Emperor's Tutor would have needed to spend sixteen or seventeen years of his wages before he could have bought even one such screen. If it had meant one ounce of gold, I do not know who could have afforded to buy one! And yet Zhang Yanyuan clearly states that at that time anyone who collected art had to have works by Gu, Lu, Zhang and Wu, so they were evidently not impossibly expensive.

Some literary men in ancient times were fond of making exaggerations in their writings. Generally during Tang, people who wrote carefully would mean one string when they wrote one *jin*. Those who liked to exaggerate would use that expression to mean one coin. According to Guo Ruoxiu's *Record of Pictures Seen and Heard Of*, 5, "Picture of the Western Garden," this famous painting by Gu Kaizhi was obtained by Zhou Feng after the yuanhe era in exchange for several rolls of heavy silk. Later, he sold it to the Inspector of Salt and Iron, Wang Ya, for 300 rolls of plain silk. Still later, probably because something happened to Wang Ya, this painting fell into the hands of a powder shop, and was bought for 300 cash by a gate guard of Guo Chenjia, who gave it to Guo. Evidently the highest price involved here was 300 rolls of plain silk, and this was a case of the buyer not counting the cost. It was probably the equivalent of from 200,000 to 500,000 cash, or 40-50 to 80-90 ounces of gold. This cannot, however, be taken as a normal price.

Similarly, tradition holds that Wang Wei received an annual subsidy from Han Gan involved 20,000 cash, and not 20,000 ounces of gold. A monk asked Yan Liben to do the "Painting of the Drunken Road for 10,000 cash, and not 10,000 ounces of gold. (Hu Man's *History of Chinese Art*, pp. 80, 85, reads it as gold). Similarly, the Northern Song poet Zhang Lei, in his poem "Three Stanzas on a Farm Household" has the line "Last year a hundred *jin* exchanged for a *dou* of grain." This probably refers to the situation during the xifeng era, and at that time the price of a *dou* of rice was right around 100 cash. There was never a time during Northern Song when a *dou* of grain went for one or two

string of bronze cash; sometimes it meant a single bronze cash. Naturally it also sometimes meant one ounce of gold. These three things each had different values.

There are no instances in Tang documents of direct use of gold or silver to express prices. Hence gold and silver were not measures of value. There are a very few instances of apparent use of gold and silver as instruments for making purchases,[2] but none of them involve normal buying and selling, and so we cannot view these metals as genuine circulatory media.

That means gold and silver were not full moneys during Tang. Their monetary role was inferior to that of textiles. The documents sometimes mention commodities being bought after first exchanging gold or silver for bronze cash. Only then could payment be made.[3]

Gold and silver did, however, develop several secondary functions of money during Tang. They served as means of payment and stores of value. Their use as means of payment was shown in the payment of taxes,[4] the taking out of voluntary subscriptions,[5] the making of gifts,[6] expenditures for military campaigns,[7] giving bribes[8] and in ceremon-

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ounces of gold.

[2]An instance of use of gold or silver as a medium for making purchases during Tang is found in the *Old Tang History*, 182, "Biography of Qin Yan," which records that in Emperor Xizong's guangqi 3, when Yang Xingmi besieged Qin Yan in Yangzhou, "in the city precious objects were sold for rice. One catty of gold, like a rhinoceros belt, bought 5 *sheng* of rice." Another instance is in *Comprehensive Mirror for Illumination of the Prince*, 257, "Xizong," wende 1, 2nd month, "Zhu Quanzhong was about to attack Caizhou. He sent as a pledge to Lei Ye 10,000 ounces of silver and asked that it be sold for grain in Wei."

Of these two examples, the first is evidently a form of barter, since the gold and rhinoceros belt were considered the same in nature. Nor is the latter example an instance of a direct purchase and sale. Silver was used instead of copper cash because it was more convenient to carry on a journey. Silver is here a medium for transmitting value.

There was an Arab who came to China on a journey during Tang. Upon his return home, he wrote a record of his journey in which he said that China used only copper coins as money, and that gold and silver were only used to make objects of value. Cf. *Ancient Accounts of India and China by two Mohammedan Travelers Who Went to Those Parts in the 9th Century, Translated from the Arabic by the late learned Eusebius Renaudot* (London, 1733), p. 20.

[3]Mo Xiufu, *Local Customs of Guilin*, "The Daolin Monk of Puti Temple": "When the lock was opened, it was found to be filled with gold, perhaps as much as a thousand ounces. Later, half of it was sold to buy land, and to build the Puti Temple."

Old Tang History, 135, "Biography of Pei Yanling": "The Sagely Decree had just raised the alarm about military affairs. Unwilling to be of greater trouble to people, he stripped off the gold with which the royal family was bejewelled, and sold it to contribute its value."

The *Xiyang Miscellaneous Trays*, continued collection, 3, "Announcements on Paying Pledges," latter part: "In dahe 3 . . . there was one ingot each of gold and silver. . . They were subsequently turned into money, to be used for meals and to pay off debts. Not a single coin was retained."

[4]Wang Jian, *Four Remonstrances on Raozhou*: "Taxpaying households will change from paying life-nourishing medicine by the year to silver by the month."

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[5]*Old Tang History*, 13, "Basic Annals of Emperor Dezong," first part, zhenyuan 17, 3rd month, day guiyou: "The Prefect of Quzhou, Deng Shizhan, advanced 5,000 bolts of heavy silk and 2,000 ounces of silver." *Book Hall of the Original Tortoise*, 484, "State Plans, 2: Expenditures," Emperor Wenzong's taihe 1, 6th month: "The Grand Master of Works and concurrent Chancellor, Pei Du, advanced 68 ingots of gold." *Comprehensive Mirror for Illumination of the Prince*, 259, Emperor Zhaozong's qianning 1, 10th month, "the Regional Commandant of the Righteous and Victorious Army, Dong Chang, was harsh. In addition to the normal tax, he imposed a surtax of several fold, which he contributed as gifts to those at and outside of court. Every ten days he put out one set of 10,000 ounces of gold and 5,000 ounces of silver."

[6] *Old Tang History*, 68, "Biography of Qin Shubao": "Emperor Taizong was about to arrest Dou Jiande and place him in Wulao prison. Shubao, with several dozen spirited cavalry, was the first to penetrate the lines. When all was at peace, he was enfeoffed as Protect the State Duke, and given 100 catties of gold and 7,000 pieces of cloth." *Ibid.*, 20, first part, "Basic Annals of Emperor Zhaozong," guanghua 3, 11th month: "When the heir apparent ascended the imperial throne, the high and lower officials and local officials were promoted in rank. The lower officials were also rewarded with 1,500 ounces of silver, 1,000 bolts of heavy silk and 10,000 ounces of brocade."

[7]*Tang Major Collected Edicts*, 108, "Edicts Banning Gold, Jade, Brocade and Embroidery," kaiyuan 2, 7th month: "We desire to collect gold in discount for jade. To rectify the fundamentals, all goods of gold and silver presented before the throne are now to paid over to the relevant offices, and are ordered cast into ingots and along with other stored goods to be taken charge of for contribution to the military needs of the state." *Old Tang History*, 15, "Basic Annals of Emperor Xianzong," yuanhe 12, 2nd month, day guishen: "From the Inner Treasury there were issued 690,000 pieces and bolts of heavy silk and plain cloth, as well as 5,000 ounces of silver to be paid over for the army."

[8]Zhang Zhuo, *Complete Records In Court and Out*, 3: "The Tang Prefect of Luozhou, Yan Shengqi, was acting as Censor, and was making a tour of inspection of the Jiangnan. He was

ies of thanks.[9] As for serving as a store of value[10], gold had long since fully taken on that role. It was precisely because gold was already fulfilling the roles of means of payment and store of value that carrying specie along on journeys must have been rather common.[11]

There were no small number of places producing gold during Tang. The *Six Statutes of Tang* enumerates some nineteen prefectures which gave tribute in gold.[12]

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The *Universal Statutes* gives the number of such prefectures as fourteen.[13] The annual amount was only around 100 ounces. The *Yuanhe Commandery and District Gazeteer* records 25 places as producing gold, and the *New Tang History* lists 73 such places.[14]

Gold could have flowed in from abroad along both the land and sea routes. On the continent, the Heilongjiang region of the northeast produced gold. By Northern Wei times, the people of the south were already amazed at the cheapness in the north of gold and jade, and often bought those goods there.

By the sea route I mean the South Seas. Ever since Northern and Southern Dynasties times, the Arabs had been carrying on a lively trade in the South Seas, and Arabia was famous for production of gold. It was said that gold from its mines did not require smelting.[15] Moreover, India and various other places in Southeast Asia also produced gold. Since antiquity, Sumatra in particular had been called Gold Island.[16] Ancient records, both Chinese and foreign, affirm the abundance of the gold it produced.[17]

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addicted to cow flesh. Whereever he went the slaughter and cooking of animals was rampant. All matters great or small were brought to an end if gold was brought in. Whereever he went gold and silver were heaped up for him, and so the people of the Jiangnan called him the Golden Cow Censor." According to another item, "Zhang Changyi was Prefect of Luoyang. There was none among the local officials who did not participate in the taking of loans. Word of this was spread widely. There was a man surnamed Xue who presented 50 ounces of gold. It was accepted surrepetitiously."

[9]Su Qing [?], *Tumulus Record*, "Flattering Epitaphs": "Because Liu Qi managed several catties of gold for Han Yu, he said that people would hear of this in a flattering epitaph." Duan Chengshi, *Xiyang Miscellaneous Trays*, 1: "Bu Beiwen was greatly pleased. As he had seen the woman, the monk had brought the medicine. The color was white. When he blew his nose, a yellow liquid was exuded, and the pain was gone. Bu rewarded him with white metal."

[10]Zhao Lin, *Record of Words' Consequences*, 3: "Fan Yanglu was a second son . . . who often worked behind the plow. He found a jar of gold, and estimated it at 100 ounces. Saying nothing to others, he buried it inside his house." Xu Xuan, *Investigation of Spirits Record Supplement*, "Fetching Silver From An Unlucky House": "The Shouzhou general, Zhao Lin, had in his prefecture an unlucky house, in which no one dared live. Lin took up residence in it, occupying the middle hall by himself. One night something bumped his bed, and said: 'I have been waiting here a long time. I have been oppressed by you. It has been very slow. You may leave quickly.' . . . Thereupon he moved his bed to the lower hall, and Lin was able to sleep undisturbed. The next day they dug up the place in the hall where the bed had stood, and found a hoard of silver. Thereafter the house was at peace."

[11]*Xiyang Miscellaneous Trays*, 12: "Traces of virtue having evaporated, at night they pack things up, and they wear several ingots of white metal around their waists."

[12]*Six Statutes of Tang*, 3, "Executives of the Board of Census" article enumerates the following prefectures which gave tribute in gold: In the Shannan Circuit there were Lizhou, Jinzhou and Wanzhou; in Longyou Circuit there were Kuozhou and Yanzhou; in Jiangnan Circuit there were Raozhou, Hengzhou, Wuzhou and Taizhou; in Jiannan Circuit there were Longzhou, Yazhou, Meizhou, Jiazhou, Zizhou and Yaozhou; in Lingnan Circuit there were Rongzhou, Xiangzhou, Huanzhou and Mengzhou.

[13]The *Universal Statutes* lists the prefectures giving tribute in gold as Yen, Kuo, Jin, Wan, Rao, Heng, Wu, Mei, Zi, Jia, Ya, Long, Meng and Huan.

[14]*New Tang History*, "Treatise on Geography," has the most detailed information on gold producing localities. It records one prefecture in Guannei Circuit, one in Henan Circuit, 8 in Shannan Circuit, 4 in Longyou Circuit, 2 in Jiangnan Eastern Circuit, 10 in Jiangnan Western Circuit, 18 in Jiannan Circuit and 29 in Lingnan Circuit.

[15]Diodorus Siculus, *Bibliotheca Historica, Al-Maqdisi* (Ahan-al-Taqsin, ed. de Goeje, Leyden, 1887), pp. 101-102, and *al-Hamdani* (Sifat Jazirat al-Arab, ed. D. H. Müller, Leyden, 1884), pp. 153-4, both tell of the gold mines of Arabia.

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[16]The Sanskrit name of Sumatra was "gold island" (Suvarnadvipa) or "gold place" (Suvarnabhumi) or "gold city" (Suvarnapura). Cf. Gabriel Ferrand, *L'Empire Sumatranis de Grivijaya* (Chinese translation by Feng Chengjun under the title *Sumendala guguokao*).

[17]*New Tang History*, 222, latter part, "Accounts of the Southern Man": "Shilifoshi [the ancient name of Sumatra] also called Hulifoshi, . . . has much gold, eternal sand and dragon brains." *Commentarios do Grande Alfonso D'Alboquerque* (1774), chapter 32: "The gold which is paid into Manlajia for the most part comes from the mines of Mi'nanjia." Cf. Chinese translation cited in note 16 above. The Portuguese historian Joao de Barros, in his *Dècade*, section three, writes: "The second vessel reached the Cape of Good Hope, sailed alone to Sumatra, and subsequently reached Gold Island. . . People were allowed

Not much silver was produced. At the beginning of yuanhe [806], annual production was only 12,000 ounces. Even during Emperor Xuanzong's reign at the beginning of the eighth century, production was only 15,000 ounces.[18]

Beginning during Tang, however, silver gradually took on importance as a means of payment. This too could have been the result of the influence of the peoples of Central Asia, because it was at this time that the Central Asian Huoxun (also written Huoliximijia --the Hualazimo [Khorasm?] of the Yuan Dynasty) and the Buhuo (also written Anguo --the Bukhara of the Yuan Dynasty) were circulating sil ver coins in abundance.[19]

China's relations with these peoples was closer than before, and it was known that in addition to Chinese silk, the peoples of the western frontiers also liked gold and silver, especially silver, and so gold and silver were used as gifts for foreign emissaries as well as textiles. Because the Chinese lacked the power to pay for Uighur horses in silk at the beginning of jianzhong [780], 10,000 ounces of gold and silver were used instead.[20] Naturally, this was based on the demand by the Uighurs for gold and silver.

During late Tang and the Five Dynasties, silver became more commonly used than gold. In the Lingnan region of the south both gold and silver circulated.[21] Han Yu once said that "the business of the Five Mountain Ranges is all done in silver," and Yuan Zhen said "from the mountains south, gold and silver are used as money." Zhang Ji has a line of poetry which reads "the Man Barbarian markets use silver."

This was because of the southerners' relations with foreign merchants. There are instances of foreign merchants in China paying head taxes in silver coins.[22] These were probably Persian silver coins.

By the end of Tāng, a great many expenditures were made in silver. By Five Dynasties times, silver's importance was almost greater than that of gold during Western Han.

The unit for gold and silver during Tang was the ounce. The catty was also sometimes mentioned, but when the term *jin* is used in written sources in connection with gold or silk, it invariably referred to one ounce of gold or silver. Sometimes a manufactured shape was used as a unit, such as the ingot or cake.

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The ingot[23] was the most commonly circulated shape, and silver cast into ingots was sometimes called ingot silver[24] so as to distinguish it from other forms of silver. Sometimes it was also called "tablets."[25] The terms tablet and ingot were sometimes used interchangeably,[26] since the shapes of the

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to take things on the island without hindrance, and so they took gold as they pleased. When fully loaded, they left." Cf. Chinese translation cited in note 16 above.

[18]*Searches into a Multitude of Books*, latter collection, 62, "Mines and Smelters," makes it 25,000 ounces. Katō Shigashi supposes that this figure represents not production, but the mining tax, so that the actual production was five times that figure. Cf. his *Studies of Gold and Silver During the Tang and Song Periods*, chapter 8.4. The *Six Statutes*, 20, "Orders of the Right Treasury of the Taifu Temple" enumerates the following prefectures as producers of silver: Rao, Dao, Xuan, Yong'annan and Yong. The *Universal Statutes*, 6, records two prefectures in Jiangnan West Circuit and 30 prefectures in Lingnan Circuit as making tribute in silver. The *New Tang History*, "Treatise on Geography" lists 68 places as producing silver, with most of them in Lingnan Circuit and Jiangnan Western Circuit.

[19]Robert P. Blake, "The Circulation of Silver in the Moslem East Down to the Mongol Epoch," *Harvard Journal of Asiatic Studies*, Vol. II (1937), pp. 300-304.

[20]*Old Tang History*, 127, "Accounts of the Sources of Good Fortune."

[21]Yuan Zhen, *Debates on Money*: "From the mountains south, gold and silver are used as money." (*Changqing Collection*, 34) Zhang Ji, "Sent South to Move Guests": "The ocean states fight with mounted elephants, the Man Barbarian markets use silver." (*Complete Tang Odes*, sixth fascicle, 6th volume.)

[22]*Six Statutes of Tang*, 3, "The Board of Census": "The peoples who come in from foreign states are placed in nine ranks. Those from the fourth rank up are the upper households; those from the seventh rank up are second; those from the eighth rank down are in the lowest category. The head tax for the upper households is ten silver coins; for the next category it is five; the lowest are exempt."

[23]*Tang Major Collected Edicts*. Cf. note 7. *Old Tang History*, 57, "Biography of Fan Xing": "given 2,000 pieces of goods and 30 ingots of gold." *Old Five Dynasties History*, 151, "Biography of Jia Wei": "After his death there were 8,000 ingots of white metal."

[24]*Book Hall of the Original Tortoise*, 484, "Expenditures." Emperor Jingzong, baoli 2, 7th month, day renzhen: "The Executive of the Board of Finance, Cui Yuanlue, came in for audience, and was permitted to take from the Left Treasury ingot silver and silver vessels to the amount of 100,000 ounces." *Old Tang History*, 17, "Annals of Emperor Wenzong," taihe 2, 5th month, day gengzi, edict: "Presents sent in to the treasuries of the various circuits, along with vessels of gold inlaid with silver and miscellaneous other inlaid objects shall be discounted into ingot silver and fine and heavy silk."

[25]Liu Chongyuan, *Golden Aspen Seed Miscellaneous Compendium*, latter part: "he wished to ransom him with 10 tablets of white metal."

[26]Yu Ti, *Record of Responses to Ghosts*, "Chen Tai": "The

two were similar.

The tablet of office was something that a member of the ancient ruling class would not have separated from his person. Royalty used jade tablets, the aristocracy used ivory tablets, and the officials used bamboo tablets. Whenever royalty said something, the officials would write it on their tablets. Jade tablets were called *ting*,[a] and so metal tablets kept the same phonetic but merely substituted the metal signific [].[b] A tablet was a hand-held plate [*ban*],[c][27] and so a silver tablet was also called a plate, with another signific [*ban*].[d][28]

A type of silver ingot which survives from the tianbao era is around 1 market *chi* long, over 2 *cun* wide and 1.3-1.4 *cun* thick. Sometimes the center is thick, and the ends are thin. Weights vary. Large ingots must have been 50 of that period's ounces in weight, or 186.5 grams. The obverse and reverse bear incised inscriptions, cut after casting, obviously not according to some set system. The text of the inscription consists of the contributor's name and official rank, the date and the source of the silver. There are some which are only inscribed on one side.[29]

Naturally, shapes were not uniform everywhere.[30] A dazhong year period silver ingot presented during the Dragon Boat Festival is of this sort, and bears as many as 64 characters. In addition to the words "one silver ingot weighing fifty ounces presented on the occasion of the Dragon Boat Festival," the official rank of the person presenting it is also provided.[31] There is no reverse inscription.

Probably, those called tablets were limited to large silver ingots weighing 50 ounces. Small ingots[32] were not called tablets, and gold ingots were probably not called tablets either, because most gold ingots were small.[33] Hence when a certain number of ingots or tablets are mentioned, large ingots are always meant.[34]

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monk laughed and said: 'I have 50 ingots of white metal which I will pledge with wine and give to you for three years' maintenance,'. . . and indeed he subsequently dug up 50 tablets."

[27]Xu Jian, *Record of Early Studies*, 26: "A tablet is a hand board."

[28]*Comprehensive Mirror for Illumination of the Prince*, 231, Emperor Dezong, xingyuan 1, 5th month: "Han Huang wanted to send a commissioner to present 40 bundles of very fine silk cloth and gauze to the travelling court. . . He boarded ship, and the goods he was bearing were loaded and filled the ship. They went down to the cabin to make the tally, and Huang enumerated all the notes he had made. All was in readiness. Each coolie was given one plate of white metal to wear at his waist."

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[29]Five silver ingots were found late in 1956 in the foundations of the Daming Palace northeast of Bafuzhuang in the northeastern suburbs of Xi'an. All bear the tianbao year period, and came respectively from Xin'an Commandery in Huainan Circuit, Jiangnan Circuit's Xuancheng Commandery, Lingnan Circuit's Nanhai, Langning and Huaice Commanderies. All were clearly marked 50 ounces, but either the weight standards seem to have not been uniform from place to place or dishonest workmen gave short weights. Cf. Li Wenju, "Very Precious Tianbao Antiquities," *Cultural Relics Reference Materials*, 4 (1957).

[30]In October of Meiji 7 [1874], in the Golden Hall of Nara's Kofukuji four silver boards were unearthed during construction work. Judging from the objects dug up along with them, they may be dated to the Nara period (contemporary with mid-Tang). At that time Japanese goods were for the most part imitations of China's, and these silver boards resemble Tang silver ingots. There are two slightly different shapes. One is shaped like a steelyard weight, that is, with the ends rounded and a somewhat narrower waist. The other kind is rectangular. Each of the four weighs almost the same as the others, 410-420 grams. They are 5.3 Japanese feet long, with some 6.15 inches longer, are over an inch wide, and 0.1-0.2 feet thick. Cf. Katō Shigashi, *Studies of Gold and Silver During the Tang and Song Periods*, chapter 4.2, subsection 1.3.

[31]Okudaira Masahiro, *Record of East Asian Coins*, 9, p. 34. The second line inscription reads: "The Zhejiang Western Circuit Commissioner of Instruction and Inspection, of the Grade Taizhong Daifu, Honorary Minister of Rites commissioner, Supervisor of Military Affairs of Runzhou, and concurrently Inspector of Runzhou and Censor in Chief, and High Pillar of State Given Purple Gold Fish Pouch, I, Cui Zhen, have contributed this."

[32]*Xiyang Miscellaneous Trays*, continued collection, 3, "Zhinogao," latter part: "The Pianzhou commoner, Zhao Huaizheng, lived in the neighborhood of Guangde. In taihe 3, his wife Ahe was often making money through woman's work. One day someone brought in a stone pillow to sell. She got it for a ring. . . . In little more than a month Zhao took sick and died, and his wife had her nephew break and look inside the pillow. Inside it were one ingot each of gold and silver. They looked as though cast in a mold. . . The ingots were over 3 *cun* long, and as thick as a thumb."

[33]*Ibid.*, 15: "Subsequently, feeling inside the boots, an ingot of gold was found." An ingot which could have been hidden in a boot could not have been very big, but there could also have been large gold ingots. Huangfu Shi, *Record of Original Transformations*, "Pei Tan": "When Pei Tan was Inspector of Huaizhou, there was a firewood gatherer who went into the Taihang Mountains and saw a mountain cave. When he opened it, he found it contained enough gold to fill a room. He entered the cave and took five ingots of the gold, each over a *chi* long."

[34]Liu Chongyuan, *Golden Aspen Seed Miscellaneous Compendium*, latter part: "Zhu Zhonghe often travelled to Hangzhou. The Lin'an Supervisor of Clerks . . . one day met with a clerk of a neighboring house to conduct a private deal involving a case, and Zhonghe overheard them. They had been

Silver ingots were also cast in the shape of horse's hooves and steelyard weights. In recent times a specimen shaped like a steelyard weight has been excavated bearing the stamp mark of the "taihe" year period.[35]

The origins of the cake[36] shape are still earlier. Gold and silver cast into the shape of a cake was sometimes called cake-metal, following the pattern of ingot-silver. In modern times silver cakes have been unearthed bearing on their surfaces such words as "yuanhe 8th year from An," "9th year," "surplus of Yao" and "in aid."[37]

Not all Tang gold and silver was cast into ingots or cakes. Sometimes it was made into various sorts of vessels or jewelry. Gifts were made directly using such items.[38]

Gold and silver coins were also minted during Tang. Quite a few Inaugural Circulating Treasure silver coins survive. They are about the same size as the bronze Inaugurals. Some have blank reverses. Others bear crescents in several variant formats. Golden Inaugurals must also have been minted, but are rare. Gold coins are sometimes referred to in the written sources as *liujin* Inaugurals, or groups of coins are said to include *liujin* Inaugurals. A fairly large number of these coins are extant, in both large and small forms. Gold and silver coins continued to be used in the court as

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rewards and gifts, and as playthings for the upper strata of society. Coins employed for such uses were especially numerous at court.[39]

I have seen a *liujin* Inaugural. The gold is very thick, and it has four holes bored in it. It was evidently used by the ladies of the court to play shuttlecocks with. Perhaps during the kaiyuan and tianbao years the game of throwing gold coins to the ladies of the Inner Court employed these coins, and they were decorated with feathers. The gold coin assembly at Chengtian Gate of Chang'an in kaiyuan 1 is famous.[40] Sometimes gold coins were used to commemorate the first washing of an infant imperial son.[41]

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stealing official money to the amount of several tens of millions of cash. When they noticed him, they hid the documents in their sleeves and left. The clerk . . . wanted to bribe him with 10 tablets of white metal. . . Before long 500 ounces of silver was needed."

[35]It was excavated from the North Yinyang Palace in Nanking in 1958. Cf. *Cultural Relics Reference Materials*, 3 (1958).

[36]*New Tang History*, 224, "Biography of Gao Pian": "The order stated, for each level, a reward of one cake of gold." Sun Guangxian, *Northern Dreams Petty Talk*, 12: "During the jianning era, the Lushan scholar Zhang Jing went on business to Guizhou. . . Shenjia presented him with 10 cakes of white metal."

[37]Cf. note 35 above.

[38]*Old Tang History*, 68, "Biography of Yuchi Jingde": "Gifts were still made to the amount of a wagonload of gold and silver vessels." *Ibid.*, 106, "Biography of Wang Ju": "[In xiantian] 2 . . . for day after day Emperor Xuanzong was feasting in the Inner Palace, and gave to each of the serving officials a bed and vessels of gold and silver."

[39]Wang Rengu, *Incidents of the Kaiyuan-tianbao Years*: "Every Spring the ladies of the Inner Court would go in groups of three to five to the Forbidden City where gold coins were thrown down for sport. Of these, alas, none remain."

Wang Jian's "Palace Lyrics" contains the following:

The palace people rise early laughing,
Know not the servant before the steps sweeping;
They compete for the golden coins,
Outside is it like this seeming?
They put on powder before one in daylight sees,
And stand before the flowering Zhaoyang Palace trees;
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Cold food the inner ladies strike long,
First from the treasury come gold coin fees.

[40]*Old Tang History*, 8, "Annals of Emperor Xuanzong," xiantian 2, 9th month: "Day yimao, the princes, dukes and officials were feasted at the Chengtian Gate. Those to the left and right were ordered to throw coins from the tower, and those from the Secretariat of fifth rank or higher and other officials from the third rank up were permitted to compete to pick them up."

Du Fu's ode "Wine Pledge to the Qu River" goes:

From atop the city wall, the Spring snow covers the garden fence,
Within the river pavilion, the evening air moves with its seasonal fragrance;
Trees flower, rain falls, fat sparrows descend,
Water lily leaves, touched by the wind, spread out in excellence.
The Longwu New Army bears up the Royal Chair,
The hibiscus blooms fill the palaces with their fragrance;
When will there be the like of this gold coin fair,
Briefly drunk, brocaded beauties holding zithers take their stance.

There is also Zhang Hu's "On Parting From a Palace Lady":

The kaiyuan period Emperor holds them tenderly in his hand,
For twenty years they've among the people taken stand;
Long pleased to hold on Chengtian Gate feast grand,
Below the tower, officials snatch up gold coins by hand.

[41]Sima Guang, *Comprehensive Mirror for Illumination of*

Such coins never developed into a general circulation money, and perhaps were not in as widespread use as during the Northern and Southern Dynasties.

The circulation of money in general was not particularly well-developed during Tang. The Tang penal laws did not treat private coining of bronze coins the same way as private coining of gold and silver coins. That private coining of such non-circulating items as gold and silver coins was not considered a criminal offense, probably means that people had goldsmiths and silversmiths make gold and silver coins as pendants and belt ornaments.

The price of gold had apparently already reached 10,000 cash per ounce by Jin times. By the Tang Dynasty, either because of the opening of new mines or because of inflow of gold from abroad,[42] the quantity had increased, but industrial demand for the metal may also have increased.

I have seen no material on the price of gold during the first half of the eighth century. It could have been as low as 6-7,000 cash per ounce, that is 1 catty per 100,000 cash.[43] This would be about the same as the price during Eastern Jin.

Of course there remain some other factors to be investigated: First, Tang and Jin weight standards differed. The Tang ounce was 37.3 grams, more than twice the size of the Jin ounce. Second, Tang coins were not the same weights as Jin coins.

The most important of the Western Jin coins was the Cao-Wei Five-grainer. While this may have been commensurate with the Tang coins, there also must have been large numbers of clipped-edge Five-grainers, the majority of which were only two-thirds the size of Tang coins at most. During Eastern Jin we have the Lord Shen Five-grainer and clipped-edge Five-grainers, and perhaps as well the *bilun* wheel coins and Four-*wen* coins. These, however, did not circulate at equal values. The weight of the standard unit coin is very hard to calculate.

If we allow for the differences in coin weights and in weight standards, then the bronze coin price of gold during Tang was about the same as during Eastern Jin.

After the An-Shi disorders of the 750s, prices in general shot up, and the price of gold was no exception. Judging from the late Tang gold price, however, 100,000 cash per catty of gold would seem to have been the price after the An-Shi troubles. Prior to the rebellions, the gold price seems to have been cheaper.

During the yuanhe period [806-821], scarcity of bronze cash drove all prices down, including gold's. At the time Emperor Muzong ascended the throne, gold and silver sold for each other in Chang'an at a price ratio of 1:10,[44] but the gold price must not have fallen below the level of before the An-Shi disorders. During the kaicheng years [836-41], it seems to have been 5,530 cash per ounce.[45] Later, however, an ounce sold for 8,000 cash.[46]

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the Prince, 216. Emperor Xuanzong "personally went to observe it, was pleased, and rewarded the secondary consort with washing-of-the-son gold and silver coins."

Cf. also Wang Jian's "Palace Lyrics":

The sun ascends, within the palace incense rises,
Shouts of ten-thousand years rise to shake the Nine Skies;
The consort within the courtyard first birth contrives,
Within they compete when with washing-son coins he plies.

Han Wo, *Confidential Record of the Golden Imperial Chariot*: "Tianfu 2. The Imperial Chariot was in Ji. For the Empress's birthday she was rewarded with washing-son fruit, gold and silver coins, silver leaves and gold and silver ingots." Cf. the Ming writer, Xu Yingqiu's *Jade Mushroom Hall Conversations*.

[42]*Complete Tang Writings*, 502, "The Acting Guanglu daifu of Deyu . . . Duke Xu's grave inscription": "From beyond the vast sea come myriads of great commercial ships stuffed full of rhinoceros horn and southern gold." "Account of Xianzhuo's Trip to Five Indian States: Persia": "He also went to the states of Kunlun to obtain gold, and also sailed by ship to Chinese territory, directly to Guangzhou to obtain thin and heavy silks, raw silk and cotton." *Entering Tang in Search of the Law* (manuscript of the Japanese monk, Master Ennin) contains in its narrative mention of several instances of use of gold dust. (This occurred during the kaicheng and huichang eras of the mid-ninth century.) For example, the first chapter mentions 4 ounces of gold dust, and elsewhere speaks of exchanging 2 large ounces of gold dust in the market for coins. Chapter three mentions 24 small ounces of gold. Wang Jian's ode, "Seeing off Secretary Zheng to the South Seas" contains the couplet "In the market is proclaimed the bandits' defeat, Gold is cheap when the sea-ships come." (*Complete Tang Odes*, 5th fascicle, 5th volume.)

[43]*Taiping Broad Record*, 118: "During Tang, among the people of Yuzhang there was a man named Xiong Shen . . . who was resting on the edge of the river, when he suddenly saw something over a foot high gleaming in the sand. He picked it up and saw that it was several catties of gold. The next day he brought it to the market, where the merchants said it was purple mill gold, and paid several hundred thousand strings for it."

[44]*New Tang History*, 54, "Treatise on Food and Money": "When Emperor Muzong ascended the throne, 1 ounce of gold sold in the capital for in exchange for 10 ounces of silver."

[45]Ennin, *Entering Tang in Search of the Law*, 1, kaicheng 3, 10th month: "14th day. Ordered to exchange 2 large ounces of gold dust in the market. The market standard was one large ounce for 7 *qian*. Seven *qian* was equal to 2.5 large *fen*, and so the price was 9 strings 400 cash."

It is still not possible to find records in China on the gold-silver ratio. In Japan in 760, the ratio of gold to silver to copper was tenfold at each step. In other words,

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a gold coin was worth ten silver coins, and one silver coin was equal to ten bronze coins.[47] If the three types of coins were the same weight, then the gold silver ratio was 1:10. There were many aspects of life in Japan then which were similar to Chinese practices, and this gold-silver ratio could have been a reflection of the contemporary Chinese price ratio. However, the price ratio between silver and copper then simply could not have been 1:10, and so we cannot rely on these Japanese prices to infer the price ratio in China, particularly since the Japanese monetary economy was not sufficiently well developed at that time.

In the seventh century, the gold-silver price ratio in Arabia was 1:6.5, and it was probably the same in India, since in the fifth century they both had a ratio of 1:5.5, and in the twelfth and thirteenth centuries the price ratio in Malaya's Lingyasi state was still 1:5.[48] By the fifteenth century it was still from 1:6 to 1:8.[49] Since during Tang the commercial links between the Chinese and the Arabs and Indians were very close, we may infer that the Chinese ratio was probably close to those of the Arabs and Indians.

The ratio in various other places across Eurasia then was entirely independent. In Europe, gold was expensive and silver cheap. In the fifth century the ratio in Rome was already 1:14. In the tenth century it was 1:10. In ninth-century Venice, it was 1:11. In Asia, however, gold was cheap and silver expensive. The ratio in Han China was 1:5.

During Tang, Sino-Indian relations were close, and the Arabs were placed between these two subcontinents of Asia. Not only did they have a monopoly on Asian foreign trade, trade between Europe and the Orient was also in their hands. Their ratio was not, however, the European one, but the Asian one. This shows that the economic center of Eurasia then was in Asia rather than Europe. We can also infer from this that the ratio in China then was between 1:5 and 1:6.

Therefore, the kaicheng era silver price was probably between 8-900 and 1,100-1,200 cash per ounce. Over the course of the ninth century, the price of silver was around 1,000 cash per ounce.

As for the import and export of gold and silver, since gold was rather cheap in the South Seas, it is possible that a small quantity flowed in from there. Some Japanese gold also flowed into China, which shows that the ratio in Japan was not 1:10.

Chinese silver could have flowed into the western frontiers region, where silver was mainly used, and the price of silver was probably rather high. Even, however, if we have made no errors in estimating these price ratios, the scale of these imports and exports was not large.

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[46] Zhao Lin, *Record of Words' Consequences*, 3: "Brought gold to sell in Yangzhou. At the time gold was expensive, an ounce fetching 8,000." (This was during the kaicheng and dazhong year periods.)

[47] *History of Japan Continued.*

[48] Zhao Rugua, *Record of Various Barbarians*, "Lingyasi State." This section records that "one *deng* of wine sells for 1 ounce of silver, or 0.2 ounces of gold; 2 *deng* of rice sells for 1 ounce of silver, and 10 *deng* is equal to 1 ounce of gold." This would make the gold-silver price ratio 1:5. *Record of Various Barbarians* is a thirteenth century work (having a preface dated baoqing 1, 9th month [1225]), but what it records is not what Zhao Rugua personally experienced. Rather it is what he heard, and probably reflects events of Northern Song or pre-Northern Song times.

[49] Del Mar, *Money and Civilization*, p. 22.

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4.2 MONEY'S PURCHASING POWER

1. High Tang Money's Purchasing Power

The monetary economy was relatively weak during the 290 years of the Tang Dynasty, particularly during its first century prior to kaiyuan and tianbao, when the natural economy bulked extremely large. In terms of money's purchasing power, the period from early kaiyuan [713] to the An-Shi disorders of the 750s was a time of low prices. At home there was profound peace, with successive years of abundant harvests, one of the rare ages of prosperity in Chinese history. A period of high prices got under way after the An-Shi disorders. From zhenyuan [785] on, though there was a temporary contraction, prices remained higher than they had been during high Tang.

In [721], the fourth year after the new dynasty had set up its own year period, it abolished the Five-grainer, which had been used for some seven or eight centuries, and changed over to the new Inaugural Circulating Treasure so as to reunify the chaotic monetary system which had evolved since the fall of Han, and to stabilize the value of the coinage, which had been oscillating since the end of Sui.

This measure was very successful. Though food prices remained high during the first few years, that was because of the continued warfare. There were few peasants, fields were left to grow wild, and so the supply of grain was insufficient. Even calculated in terms of heavy silk, the price of rice was very high.[1]

Later, with the restoration of peace and normal production, there appeared what was called the "good government of the zhenguan period." Horses and oxen were allowed to run wild, and both people and goods were at ease. Such prosperity was perhaps normal in the aftermath of great disorder. The warfare at the end of the Sui had greatly diminished the size of the population, and after the restoration of peacetime production, seeking a livelihood had become easier for the survivors.

At that time the value of money was very high. In zhenguan 3 and 4 (629), a picul of rice cost 30-40 cash,[2] and there had been successive years of good harvests. In zhenguan 8 and 9, a picul cost 40-50 cash. In zhenguan 15, a picul was 20 cash.[3] The national average price in zhenguan 16 was 5 cash per *dou*, and the price fell as low as 3 cash in the cheapest localities.[4]

As for textiles, at the beginning of Tang, they were much used as the basis for calculating prices. Just after Taizong assumed the throne, because the price of rice was still high, a bolt of heavy silk only exchanged for 1 *dou* of rice. Later, when the price of rice fell during the several years after zhenguan 5 and 6 [631-632], a bolt of heavy silk could exchange for more than 10 piculs of grain.[5]

Near the end of Taizong's reign, soldiers were more frequently used abroad, and by Gaozong's time, the situation had become still more complex. Uninterrupted warfare caused the people's

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[1] *New Tang History*, 51, "Treatise on Food and Money": "At the beginning of zhenguan, there were fewer than 3 million households, and a bolt of heavy silk exchanged for a *dou* of rice. By zhenguan 4, rice

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was down to 5 cash per *dou*, and it had been several months since the outer gates had been shut. Horses and oxen had gone wild. A man could travel a thousand *li* and not lack for food. People and goods were all at ease. Some 1.2 million of the outer barbarians had submitted. In that year some 29 persons suffered capital punishment in the entire empire. It was being called the Great Peace."

[2] *Outline of the Administration of Zhenguan*, 1: "By zhenguan 3, the harvest in the region within the passes was abundant. . . Horses and oxen were distributed into the wild areas, and the outer gates were not shut. Owing to the successive excellent harvests, a *dou* of rice was 3 or 4 cash." *New Tang History*, 97, "Biography of Wei Zheng": "In the fourth year after the Emperor ascended the throne, . . . a *dou* of rice was 3 cash." *Five Dynasties Collected Statutes*, 25, "Taxation": "The Empire enjoyed the Great Peace. Grain was worth 2 cash."

[3] *Universal Statutes*, 7: "From zhenguan on, Emperor Taizong exerted the full force of his rationality. By zhenguan 8 and 9, there had been year after year of abundant harvests. A *dou* of rice was 4-5 cash, horses and oxen had been distributed into the wilds, and outer gates would remain unclosed for several months at a time. By zhenguan 15, a *dou* of rice was worth 2 cash."

[4] *Outline of the Administration of Zhenguan*, 8, "Duties of Agriculture," 30, article 2: "In zhenguan 16, Emperor Taizong calculated that for the whole Empire, a *dou* was worth 5 cash, and in especially cheap places, it was worth 3 cash."

[5] *Old Tang History*, 74, "Biography of Ma Zhou." In zhenguan 11, he sent up another communication: "Previously, at the beginning of zhenguan, when the harvests were blighted by frosts and hence meager, 1 bolt of heavy silk only obtained 1 *dou* of rice. Then the Empire was made docile. . . Since zhenguan 5 and 6, there have been abundant harvests year after year, and a bolt of heavy silk fetches over 10 piculs of grain. The masses . . . rarely have any resentment to express." *Outline of the Administration of Zhenguan*, 1: "When Emperor Taizong first ascended the throne, there were frosts and drought, and the price of grain shot up. . . One bolt of heavy silk only fetched 1 *dou* of rice."

burdens to become heavier, and as a consequence private coining flourished. This in turn forced a reduction in the weight of coins. Otherwise the coiners could not have hoped to make a profit. Hence a large volume of bad coins came into circulation.

Nevertheless, right down to Emperor Gaozong's linde era [664-666], in general the purchasing power of coins remained high. Whenever there was a very good harvest, rice could fall to as low as 50 cash per picul. For example, in yonghui 5 [654], the price of unhusked rice in Luozhou was 25 cash a picul; for non-glutinous rice it was 110 cash.[6] In linde 2 and 3, rice fell to 50 cash a picul.[7]

Bad coins were a troublesome problem from the time of Gaozong to that of Xuanzong. In xianqing 5 (660), 9th month, the government ordered all local authorities to buy up bad coins, using one good coin to buy up five bad ones, but because this set the price of bad coins too low, they were hoarded rather than turned in. And so in the 10th month the authorities changed the exchange rate to one good coin for two bad ones. Nevertheless, the problem of bad coins was not resolved.

There was a slight depreciation of the domestic money supply during the reign of Gaozong. This was the result of the 10-cash Qianfeng Spring-treasure issued in qianfeng 1 (666). By the following year all the old coins had disappeared, prices shot up, and commerce was stymied. As a consequence there was no choice but to abolish the 10-cash coin, and return to the Inaugural. But even though this was done, private coining was not halted.

Floods, droughts and successive years of warfare followed, and so by yifeng 4 (679) prices were still very high, and the burden on the people could not have been light. In yongchun 1 (682), there were heavy rains in the capital districts, and a famine, causing rice to jump to 400 cash per *dou*.[8]

On several occasions Gaozong contemplated banning the use of bad coins. In yifeng 4 rice was used to gather in coins, with 1 *dou* of coarse rice exchanging for 100 bad coins. The bad coins collected were melted down by the Imperial Workshops and Court of Agricultural Supervision, and those whose weight matched the regulations were put back into circulation. The price of grain then gradually increased, and people said it was because of the increased number of coins minted.[9]

Empress Wu Zetian put model coins on display in the markets of Chang'an to serve as standards for coins in circulation, but Chinese standard coins have never been very uniform in size, and there was no serious distinction made between good and bad coins. Therefore they finally only banned coins heavily adulterated with iron or tin, and those with exceptionally large holes. All others were permitted to remain in circulation.

This caused illegal private coining to become still more severe a problem. By Emperor Xuanzong's xiantian 1 (712), the capital was still troubled by the problem of bad coins, and prices were still high. At the beginning of kaiyuan, the situation improved somewhat. Prices fell, but later the situation again worsened. In addition to coins from the official furnaces, there were also several dozen kinds of what were called auxiliary furnace coins. Most were privately minted in the region between the Yangtze and the Huai, and it was said that it took seven or eight of them to match one coin from the official furnaces.

The harm caused by illegal coining was first, that it caused reductions in the weight of coins; second that it put increased quantities of money into circulation. Both of these evoked

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price increases, particularly in times of war.

There are, however, limits to the degree of weight reduction which is possible. Standard Inaugural coins weighed 6 catties 4 ounces per thousand. The most severely lightened Goose-eye, iron and tin coins, old coins, and Brim-ring cash still weighed 3 or 4 catties per thousand. Bad coins could not be used exclusively. They had to be mixed in with good ones, and so prices could not have gone up as much as five fold. Reckoned in good coins, prices should not have gone up at all.

Actually, one natural disaster could have a greater influence over prices than many years of bad coins. For example, in the Summer of yongchun 1 (682), ten successive days of heavy rains caused flooding of the Luo River, and the price of rice in that region shot up to 200-300 cash per *dou*, while the price of plain cloth was only 100 cash per length. During Tang there was no particular need for there to be an increase in the quantity of money in circulation. After the end of military activity, domestic production increased, and the burden of taxation on the people was lightened, and so private coining could have been reduced. This is what happened during the kaiyuan period.

The histories record that at the beginning of kaiyuan rice fell to 3 cash per *dou*.[10] Before and after

[6] *Comprehensive Mirror*, 199.

[7] *Comprehensive Mirror*, 201. *Universal Statutes*, 7.

[8] *Universal Statutes*, "Food and Money, 7."

[9] *Universal Statutes*, "Food and Money, 10."

[10] *Grove of Tang Words*, 3, "The Naturally Intelligent": "At

kaiyuan 13 (725), because of successive years of abundant harvests, rice sold for 13 cash a *dou* in the Eastern Capital, and during the growing season grain was 5 cash a *dou*. Afterward, the cost of rice in the two capitals was generally less than 20 cash per *dou*, wheat flour [?] was 32 cash, and a bolt of heavy silk was 210 cash.[11] In zhenguan 16 and 25 the authorities remained afraid that the cheapness of grain would harm agriculture.[12] In zhenguan 28, because "for successive years the harvest has been excellent, a *hu* of rice in the capital districts is less than 200. The Empire is again at peace, and though one travels 10,000 *li*, one need not raise one's sword."[13] Fear was again expressed in tianbao 4 (745) that the cheapness of wheat would harm agriculture.[14]

This was the second age of abundance during Tang, the time which Du Fu had characterized as when "paddy rice flowed richly, and unhusked rice whitened, so that public and private granaries were all filled."[15]

Private coining decreased at the beginning of tianbao [742], and coins were kept intact. There was prosperity everywhere. A *dou* of rice was 13 cash. During the growing season, a *dou* was only 3 cash. Heavy silk cost only 200 per bolt.[16]

In tianbao 11 [752], the government used several hundred thousand strings of good coins to gather in private coins, and as merchants opposed this as inconvenient, it is obvious that production and trade were in such a flourishing state then that the demand for money was great.

The quantity of coins minted then was also greatly increased. Prior to kaiyuan, the quantity minted by government furnaces only averaged 100,000 strings annually. This amount was increased during kaiyuan, but it was not until tianbao that there was a great increase in activity of the mints, and even peasants were enlisted to mint coins. There were then altogether 99 mints in the entire country, and they turned out 327,000 strings per annum.[17]

Records of rice prices from the high Tang period are practically all reports from times when harvests were especially good, and so we cannot tell what the normal price was. The texts state that a picul ran from 30 to over 100 cash. The *Universal Statutes* clearly states that within three years of the beginning of kaiyuan there were no expensive goods in the empire, with a *dou* of rice in the two capitals being less that 20 cash. Thus, if we take 200 cash

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per picul as the normal rate for rice during kaiyuan and tianbao, we are probably not too far off.

This would make a hectoliter 336 cash,[18] this being higher than the level during the reign of Western Han Emperor Xuan, but lower than the level under Emperor Yuan. The price of gold then was 100,000 cash per catty, and a hectoliter of rice was worth 2 grams of gold, less than half the price under Western Han Emperor Xuan. If the gold-silver ratio was 1:5, then a hectoliter of rice was worth 10 grams of silver.

At that time (seventh and eighth centuries) in Europe, the price of wheat was 15.8 or 15.9 grams

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the beginning of kaiyuan . . . there were abundant harvests on all sides . . . and rice was 3 cash per *dou*." *Book Hall of the Original Tortoise*, 502, kaiyuan 2, 9th month, edict: "This year the harvests are quite good in the prefectures of the Empire, and the price of grain is everywhere low. We must ponder the harm to agriculture. . ."

[11] *Universal Statutes*, 7: "In the 13th year the *feng* ceremony was carried out on Mount Tai, and rice reached 13 cash per *dou*. In the growing season a *dou* of grain reached 5 cash. Thereafter there were no expensive goods in the Empire. In the two capitals, grain was less than 20 cash, wheat flour [?] was 32 cash, and a bolt of heavy silk was 210 cash."

[12] *Book Hall of the Original Tortoise*, 502, kaiyuan 16, 9th month, edict: "We have heard that in the prefectures of the Empire this year's harvests have generally been good, and because grain has become cheap, there must be fear about harm to agriculture." There is also an order of zhenguan 25, 9th month, day weizi: "This year the Autumn sprouts are abundant near and far. As grain is now cheap, agriculture must be severely harmed."

[13] *Old Tang History*, 9, "Annals of Emperor Xuanzong," latter part.

[14] *Book Hall of the Original Tortoise*, 502, tianbao 4, 5th month, edict: "We have heard that collections of wheat this year have been twice those of normal years, and that this abundance has cheapened the grain, so that there is concern over harm to agriculture."

[15] Du Fu, ode "Recalling Bygone Days":

Recalling the bygone days of kaiyuan's universal prosperity,
A small town still held 10,000 families' houses.
Paddy rice flowed richly and unhusked rice whitened,
Public and private granaries were full.
No wolf or tiger on the roads of the Nine Provinces,
One needed not pick an auspicious day to set out on a long journey.
Mourning clothes and mottled carts,
Men plowing and women rearing silkworms all without loss.

[16] *New Tang History*, 51, "Treatise on Food and Money."

[17] The accounts in various works differ. The actual amount must have been between 326,000 and 327,000 strings.

[18] During Tang, 1 picul was equal to 0.5944 hectoliters; and 1 ounce was equal to 37.30 grams. Cf. Wu Chengluo, *History of Chinese Weight Measures*.

of silver per hectoliter, which was rather higher than the Chinese price. Commuted into gold, the price was around 1.06 grams of gold per hectoliter. This was only half the Chinese price for rice.[19] The normal cost of rice in China was, however, possibly less than 200 cash per picul.[20]

Among textile prices, the high Tang price of 200 cash per bolt[21] was the lowest such price since Han, and so low a price was never again achieved during the ensuing thousand years. Though this price of 200 cash per bolt occurred during high Tang, it was not a normal price, and cannot be used as a benchmark. The price of heavy silk then was not exactly the same in every locality: The price south of the mountains was low, around 200-300 cash per bolt. The Henan price was higher, reaching over 700 cash per bolt.[22] As a consequence, in kaiyuan 16 the authorities took a price of 550 cash per bolt as the standard for establishing the value of stolen goods. We may say that this was the high Tang standard price for heavy silk.

There are two important reasons why prices were low during the first half of Tang:

The first is that the nation enjoyed profound peace within, and so production increased.

The second is that the quantity of coins was insufficient.

The Five-grainer was abolished in wude 4 [621]. Nor, of course, were a number of other coins of varying quality allowed to circulate. The Inaugural coin was the main money in circulation. But how could this be sufficient to meet demand? Such a situation was rare in Chinese monetary history.

The only comparable situation was when the First Emperor of Qin abolished all the old coins after unifying China, and solely employed the Half-ouncer. But on that occasion the large knives and spades could be reminted into the relatively small and light Half-ouncers, so there was no great problem involving the supply of coins. In addition, the production and circulation of commodities then was still not very well developed.

By Tang times, however, these aspects of economic life had developed a step further, and the coinage depended on light and small private coins like the String-ring cash being reminted into the larger Inaugural coins. By that time the Han Five-grainers had long since been melted down and reminted, or had undergone clipping, with the intact ones mostly having been hoarded away. Hence it was necessary to use several old coins before one had enough metal to remint them into one Inaugural coin. This, of course, caused a constriction in the supply of coins. The reason for the large role in the Tang economy played by barter lay precisely in this. The low prices were also related to this factor.

2. *The An-Shi Disorders and the Depreciation of Money*

Wasteful practices gradually increased during the last years of Xuanzong's reign. Though taxes in coin amounting to more than 2 million strings of coins, 19.8 million *hu* of grain and 7.4 million bolts of heavy silk, were collected annually, as well as cotton and plain cloth, annual expenditures often exceeded income. It was only the accumulated surplus of many years that kept the treasury solvent. In tianbao 8 [749] the Emperor led the officials into the Left Treasury to observe how many coins it still

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[19]The price of wheat in Europe during the sixth, seventh and eighth centuries was on the average 1 ounce of silver to buy 314 pounds of wheat. Cf. Michael G. Mulhall, *The Dictionary of Statistics* (London, 1892), p. 418. At that time

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the gold-silver ratio was 1:15. Cf. G. F. Warren & F. A. Pearson, *Gold and Prices*, p. 260.

[20]*Kaiyuan Divination Classic*, 92, "Rain Prognostications": "In all four seasons, if there is rain on a *mao* day, it will always affect grain prices. Rain on the first *mao* day means 100 cash per *hu*. Rain on the second *mao* day means 200 cash per *hu*. Rain on the third *mao* day means 300 cash per *hu*. Rain on the fourth *mao* day means one catty of gold per *hu*." This book was written at the beginning of kaiyuan. Judging from this passage, it would seem that 100 or 200 cash per *hu* of grain was reckoned expensive. This shows how low the price of rice was.

[21]*Universal Statutes*, 7. Cf. note 11 above. *Comprehensive Mirror*, 214, kaiyuan 28: "In the Western and Eastern Capitals, a *hu* of rice was less than 200, and the same was true of a bolt of heavy silk." *New Tang History*, "Treatise on Food and Money," tianbao 3: "At this time all within the seas was prosperous. The price of a *dou* of rice was 13 cash, and in season a *dou* was only 3 cash, with a bolt of heavy silk at 200."

[22]*Tang Collected Statutes*, kaiyuan 16, 5th month, 2nd day. The Executive Censor Li Linfu memorialized: "There are differences in the reckoning of stolen goods in the Empire. For example, south of the mountains heavy silk is cheap, whereas in Henan it is expensive. In places where it is cheap, it takes less than 300 to reach the the point where the death penalty applies. In places where it is expensive, it takes more than 700 to reach the death punishment. As the light does not match the heavy, how can punishments be adjusted? I request that an Empire-wide standard be set for thefts in silk, with each bolt being reckoned at no more than 550."

contained. Some say that An Lushan rebelled because he coveted this wealth of the Emperor.

The rumblings of war from Fanyang smashed the beautiful dream of the Palace of Immortality. War took the happy court of Emperor Minghuang and turned it topsy-turvy. Because the great peace had lasted so long, all had forgotten how to make war. It was precisely the case that "Yuyang was drummed up to battle, but there were no strong city walls north of the Yangtze." Nevertheless, Yang Guozhong still wanted to sell ordination certificates to the Buddhist and Daoist clergy, not realizing that even the coins and textiles of the Left Treasury could not continue to be paid out for very much longer.

After two years of war, selling official ranks and monkish ordination certificates proved no help, and under the control of the Fifth Jade, a monetary depreciation was carried out. In qianyuan 1 (758), 7th month, the 10-cash Qianyuan Heavy Treasure was minted to supply an army of several hundred thousand, but though a hundred thousand were decapitated and corpses spread out for 30 *li*, it was still impossible to quench the rebellion. At times even Guo Ziyi was on the verge of defeat.

After An Lushan's death, Shi Siming formally proclaimed himself emperor. Thereupon the 50-cash heavy wheel Qianyuan Heavy Treasure was issued. In the Eastern Capital, Shi Siming issued a 100-cash
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Obtain-one Original Treasure. In shangyuan 1 (760), 3rd month, the price of rice shot up to 7,000 per *dou*.[1] This was 3-400 times higher than the prewar price of 200 cash per picul.

Private coining expanded madly. Some 800 persons in the capital region alone were executed for it. To have several types of nearly the same sized Qianyuan coins circulating with identical inscriptions was, naturally, very inconvenient, and so within the capital the face value of the heavy wheel coins was reduced to 30-cash, and the face value of the old Inaugural coins was raised to 10-cash. Even this represented a devaluation. In the 7th month an order was sent down revaluing the heavy wheel coins to 30-cash throughout the country. In baoying 1 (762), after Emperor Daizong ascended the throne, the small Qianyuan coin had its face value changed to 2-cash, and the heavy wheel large coin to 3-cash.

Later, after Yuan Zai became Chancellor, the large and small Qianyuan coins circulated at the same value. The privately minted Qianyuan coins of that time were much smaller and lighter than Inaugural coins. There are surviving Qianyuan Heavy Treasures as light as 2.4 grams, and even 0.5 grams. We may imagine that the Inaugural coins from the old days must have been hoarded, and the small coins circulated. As a consequence prices did not return to former levels. It is said that in Loyang, occupied by Shi Siming, prices were even higher.[2]

In baoying 2 (763) rice still cost 1,000 per *dou* in the capital.[3] The palace kitchens had not the materials for two consecutive meals, the palace guards went hungry, and commoners were pressed hard to make contributions. The price of salt during tianbao and zhide was only 10 cash per *dou*, just 2 copper cash per catty. After the outbreak of rebellion and the Fifth Jade's Salt Law Reform, the price of a *dou* increased to 110 cash, or 22 cash per catty, an eleven-fold increase.[4]

As a consequence of the monetary devaluation, there appeared several characteristic phenomena.

The first of these was an increase in the amount of money obtained by the officials. According to a regulation of kaiyuan 24 [736], 6th month, 23rd day, a first rank official's monthly income was only 60-70 strings.[5] During the dali era [766-80] a brevet

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[1] *New Tang History*, 54, "Treatise on Food and Money, 4."

[2] *Yongle Encyclopedia*, quoting *Floating Words of the Jing Studio*. Cf. *Collected Investigations of Ancient Coins*.

[3] *Old Tang History*, 123, "Biography of Liu Yan."

[4] *New Tang History*, "Treatise on Food and Money, 4": "During tianbao and zhide, salt was 10 cash a *dou*. . . When Qi [Fifth Jade] was made Salt and Iron Commissioner, a levy was placed on all the salt of the Empire, and a *dou* had its price increased to 100 cash before it was put out for sale, making the price 110 cash." Liu Su, *Great Tang New Words*, 10, "Reforms," no. 21: ". . . at the beginning of yongtai, a memorial sought permission to collect a 100 cash per *dou* levy on the salt of the Empire. Now this was done." (This work records events from the beginning of wude up to the end of dali.) Cf. the Yuanye zhiben edition of *Messages Requesting Reduction in the Price of Salt*.

[5] *Tang Collected Statutes*, 91. According to the *Old Tang History*, "Treatise on Food and Money," in yonghui 1 and kaiyuan 24, officials received the following monthly incomes. (During yonghui, in addition to salaries in cash, servants to protect the chamber were also provided, and the cash value of these is not included. The kaiyuan system also provided salary rice, the cash value of which is also not included here.) The unit is the cash.

Rank	Yonghui 1	kaiyuan 24
1	11,000	31,000
2	9,000	24,000
3	6,000	17,000
4	4,200	11,567
5	3,600	9,200

official got a monthly salary of as much as 9,000 strings, and commandery prefects all got 1,000 strings.[6] Guo Ziyi's annual official salary was 240,000 strings, not including his unofficial perquisites.[7]

The second characteristic was an increase in tax collections. For example, annual income from the salt tax during the early years of Emperor Suzong was only 600,000 strings. By the last years of the reign it had gone up ten-fold. It is said the people were not harmed thereby. The historians mostly give credit for this to the Transportation of Tribute policies of Liu Yan,[8] but it was really because of the monetary depreciation. When the value of money has been reduced, its quantity must have increased.

Nevertheless, under ordinary circumstances, at a time of monetary depreciation a rise in income would generally not have been able to keep up with the rate of increase in prices, because in wartime production would be reduced and the supply of goods would become deficient, aggravating the extent of the reduction in money's purchasing power. [Even in peacetime, the privileged get the new money first, before it has driven up prices. The unprivileged get it only after it has passed through many hands, driving up the prices of what they buy before their own wages can increase. EHK] Laboring people and government functionaries must, however, continue to sell their labor, and so the standard of living of most people is placed in jeopardy.[9]

Crafty persons took advantage of opportunities to take increased amounts of graft.[10] Weak willed men sometimes

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found it hard to avoid bowing down before the temptations of money.[11] There were officials who

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6	2,400	5,300
7	2,100	4,100
8	1,850	2,475
9	1,500	1,917

[6] *Tang Collected Statutes*, 91, "Inner and Outer Officials Kind and Cash Payments," 2, yuanhe 6 article. *Tang History*, "Treatise on Food and Money," makes a brevet official get 900,000, and a prefect 100,000.

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[7] *Old Tang History*, 120, "Biography of Guo Ziyi."

[8] *Old Tang History*, "Biography of Liu Yan."

[9] *New Tang History*, 162, "Accounts of the Childless and Orphans": "Movements of armies did not cease for a decade. The people's production suffered from empty looms. Those drafted as soldiers were lined up in the halls, and ranked in the streets. Bondservants and female servants were wearied with wine and meat, but the impoverished were starving while doing their labor service, and were flayed down to the marrow."

Ci Mountain Collected Writings, 7, "Questions for the Metropolitan Graduate" (yongtai 2 [766]): "At this point, of the three rivers' fertile land, the Huai, Si and Yao wilds, were all full of thorns and brambles grown old, and from this one can tell the extent of their cultivation. The great granaries were empty, and even the rats were starving. As for the masses, they did not know in the morning what they could eat in the evening. Soldiers were collected in the various circuits by the millions. If the harvests were not brought in, what was going to happen?"

Duke Lu Xuan's Garden of Pencils, 4, "Advising an Edict Reducing Salt Prices": "It has been thirty years since the rising of the bandits. Those who served on the ramparts, were completely removed from agriculture. Those who remained in the villages, had to make up for their absence. The soldiers and wagons were in waste lands, and army supplies had often to be transported to them. Many people became refugees, and the fields became fouled with weeds."

[10] *Old Tang History*, 126, "Biography of Chen Shaoyou": "In yongtai 2 (766) . . . Shaoyou wanted to seek out a nearby commandery because the mountain frontiers were distant. At this time Dong Xiu was working in the Military Affairs Bureau. Shaoyou spent the night in his village, waiting for him to return from his duties.

"When they met, he offhandedly asked, 'How many persons are there in your lordship's family? How much do you spend each month?' Xiu replied, 'For a long time I have advanced in office, and my family burdens have become terribly heavy. Furthermore, goods have now become expensive. In a month I expend more than a thousand strings.'

"Shaoyou said, 'With such expenses, your salary cash would last for only a few days, and for the rest you must seek the help of outsiders to gain succor. There should be someone who would sincerely make up the lack, but would be careful to conceal it, and thereby render it easier for you to exert yourself. Though I lack ability, I request that I alone be allowed to meet your lordship's expenses. Each year I could contribute 50,000 strings of cash. I have here more than half the amount, which I ask you to accept. The rest I will send after I have taken up my office. You need not trouble yourself over it.'

"Xiu jumped up when he first laid eyes on the money, and let out a great sigh of delight. As a consequence he gave Shaoyu a fine job. . ."

[11] *Taiping Broad Record*, quoting the *Eulogy of Solitary Leisure*: "Zhang Yanshang of the Tang [dali and jianzhong periods] was about to judge a financial matter. He knew that a large penalty was due because a false charge had been brought, and was much angered. He severely reprimanded the clerk in charge of bringing the case and said that the case had already dragged on for a long time, and must be finished within ten days.

"The next day when he settled down to business, he found a small card on his desk which read: 'Cash 30,000 strings. It is requested that you do not inquire about this case.' His lordship was greatly angered, and struck fear into the man. The next day

were pressed by the need to earn aliving to make demands from the countryside which were not permitted, and even intentionally committed transgressions in their search for graft over and above their salaries.[12] This had a very bad influence on all of the minor officials.

We lack detailed and reliable records on the degree to which prices jumped. Most recorded in the written sources are exceptional prices.

For example, when Nanyang was under siege in zhide 2 (757), a *dou* of rice sold for as much as 40-50 strings.[13] When, in qianyuan 1 and 2, Yecheng's An Qingxu was besieged, a *dou* of rice sold for more than 70 strings.[14] Neither of these prices had anything to do with money.

Issue of the Qianyuan large coins was followed by a jump in the price of rice to 7,000 cash per *dou*, but this rise was also in part a response to the psychological shock, and the price later probably slowly regressed backwards. The drought in the capital district at the beginning of shangyuan also only brought the cost of rice up to several thousand per *dou*. In qianyuan 3 the price of rice was below that during the drought-induced famine, and was only 800 to 1,500 cash per *dou*.[15]

After the liquidation of the large coins, prices probably fell further, since at the beginning of Daizong's reign (763-764), even under disastrous conditions, a *dou* of rice only rose to 1,000 cash.[16] The highest it reached was 1,400.[17] Normal prices would, of course, have been still lower.

In the metropolitan level civil service exam given by the government in yongtai 2 (766) Yuan Jie set the following question: Why if in past years a *hu* of grain was considered expensive at 400, has it been considered cheap at 500 in recent years? Why if in past years a bolt of cotton was considered expensive at 500 cash, was it considered inexpensive in recent years at 2,000 cash?[18] Evidently, the price of grain in around yongtai 2 was only twice the pre-war level, while cotton had jumped four-fold. Du Fu's "Remembrance of Bygone Days" contains the line "How can one hear that heavy silk is worth 10,000 cash?" This probably refers to the time when the price of heavy silk was at its highest level.

By dali 2 [767], the last elements of the forces of An and Shi had been run to ground, but the value of money had not been restored to its old level. When Guo Ziyi came to court from the Hezhong region, Emperor Daizong only rewarded him with 200 bolts of gauze silk and brocade, and not with cash, probably because the purchasing power of copper coins was very low. At each of the welcoming feasts for Yuan Zai and Wang Jin, and two others, there was put forth 300,000 cash. The feast for Tian Shengong cost 100 million.

These feasts were ostensibly to celebrate victories, but actually many difficulties still lay before the dynasty:

First, Turfan was continuing to cause trouble for China.

Second, to compensate the Uighurs for their help in recovering the Western Capital, China had agreed

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he saw another card which read: 'Cash 50,000 strings.' He became still more angry, and ordered that proceedings be ended within two days. The morning of the day after that on his desk was yet another card, which read: 'Cash 100,000 strings.' He subsequently halted further inquiries.

"When his subordinates questioned him about this, he replied 'When the money reached 100,000 strings, it shook my spirit. There is no matter concerning which one may not change one's mind. I feared there would be disaster, and so had no choice but to take the money.'"

[12] *Old Tang History*, 131, "Biography of Li Gao": "At the beginning of shangyuan (760), there was a drought in the capital district, a *dou* of rice cost several thousand, and a great many died. Gao, judging his salary insufficient, urgently requested an external appointment. When this was not granted, he intentionally discounted the tax collections, and was demoted to becoming Office Chief of Wenzhou."

[13] *Old Tang History*, 114, "Biography of Lu Ling."

[14] *Old Tang History*, 200a, "Biography of An Qingxu."

[15] *Old Tang History*, 37, "Treatise on the Five Agents," qianyuan 3, intercalary 4th month: "This month Shi Siming retook the Eastern Capital, and in the capital a *dou* of rice was 800 cash." *Ibid.*, 10, "Annals of Emperor Suzong," qianyuan 3: "This year there was famine. A *dou* of rice reached 1,500 cash."

[16] *Old Tang History*, "Treatise on the Five Agents": "In the Autumn of guangde 1, insects ate the shoots of the crop. This was especially severe in the northwest, in Guanxi. A *dou* of rice was 1,000 cash." *Ibid.*, 123, "Biography of Liu Yu," records an event of the early years of Daizong: "At this time, after newly conscripting soldiers and weapons, food was scarce everywhere, and in the capital districts rice reached 1,000 per *dou*." *Old Tang History*, 11, "Annals of Emperor Daizong," guangde 2: "From the 7th month heavy rains did not cease, and inside the capital a *dou* of rice was valued at 1,000 cash." *Old Tang History*, 11, yongtai 1: "It was a year of starvation, with a *dou* of rice at 1,000 cash, and all grains were expensive."

[17] *Old Tang History*, "Annals of Emperor Daizong," yongtai 1, 7th month: "At the time there was a long drought. In the capital a *dou* of rice was 1,400, and other grains proportionately as high."

[18] *Complete Tang Writings*, 380, "Yuan Jie's Questions to the Metropolitan Graduates," Number 4. I am referring to the Guangxu era year xinchou, Guangya Shuju edition. Other people's quotations substitute *dou* for *hu* as the unit for grain.

to purchase from them 10,000 horses annually, at a price of 40 bolts of heavy silk per horse. This was a very heavy burden on the people, and was the reason why heavy silk became expensive thereafter. The price of heavy silk then was 4,000 cash per bolt.[19] This was much less than the earlier 10,000 cash per bolt, but still many times more than the prewar price. During the dali period there were some

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natural disasters, and rice rose to 800 to 1,000 cash per *dou*.[20]

The situation did not worsen then because the authorities did not again resort to monetary depreciation, but instead used the method of broadening the sources and decreasing the outflow. By broadening the sources was meant a rise in taxes.

For example, in Emperor Daizong's yongtai 2 (766), a surtax was placed on the Green Shoots Land Head Cash and on the dali 4 (769) Autumn tax. Soliciting contributions from the people was another method for broadening the sources of income.

An example of decreasing the outflow was to decrease the office lands assigned to capital officials and to reduce staff. These measures all had the effect of constricting the use of money.

Nevertheless sole reliance on constricting the quantity of of money or inscreasing the treasury's income was not enough to induce monetary stability. It was necessary to simultaneously increase production. In addition to the fact that too many men were then serving as soldiers, a large number of monks and nuns not only were not engaged in production, but were also not paying taxes, which was a very large extravagance.

This point was also stressed by other people then. For example, at the end of dali (779), Li Shuming sent up a communication requesting a cleaning up of the monasteries and temples of Eastern Sichuan, leaving only those monks and nuns in orders who were following the proper path, with the rest to be returned to secular life.

Peng Yan went still further with his proposal that all clergy be obliged to be fully employed. He advocated having all male Buddhist and Daoist clergy under the age of fifty contribute 4 bolts of heavy silk annually, with nuns and Daoist priestesses providing 2 bolts. Their servants would be treated the same as ordinary people. People would still be allowed to serve as Buddhist or Daoist clergy. This proposal of his was opposed by court officials, and not carried out.

Within a few years after putting into effect the policy of opening the sources and constricting the outflow, the situation appeared to have improved somewhat. In yongtai 2 [766], the price of grain was only something over 500 cash per *hu*. The household tax was reduced in dali 5 [770]. In dali 8 the Green Shoots Land Head Cash was also reduced.

A good harvest made grain cheap, one *dou* fetching only 20 cash.[21] The government was still putting out 1.2 million strings of cash to maintain the price of grain.[22] These examples, however, can only show that the strength of the inflation had abated.

In actuality, prices were still very high, and as a consequence in dali 12 [777] official salaries were recomputed in terms of the new value of money.[23] Li Ao said that at the beginning of jianzhong (780) rice was 200 cash per *dou*,[24] which was four or five times the prewar level. In zhenyuan 4 (788), the price of salt increased from 110 cash per *dou* to 310, and in Hezhong and around lakes Dongting and Poyang to 370. This was the official price. Some sharp merchants even raised the market price to twice the official price.[25]

We can tell from this that the authorities had no confidence they could restore the previous value of money. Naturally, a fall in the value of money caused the government to feel that the quantity of money in circulation was inadequate, and it took measures to mint more coins. In dali 4 the number of mints was increased; in dali 7 the domestic manufacture of bronze vessels was banned.

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[19] *New Tang History*, 165, "Biography of Quan Deyu": "It is also said that during dali, one bolt of fine silk was worth 4,000 cash."

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[20] *Old Tang History*, "Treatise on the Five Agents," dali 4: "This year heavy rain fell from the 4th to the 9th month, and rice cost 800 cash per *dou* in the capital." *Ibid.*, 11, "Annals of Emperor Daizong," dali 5, 7th month: "This month a *dou* of rice was 1,000 in the capital." *Op. cit.*, dali 6: "This year there was drought in the Spring. A *hu* of rice reached 10,000 cash."

[21] *Book Hall of the Original Tortoise*, 502, "Equitable Sales": "Emperor Daizong's Dali 8, 11th month, day guiwei . . . There was a large harvest in the capital district, the price of grain suddenly cheapening, a *dou* of barley going to 8 cash, and grain to 20 cash."

[22] *Old Tang History*, "Annals of Emperor Daizong," dali 9: "5th month, day gengshen. There was an edict to the Commissioner of Funds to pay out 700,000 strings and to the Transport Commissioner to pay out 500,000 strings for Harmonious Purchase of grain, since the abundant harvest had cheapened grain."

[23] *Old Tang History*, "Annals of Emperor Daizong."

[24] *Complete Tang Writings*, 634, Li Ao's "Communication on Changing the Tax Laws."

[25] *New Tang History*, 54, "Treatise on Food and Money."

At the beginning of jianzhong [780] more coins were minted. The cost of minting 1,000 cash
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was 900.[26] These were probably the small and light Jianzhong Circulating Treasure, which only weighed around 2.4 grams apiece.

The region between the Yangtze and Huai mostly used coins alloyed with lead and tin, in terms of which the price of heavy silk was exceptionally high.[27] Opportunistic people took good coins and melted them down, getting 6 catties of copper per thousand, and used the copper to cast implements which they could then sell for 600 cash per catty.

It was just then that Li Xilie's rebellion broke out, and because normal land taxes proved insufficient, Zhao Zan proposed minting a 10-cash tutenag large coin. Apparently this was not done. As a consequence, copper cash gradually became scarcer, causing the value of money to slowly rise.[28]

It was only after the adoption of the Double Tax during Emperor Dezong's zhenyuan year period, however, that the trend in the value of money shifted, and the inflation of prices that followed the An-Shi disorders was finally brought to a halt.

[26] *New Tang History*, 54, "Treatise on Food and Money": "In dali 7, casting of bronze vessels was banned throughout the Empire. At the beginning of jianzhong, the Executive of the Board of Census, Han Hui, requested the reopening of the Luoyuan Inspectorate with ten furnaces erected, because much copper was smelted at Hongyai, Shangzhou. Annually, 72,000 strings worth would be minted at a cost per thousand coins of 900. Emperor Dezong accepted this advice.

[27] During the dali era Du Fu had said: "In former days the use of coins forced private coining. Now it is permitted to alloy lead and tin with copper." ("Carrying Out the Annual Feast.") *Tang Collected Statutes*, 89: "In jianzhong 2 the Inspector of Salt and Iron of the Circuits, Bao Ji, memorialized: 'The masses of the Yangtze and Huai region in recent days have been bringing coarse and bad coins into the markets for exchange. When melted down for reminting by the officials, three coins only yield two. The remainder consists of lead and tin which had been alloyed with the copper. If catties and ounces [of specie] are not used to purchase it, the price of heavy silk is rendered very high. Bad coins are gradually becoming more numerous.'"

[28] *New Tang History*, 54, "Treatise on Food and Money": "[Jianzhong] 10. An edict to the Empire [limited the] casting of bronze implements to those weighing 1 catty, and with a value of less than 160 cash. Those who melted down coins to cast objects were to be treated as criminals. Nevertheless, coins became increasingly scarce among the people, and the prices of textiles lower."

3. *The Monetary Contraction of Zhenyuan and Yuanhe*

Beginning with Emperor Dezong's zhenyuan era (785-805), the Tang Dynasty underwent a monetary constriction which continued for some sixty to seventy years. This contraction was an important event in the history of China's monetary economy, its severity being comparable to the constriction which occurred under Southern Qi. Strictly speaking, however, we can only say that it was a partial deflation, since even at its lowest point, prices remained higher than the kaiyuan and tianbao level.

Four causes may be elucidated for the contraction.

First, it was a natural correction, since in the aftermath of a monetary depreciation, the people lose faith in money, which causes its purchasing power to fall to a certain extent over and beyond the fall induced by the reduction in the weight of the coins. This causes the market price of the copper coins to become lower than the value of their metal content, and gives rise to the phenomenon of private melting down of coins.[1]

For example, during the changshou and yanzai periods of Empress Wu Zetian, Wu Sansi recommended casting an octagonal bronze pillar to be placed inside the Dingding Gate of Chang'an. It would be called the Great Zhou Ten-thousand States Transmit Virtue to Heaven Axis, would commemorate Wu Zetian's accomplishments and virtue, and would use over 500,000 catties of bronze,[2] most of which

[1] *Old Tang History*, 48, "Treatise on Food and Money": "In zhenyuan 9, 1st month, Zhang Pang memorialized that 'everywhere both public and private parties had been casting bronze vessels and other objects, causing the state's coins to diminish in number, and bringing harm to many. Those who carry on this harmful practice melt down 1,000 coins to make 6 catties of bronze, which they then cast into utensils. Thus, a catty is worth over 600, the profit is considerable, and such melting down and recasting becomes more common. Between the Yangtze and the Huai, coins are indeed disappearing.'"

[2] *Chronicles of Tang Odes*, 13, "Li Xiulie" article, quoting the *Great Tang New Words*. *New Tang History*, 76, "Empresses and Consorts, first part: Gaozong's Zetian Shunsheng Empress": "Wu Sansi led in the chiefs of the frontier barbarians and the elders to request the making of a Heavenly Axis to commemorate the accomplishments and virtues of the Dowager Empress, degrading Tang and enhancing Zhou. An ordinance granted permission to do so. Objections were received that this would greatly weaken the bronze coinage through the melting down required . . .and heedlessly use 2 million catties of bronze cash."

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would be obtained by melting down bronze cash amounting to nearly 100 million coins. Later, during the kaiyuan period, the Heavenly Pillar was ordered destroyed, and the task of melting it down took more than a month. All this occurred before the war.

During the reign of Daizong [763-780], because coins of different sizes were circulating at the same value, the heavy Qianyuan and Heavy Wheel coins were all melted down by people to make utensils. In addition, the practice of melting down coins to cast statues of Buddha also flourished. During Daizong's reign, the Gold Pavilion Temple on Mount Wutai cast bronze into rooftiles, melting down many hundreds of millions of coins for this purpose.[3] In these ways the quantity of money in circulation was reduced, and its purchasing power slowly raised.

The second cause was the reduction in the number of coins minted. By mid-kaiyuan, there were more than 70 furnaces in the country casting coins, and their annual production was fully a million.[4] In tianbao 11, the total annual coin production figure was 327,000 strings.[5] In terms of the population at that time,[6] that was 6 coins per capita. During the reign of Xianzong (806-820), however, the whole country only minted 135,000 strings. In taihe 8 (834), production did not quite reach 100,000 strings.[7]

The third cause was the broadening of the territory within which coins were used. Yang Yuling stated that "before dali, in Ziqing, Taiyuan and Weibo, coins adulterated with lead and iron were in use; in Lingnan use was also made of gold, silver, cinnabor and elephant tusks." After dali, however, all of these places used bronze coins.[8]

In addition to this, bronze cash were also being exported. The power of the Tang Dynasty was far-reaching, and its trade well developed. Where its merchants went, bronze cash followed. Chinese bronze cash were present as far away as Siraf on the Persian Gulf.[9]

Japan also imported Chinese copper cash. Japan's relations with China were very close then. In the first year of Ruizong's reign [710], two years before the Japanese moved their capital to Nara, they had already begun to mint coins.[10] These re-

This last phrase may have erroneously substituted "bronze cash" for "bronze and iron." The *Great Tang New Words* clearly states that "there was levied from the Empire over 500,000 catties of copper and more that 1.3 million catties of iron." This was because the Heavenly Pillar was to rest upon a mountain of iron.

[3] *Old Tang History*, 118, "Biography of Wang Jin": "In the time of Emperor Daizong . . . there was a Golden Pavilion Temple on Mount Wutai, which cast copper into tiles, which were then gilded, so that they reflected light into the mountain valleys. This used hundreds of millions of coins."

[4] *New Tang History*, 52, "Treatise on Food and Money," quoting Yang Yuling. Both the number of mints and quantity of coins given differ from the figures in other documents. At that time a mint only turned out 3,300 strings, and so how could something more than 70 mints have turned out one million? This figure is really suspicious.

[5] *New Tang History*, 54, "Treatise on Food and Money."

[6] *Old Tang History*, 9, "Annals of Emperor Xuanzong," latter part, records that in tianbao 13 the country's entire population was 52,880,488.

[7] *New Tang History*, 54, "Treatise on Food and Money."

[8] *New Tang History*, 52, "Treatise on Food and Money."

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[9] "The Chinese Coin no Money besides the little Pieces of Copper, . . . There are some of these Pieces at Siraf with Chinese Characters upon them." *Ancient Accounts of India and China*, p. 47.

[10] From the beginning of the eighth century to the middle of the tenth century, bronze cash were minted in Japan on twelve occasions (not including the Opening the Foundation Victorious Treasure Gold coin and the still undiscovered Great Peace Original Treasure silver coin). These are what the Japanese numismatists call the twelve imperial coins. Their names, dates of first minting and approximate weights are as follows (The weights given are only on the basis of my personal observations; these are neither standard nor average weights.):

Coin Name	Date	Weight (grams)
Wado kaiho	708	3.0
Mannen toho	757	4.0 (some up to 6.0 grams)
Shinko kaiho	765	6.0
Ryohei eiho	796	3.7
Fushou shinho	818	3.4 (some large ones)
Eiwa choho	835	2.2 (some large ones)
Chonen daiho	848	1.7
Gyoeki shinho	859	2.1
Teikan eiho	870	2.6
Kanhei daiho	890	2.0
Enki toho	907	2.9
Kengan daiho	958	1.9

Because Japan did not produce much copper then, to maintain the profligate way of life of the aristocracy it was necessary to have ever larger numbers of coins. Therefore a policy of depreciation was carried out: Whenever a new issue of coins was minted, one of the new coins was made equal to ten of the old ones, and there was also a tendency to lighten the coins. Only

sembled the Chinese Inaugural coins, so it is evident that Chinese coins must have flowed into Japan at an early date.[11] As Japan was minting its own coins by then, the quantity of Chinese coins flowing in was probably not great.

The fourth cause was taxation policy. There were few precedents in Chinese history for the miscellany of nuisance taxes levied after the An-Shi disturbances. Successive chancellors, like Yang Yan and Zhao Zan, bent their best efforts toward taxation policy.

In jianzhong 1 (780), total tax receipts were 13,056,070 strings, some six or seven times higher than at the beginning of zhenguan. In terms of the population at that time,[12] this was 4 strings 232 cash per household, which was no light burden. Because, however, of the Li Xilie attempt to overthrow the government, monthly military expenses were over 1 million strings, which would have emptied the treasury in a few months.

As a consequence, in addition to extorting loans from rich merchants, Zhao Zan also collected the so-called Room Tax (or House Tax) and the Deduction (or Exchange) Tax at a rate increased from 2 percent to 5 percent. In addition, there was also collected a commodity tax of 2 percent of the value of goods on which it was levied. A 10 percent tax was levied on bamboo, wood, tea and lacquer.

Because those in charge

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were corrupt and did not levy these at consistent rates, there was resentment everywhere, and Li Xilie could use the fact that he did not collect the Room Tax and Deduction Tax to win men's hearts.

The most important of the tax policies was Yang Yan's Double Tax. The instability in prices caused by the post-An-Shi monetary depreciation was only truly ended after the adoption of the Double Tax, and the monetary constriction only began after the institution of the Double Tax. This was because the various nuisance taxes had annoyed the people without bringing in much money. The histories say that when the Double Tax first came in, goods were still heavily demanded and coins lightly demanded, and only afterwards did goods become cheap and coins dear.

During the first half of the Tang Dynasty, taxation was in the three categories called *zu*, *yong* and *diao*. The *zu* was collected in grain, the *diao* in local products, and the *yong* was a replacement for labor service, probably reckoned in heavy silk.

This system was still suffused with the aura of a natural economy. No census had been taken since kaiyuan, however, and in the meantime people had died, moved, bought and sold and combined fields. This tripartite system of taxation had become even more inconvenient since the An-Shi disorders, but it was not until the time of Daizong (763-779) that a change was made to collect taxes on the basis of acreage rather than households. At the beginning of Emperor Dezong's jianzhong era, Yang Yan became chief minister, and he promulgated the Double Tax system, with all taxes to be collected entirely in copper cash.

The Double Tax law has a heavy significance in the history of the Chinese monetary economy. There have been two occasions in Chinese history when taxes have been monetized. One was the Reckoned Contribution, Mouth Cash and Reckoned Strings taxes of Western Han. The other was the Double Tax of mid-Tang.

The Han taxes had made it necessary for everyone in the country to use coins, and so greatly stimulated the circulation of money. The Double Tax also monetized various taxes, and so should also have stimulated the circulation of money, but its practical effect was not the same as the Western Han measures. The Western Han Reckoned Contribution was accompanied by an increase in the quantity of money, and so produced the expected consequences.

The mid-Tang Double Tax only increased the demand for money, but did not increase its quantity. Once, beginning in the reign of Daizong, various kinds of coins began to circulate at the same value, the heavier Qianyuan coins and Heavy Wheel coins were mostly melted down to make utensils or to produce Buddhist statues, and so there was a tendency for the quantity of money in circulation to be

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the *Mannen tohō*, the *Shinko kaihō* and the *Ryohei eihō* were particularly heavy and thick when first minted, weighing more than 1 *qian*. From the *Eiwa chohō* on, there were only light and small coins. The *Enki tohō* and the *Kengan daihō* were sometimes made out of lead, which made for a still greater degree of depreciation. However, this depreciation occurred over a period of 250 years, and the burden of it was spread over many generations of people.

[11] *Account of the Tang Yamato Expedition to the East* records that on the second visit of inspection, the Japanese vessel was permitted to be loaded with goods which included 10,000 strings of copper cash, 10,000 strings of official mint cash, and 5,000 strings of purple edge cash. The official mint cash, at least, must have been Inaugural coins. In March 25, Meiji 9 (1876), among the objects excavated from the Yamato no Koku Soegami Gun Hokkeji Temple were three fragments of Inaugural Circulating Treasures, along with *Wado kaihō Mannen tohō*and *Shinko kaihō*, so it is evident that by around the time of the An-Shi disturbances, Inaugural coins had reached Japan.

[12] According to the *Tang History*, "Treatise on Food and Money," the population then was 3,085,076 households. *Investigation of Literary Remains* makes it 3,805,076 households.

diminished.

After the Double Tax was put into effect, everyone was using coins to pay taxes, and after the government had collected these coins, it did not pay them all out again. At the same time, because the rich families knew that the demand for bronze coins was not matched by their supply, they rushed to hoard them, causing a sudden contraction in their supply.

There was a weakening of the monetary economy during late Tang and Five Dynasties, and so this was a period of renewed strength for the natural economy. The institution of the Double Tax not only did not change this situation, it could well, on the contrary, have accentuated it, because it

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increased the demand for the medium of payment, while the quantity of money did not increase, and may even have diminished.

As a consequence, a still larger proportion of payments could only be made in goods. In fact, beginning in changqing 1, the Double Tax was entirely paid in plain cloth, silk thread and floss, and only the salt and alcohol imposts were paid in cash. That was a step backward.

It was within the context of this monetary contraction that Lu Zhi and Bo Juyi opposed the Double Tax. Although Bo Juyi criticized the errors of those administering the Double Tax,[13] he was mainly concerned with the monetary aspect. Lu Zhi said that grain and cloth could be produced by the people on their own, but coins could only be minted by the officials. Hence, the people had no way to obtain enough money to pay their taxes.[14] Bo Juyi also said that for the peasantry to obtain bronze cash, they had no choice but to sell their foodstuffs at low prices or to borrow from usurers.[15]

The phenomenon of contraction was made manifest in the prices of goods. For example, in Emperor Shunzong's yongzhen 1 (805), the price of salt fell from 370 or more per *dou* to 250-300 cash.[16] In an-

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[13]Bo Juyi, "Sighs in Qin":

The original intent of the state in fixing the Double Tax,
Was to show its love for the people.
They first guarded against temptation,
And gave clear orders to inner and outer officials.
If one thing was added outside of the tax,
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Any wild methods might be adopted.
Is it any wonder that as the years and months lengthened,
Avaricious clerks got their way?/
Obsequiously seeking favor,
They pull things in whether it is Winter or Spring.
Before a bolt of heavy silk is woven,
Hemmed silk comes in to the amount of a catty.
The hamlet clerk forces his way in,
And is not permitted to shrink back even for the moment.
At the end of the year Heaven and Earth close down,
And the ill wind rises to smash the village.
In the depths of the night the smokey fire quenches,
Clumps of snow spread white.
The young cannot cover their forms,
And the bodies of the old are unwarmed.
Their mournful sighs echo through the cold air,
And bitterness enters into the nostrils of both.
Yesterday they paid a cruel tax,
And so peeked into the official treasury's gate.
The cloth was piled up like a mountain,
And the bundles of silk floss were like clouds.
It is called coveting surplus goods,
And by the month they are presented to the superior.
Snatching the warmth from my back,
They buy benevolence from before your eyes.
Entering the Jade Grove Treasury,
As the years lengthen it all turns to dust."

[14]*Old Tang History*, 319, "Biography of Lu Zhi": "Grain may be obtained by way of the plow; cloth can be made by weaving; but as for coins, only the officials can mint them. This is what both aristocrats and commoners lack. It would be best to use grain and cloth because of their convenience."

[15]Bo Juyi, *Changqing Collection*. A discourse states: "The basis for collecting the old land tax, was to total the amount of mulberry land for the *zu*, and to estimate the size of families for the *yong*, the *zu* and *yong* being paid only in grain and cloth. Now in addition to grain and cloth, there is also a responsibility to pay in coins. For coins, mulberry land does not produce copper, private families dare not mint them, and so how can those engaged in agriculture obtain them? When they get coins, the clerks collect them, the officals constrict them, and so they exchange that which they have in order to meet the public measures set. In years of abundance they sell cheaply for half price, and do not get enough to make up a string of cash. In bad years the interest on their loans doubles, and there is not enough to pay back what they owe. . ."

Bo Juyi's ode, "Present to a Friend":

Private families lack coin furnaces,
Flat land lacks copper hills;
How is the Spring and Summer tax,
Year after year to be paid in copper cash?
Coins' strength daily grows heavier,
The farmer's strength daily grows mor exhausted,
Cheaply selling millet and wheat,
Cheaply trading silk floss and cotton,
By year's end clothing and food exhausted,
How can they avoid starving in the cold? . . ."

[16]*New Tang History*, 54, "Treatise on Food and Money, 4":

cient times in China, however, salt was a government monopoly, and though adjustments in its price might reflect the trend of prices in general, such changes were not made with alacrity. That is to say, the extent and the timing of such changes were not necessarily entirely parallel to other price changes. Salt's price tended to be a little milder in the degree of its movement than prices in general, and it tended to lag somewhat behind movements of other prices. Prices in general had already begun to fall back during the jianzhong year period [780-784].

There are no better indicators of the trend in prices than the prices of rice and heavy silk. In jianzhong 1 [780], the price of rice was 2,000 cash per picul. During the next few years military alarms were succeeded by floods and droughts, so that a picul ranged from 5,000 to 15,000 cash.[17] Prices began to fall from zhenyuan 3 [787].

In zhenyuan 8 [792], Lu Zhi send up a communication saying that in the Yangtze and Huai region rice was going for 150 cash per *dou*, and for 37 cash in the capital region. He also said that in the districts of the capital itself, a *dou* of rice was only worth 70 cash.[18]

In a metropolitan examination question he posed during the yuanhe period (806-820), Li Ao had said that when the Double Tax was first instituted (in jianzhong 1 [780]), rice cost 100 cash per *dou*. Thirty years later (c. yuanhe 5), a *dou* of rice was only 20 cash. In his communication on tax reform he added that in jianzhong 1 rice was 200 cash per *dou*, while forty years later a *dou* was only 50 cash.[19] This shows that during the contraction of the yuanhe period, prices went down to from one-fifth to one-fourth the level at the beginning of jianzhong. In yuanhe 6, rice fell to 2 cash per *dou*.[20]

As for heavy silk, during dali (773), 1 bolt went for 4,000.[21] At the beginning of jianzhong, a bolt
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was 3,200-3,300 cash. In around zhenyuan 8 [791], a bolt was 1,500-1,600 cash.[22] By zhenyuan 19 it had fallen to 800 cash.[23] This price lasted right down to the yuanhe [806-821][24] and changqing periods (821-824).[25] If we take the dali price of heavy silk as our base, then by the end of zhenyuan the price had fallen to 20 percent of that base level.

HEAVY SILK PRICE INDEX TABLE (1)

Year	Index Number
Mid dali (773)	100.00
Beginning jianzhong (780)	82.50
Zhenyuan 8 (792)	40.00
Zhenyuan 19 (803)	20.00

"In the time of Emperor Shunzong, the price of salt in the Yangtze and Huai regions began to be reduced. A *dou* was 250 cash. In the Hezhong and lakes regions salt was 300 cash per *dou*."

17 *Comprehensive Mirror*, 231, xingyuan 1, 5th month: "At this time there were military alarms in the Guanzhong, and a *dou* of rice was worth 500 cash." Same year, 11th month: "Today, locusts descended, and in the Guanzhong a *dou* of rice was 1,000 cash." In zhenguan 1: "Now in the Hezhong a *dou* of rice was 500, and forage was exhausted." *Old Tang History*, 12, "Annals of Emperor Dezong," zhenguan 1, 2nd month: "Famine in Henan and Hebei; rice at 1,000 cash per *dou*." Zhenguan 2, 5th month: "Heavy rains since day guisi until this day. People were starving waiting for the Summer wheat to rise when this continuous heavy rain occurred. Men's hearts were extremely fearful. A *dou* of rice had returned to 1,000 cash." *Old Tang History*, 141, "Biography of Zhang Xiaozhong": "Zhenyuan 2, locusts and drought in Hebei; rice at 1,500 per *dou*."

18 Zhang Junqing, *Searches into a Multitude of Books*, latter collection, 52, "The Gates of Wealth: Countercyclical Sales of Grain." *Comprehensive Mirror*, "Annals of Tang."

19 *Complete Tang Writings*, 634, "Two Questions for the Metropolitan Examination."

20 *Comprehensive Mirror*, 238, yuanhe 6: "This year there was a large harvest in the Empire; there were instances of rice at 2 cash per *dou*."

21 *New Tang History*, 165, "Biography of Quan Deyu": "Zhenyuan 19 . . . It was also said that 1 bolt of fine silk was worth 4,000 during dali, but now was only 800. Since the tax was collected at the old rate, this meant a five-fold increase in the amount the people had to put out."

22 *Collected Works of Duke Lu Xuan*, 22, "Equalizing and Moderating Taxes to Aid the Masses," second article: "In the past, at the time when the Double Tax was first established, the masses would pay a tax of one bolt, which converted into cash was 3,200 or 3,300. In general, the rate was 10,000 cash for 3 bolts. . . Recently, when the masses have paid one bolt, it has been the equivalent of 1,500 to 1,600 cash. The general rate is 10,000 cash for 6 bolts." *Old Tang History*, 139, "Biography of Lu Zhi."

23 *New Tang History*, "Biography of Quan Deyu." Cf. note 21 above.

24 *Collected Works of Duke Li Wen*, 9, "Communication on Changing the Tax Laws": "I believe than since the beginning of jianzhong, when the Double Tax was instituted, until now forty years have passed. . . Now the tax rate is the same as before, and yet grain and cloth daily grow cheaper, while coins are increasingly more heavily demanded. One bolt of heavy silk is priced at only 800."

25 *Collected Works of Han Changli*, 40, "Petition on Regulation of the Salt Gabelle," (changqing 2): "Now a bolt of heavy silk is worth 800 cash."

Yuanhe 15 (820)	20.00
Changqing 2 (822)	20.00

There are several points we should note here: Even though prices were falling during zhenyuan because of the monetary contraction, the value of money had not returned to the level prior to the An-Shi disturbances. The price of heavy silk in particular remained somewhat high, because it was in demand for paying taxes. In Emperor Wenzong's kaicheng 3 (838), even in the silk producing Jiangnan region, heavy silk still cost 660 or 670 per bolt.[26] If we take as our base the kaiyuan 16 heavy silk price of 550 cash per bolt, then the index numbers change.

HEAVY SILK PRICE INDEX TABLE (2)

Year	Index Number
Kaiyuan 16 (728)	100.00
Tianbao 5 (746)	36.36
Suzong's reign (756-761)	1,818.18
Middle dali (773)	727.27
Beginning jianzhong (780)	600.00
Zhenyuan 8 (792)	302.90
Zhenyuan 19 (803)	145.45
Changqing 2 (822)	145.45
Kaicheng 3 (838)	121.28

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If we take the tianbao 5 price of 200 cash per bolt as our base, then the zhenyuan and yuanhe prices of heavy silk will seem even less low.[27]

The circumstances surrounding the fall back in the price of rice are almost the same. During the monetary depreciation, a *dou* of rice reached 7,000. While a city was under siege, it ranged from 40-50,000 to 70,000. After the war, no matter what happened, a *dou* of rice was 1,000 cash. In zhenyuan 3 [787], 12th month, a picul had fallen to 1,500 cash; by zhenyuan 8 it fell to 1,000[28] and 700 cash.[29] In yuanhe 6 [811] it even sold for as little as 20 cash per picul, but this is an atypical example, and is attested only by the *Comprehensive Mirror*.

The normal price of rice at the end of yuanhe was probably 500 cash per picul.[30] This was the price at the time of the most severe price decline. Even then, it was more than twice the prewar normal cost of rice. In changqing 4, 5th month, the officials sold grain for 50 cash per *dou*.[31] A little later the price went up to 70 cash.[32]

Naturally, rice was a little more expensive than ordinary grain. During taihe, ordinary grain was around 60 cash per *dou*, but peasants could only sell it for 20 cash.[33]

Still, any changes in money's value unsettles people. If the price of a *dou* of rice goes from 3 cash to 7,000 cash, people will, of course, have no way to earn their livelihoods. But for heavy silk to fall from 4,000 cash per bolt to 800 would strike an equally severe blow to the people's livelihood, whether or not this 800 cash price exceeds or is lower than the price of fifty years before. [Ludwig von Mises compares such a forced deflation following a forced inflation to first running a man down with a car, and then carefully backing over his body in hope of undoing the mischief. EHK]

The government made several attempts to remedy this excessive fall in prices. In zhenyuan 9 [793]

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[26] *Entering Tang in Search of the Law* (manuscript of the Japanese monk Ennin), 1, relates that in Yangzhou "to buy 3 bolts of white heavy silk costs 2 strings."

[27] With the tianbao 5 heavy silk price as our base, the index numbers for the other years are as follows:

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Year	Index Number
Tianbao 5 (746)	100.00
Middle dali (773)	2,000.00
Beginning jianzhong (780)	1,650.00
Zhenyuan 8 (792)	800.00
Zhenyuan 19 (803)	400.00
Changqing 2 (822)	400.00
Kaicheng 3 (838)	333.33

[28] Lu Zhi sent up a communication requesting that the Board of Census be ordered to pay 200,000 cash to the Metropolitan Prefect of the Capital for him to use buy rice to meet shortages in the Wei Bridge area. A *dou* would require a price of 100 cash for the peasants to make a profit. *Searches into a Multitude of Books*, latter collection, 52, "The Door to Wealth: Countercyclical Sales."

[29] *Collected Works of Duke Lu Xuan*, 18, "Request to Reduce the Jingdong Water Transport Collection of Foot Transport Price in Various Localities so as to Accumulate Food to Nourish the Armies."

[30] *Collected Works of Duke Li Wen*, 9, "Communication on Change of the Tax Laws": "I believe that from the establishment of the Double Tax in jianzhong 1 until now forty years have passed. . . Now . . . a *dou* of rice is only 50."

[31] *Book Hall of the Original Tortoise*, 502, "Countercyclical Grain Sales." *Tang Collected Statutes*, 92, "Inner and Outer Officials' Pay in Kind and Cash," latter part.

[32] *Tang Collected Statutes*, 92, "Inner and Outer Officials' Pay in Kind and Cash," latter part.

[33] *Book Hall of the Original Tortoise*, 484, "Expenses," kaicheng 1 article.

it tried to encourage the mining of copper, and banned the manufacture of copper utensils. What copper was mined was bought by the government for casting into coins.[34]

In yuanhe 3 a ban on hoarding coins was proclaimed. In yuanhe 12 another order was issued banning hoarding of coins. Regardless of a person's rank, his hoard of ready cash could not exceed 5,000 strings. Those with cash balances exceeding that level had to expend the surplus to purchase goods within one or two months, depending on the size of the cash balance. However, sufficient amounts of goods were hard for coin hoarders to discover, coins are not bulky objects, and even harder to lay hands on. Hence this measure would not seem to have had the anticipated effect. That is why commodity moneys were adopted.[35]

In changqing 4 [824], a broader time limit was set for expending hoards of cash. Amounts exceeding 10,000 strings up to 100,000 strings had to be expended within one year. Amounts from 100,000 to 200,000 strings had to be liquidated within two years. Analysis of these measures shows that they could have accomplished two things: an increase in the quantity of money and an increase in money's velocity of circulation. In actuality, hoarding of coins was one cause of the contraction. It was said that a hoard of 500,000 strings then would have been considered small.[36]

In the 5th month of that year grain was rather expensive in the capital. A portion of official salaries was paid in grain, with a *dou* of salary grain discounted into 50

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cash.[37] Rice was expensive in yonghe 7 [833], 3rd month, because of a long drought, and a *dou* of grain was discounted into 70 cash.[38] This would not seem to have had monetary causes.

By Emperor Wenzong's kaicheng 3 [838], there were still upsets caused by goods being less in demand than coins. In yonghe 8 (834), annual coin production was still less than 100,000 strings, but there was one inconsistency which is worthy of note. At the same time that prices were low, people were melting down coins to make utensils, because it was said, a three or four-fold profit could be obtained.[39]

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[34] *Old Tang History*, 13, "Annals of Emperor Dezong," zhenyuan 9, lst month: "The sale of swords and copper utensils was banned. The copper mountains of the Empire were entrusted to people to work, with the officials to buy their copper. Except for bronze mirrors, nothing else was to be manufactured of bronze."

Old Tang History, 48, "Treatise on Food and Money," first part: "In yuanhe 3, 5th month, the Salt and Iron Commissioner, Li Xuan, sent up word that he had found ancient copper mounds at Pingyangye and Majijumu in Pingyangxian and Gaohengxian of Shenzhou and Liuzhou in Hunan's jurisdiction. There were more than 280 pits. He had sent officials to check them out, and they indeed contained copper and tin. He now requested that two furnaces be established in the Guiyang Inspectorate of the old prefecture to mine copper and cast coins. About 20 strings per day could be produced, and in one year 7,000 strings, which would yield things of use for the people. This recommendation was accepted."

Also: "Regulation of yuanhe 8, 4th month: Because coins are heavily demanded and goods lightly demanded, 500,000 strings of cash are to be issued from the Inner Treasury, and the two markets are ordered to collect plain cloth and silk on the market, with each piece or bolt priced at a 10 percent increase."

[35] *Old Tang History*, "Treatise on Food and Money," first part: "Yuanhe 6, 2nd month, regulations for public and private exchanges established that transactions of 10 strings of cash and more must be jointly conducted in bolts and pieces of cloth." *Old Tang History*, 16, "Annals of Emperor Muzong," yuanhe 15, 8th month: "The Minister of War, Yang Yuling, led the officials in a discussion of the supply and demand for money and goods, which advocated collecting all Double Tax, ferry, wine and salt taxes in cloth and other local products, and not in cash. This would gradually make goods more heavily demanded and coins gradually more lightly demanded."

[36] *Old Tang History*, "Treatise on Food and Money," first part: "[Yuanhe 12]. At this time in the villages and townships of the capital region, those who had amassed hoards of money of no less than 500,000 strings, were Wang [?], Han Hong and Li Weijian." *New Tang History*, 52, "Treatise on Food and Money": "Since the establishment of the Double Tax during jianzhong, goods had become lightly demanded and coins heavily demanded, and the people had suffered from that. Up to then [when Muzong ascended the throne] it had been forty years. What would have at that point obtained 2.5 bolts of heavy silk, later on obtained 8 bolts, a three-fold increase in the general tax rate. Rich families and great merchants accumulated coins to seek out the lightly demanded with the heavily demanded, and so the peasantry was in difficulties, and those who failed in their occupations daily increased in number."

[37] *Tang Collected Statutes*, 92, "Inner and Outer Officials' Pay in Kind and Cash," latter part.

[38] *Tang Collected Statutes*, 92, "Inner and Outer Officials' Pay in Kind and Cash," latter part.

[39] *Old Tang History*, 176, "Biography of Yang Zifu": "Orders banning bronze were frequently enacted by the court, but enforcement was not strict, and so it would have been better not to have such orders. Now from the Yangtze and Huai on south, bronze utensils have become the rage. Those who seek profit in the market can melt down 1 string of cash to make several utensils, and sell them for a profit of three or four-fold. The people at a distance do not know the regulations, and sell at

One can only explain this by surmising that the prices of copper utensils must have risen even more than had copper cash. This deflation was really only partial, and so a number of prices remained higher than their tianbao era level. During kaicheng, the price of a picul of rice was probably 800 cash.[40]

The constriction in the supply of money explains the phenomenon of the Short-hundred. During yuanhe [806-821], the Short-hundred was instituted in the capital region, with each string being diminished by 60 cash. During changqing [821-825] it was reduced by 60 cash. At the end of the reign of Zhaozong [904], it was diminished by 150 cash in the capital, and by 200 in Henan. This practice lasted through the Five Dynasties, and right down to Song.

4. Value of Money During Late Tang and Five Dynasties

The monetary constriction of zhenyuan and yuanhe was, for a time, alleviated during late Tang. This easing was brought about by the monetary reform of Emperor Wuzong's huichang period [841-847]. There were three reasons for undertaking this monetary reform.

The first reason was the scarcity of coins since zhenyuan and yuanhe times, which caused a great many payments to be made in silk. When Emperor Wuzong rewarded Shi Xiung, he did so with 7 bolts of silk. Military provisioning was also financed with bolts of heavy silk. When Liu Zhen was levying commercial taxes in Shandong, he calculated them entirely in terms of bolts of heavy silk. These were all consequences of the shortage of money.

The second reason was an increase in military expenditures. During the huichang period there was war with the Uighurs and Turks abroad, and at home there were the Zhaoyi (Liu Zhen) and Taiyuan (Yang Bian) rebellions. There was not even one year of peace.

The third reason was the anti-Buddhist policy of the authorities. The Chief Minister Li Deyu was an opponent of religion. The two main religions of that time were Buddhism and Daoism. Emperor Wuzong was a believer in the Daoist Immortals. A Daoist priest had slandered the Buddhist temples to him, and made the Buddhist temples the focus of his attack. In fact the Buddhist temples of that time were more extravagant than the Daoist ones. Ever since the Northern and Southern Dynasties, immeasurable amounts of China's gold and bronze had been lavished on the Buddhist temples.[1]

In huichang 5 (845) a nationwide purge of Buddhist temples was carried out. More than 4,600 of them were destroyed, and in excess of 260,500 monks and nuns were secularized. Some 40,000 monastic estates were placed back on the tax rolls.

This measure had three aims. The first was to use the bronze statues and bells in the temples to cast coins, and the gold and silver to fill the state treasury. The second was to turn the resecularized monks and nuns into sources of tax revenues, and to bring about an increase in production. The third was to use the millions of acres of fertile land on the monastic estates to increase production.

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the normal rate. Even if the state increases the number of furnaces minting coins, how can this keep up with the bad practice of melting them down and recasting them into utensils. Hence laws banning bronze utensils must be severe."

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[40] *Entering Tang in Search of the Law* (manuscript of the Japanese monk Ennin), contains a reference to the price of nonglutinous rice in various localities during kaicheng 5. In Laizhou a *dou* was 90 cash; in Fenglaixian, it was 70; in Beihaixian it was 60; in Qingzhou 100; in Yuchengxian 100. If we average these figures, a *dou* ran 84 cash. The Qingzhou price, however, was produced by three or four years of infestation by locusts, and so the normal rice price was probably no more than 80 cash per picul.

[1] *Wei History*, 114, "Treatise on Buddhism and Daoism": "Xingguang 1, Autumn, an edict to the authorities inside the Wuduan Great Temple to cast five standing statues of Sakyamuni for Emperor Taizu and his four successor emperors, each to be 1 *zhang* 6 *chi* tall, in all to use 25,000 catties of red metal . . . Tian'an . . . [second year], another standing statue of Sakymuni was cast in the Tiangong Temple. It was 43 *chi* tall, and used 100,000 catties of red metal and 600 catties of yellow metal."

Northern Qi History, 46, "Biography of Su Qiong": "Su Zhen's transfer was to be Left Executive in charge of Xuzhou. In Xuzhou city, the Wuduan Temple was looted of 100 bronze images."

Liang Huijiao, *Biographies of Great Monks*, 13, "Biography of Shifayue," records that "in tianjian 8 of Liang, the Songwang Temple in Pengcheng made a 1 *zhang* 9 *chi* tall metal statue using 43,000 catties of copper."

Old Tang History, 118, "Biography of Wang Jin": "[In the time of Emperor Daizong] there was a Gold Pavillion Temple on Mount Wutai, which cast bronze into roof tiles which it then gilded, so that light shone into the mountain valleys. Hundreds of millions of cash were required." *Old Tang History*, 153, "Biographies of Xue Cuncheng and his son Yanlao": "During baoli . . . to honor religion a new palace was built in the Qingsi Courtyard of the palace grounds. It required 3,000 bronze mirrors and hundreds of thousands in gold and silver."

In huichang 6, 2nd month, an order was issued that from the beginning of the next year only new coins, that is the Huichang Inaugurals, were to be used. Up to then there had been only seven inspectorates minting coins. Now their number was to be increased to eight. In addition, each circuit was to set up a furnace.[2] The old coins were to temporarily cease circulating for several years. The old coins were not in fact withdrawn, and so the quantity of money increased. The prices of plain cloth and heavy silk rose, and coins appeared in the salaries of civil and military officials.

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The histories state that after Xuanzong ascended the throne, Wuzong's policies were entirely overturned, and the new coins were used to cast Buddhist statues. Yizong, however, in his turn revised some of Xuanzong's errors. It is possible that the new coins continued to be minted. Though not many of them survive, they are not so few that they could all have been minted within a few months.

Still, these new Inaugurals were insufficient in number to have caused prices to jump up very much, and so when during the xiantong year period (868), at the time of Pang Xun's uprising in Xuzhou, the cost of rice rose to 200 per *dou*,[3] the histories treat it as an important matter. Evidently the normal price of rice was then much lower than this.

We can also see from this report that coins were still in short supply. Another piece of evidence for this is the reestablishment of the Short-hundred system. During high Tang, the full-hundred was used. During yuanhe [806-821], in the capital, a string was short 20 cash. This represented a restoration of the Short-hundred. At the end of Zhaozong's reign [904], the capital used 850 cash to make a string.

Peasant uprisings got under way with the ascent to the throne of Xizong. In qianfu 2 (875) Wang Xianzhi assembled several thousand men to attack and take Puzhou. In qianfu 4, Huang Chao led 10,000 men to take Yunzhou. Civil war continued during each of the next thirty years.

Over the broad expanse of China, from Canton in the south to Tongguan in the north, not one place escaped the devastation of war. Everywhere agriculture and sericulture were abandoned, and the plowing and planting missed their seasons. On the battlefields, corpses choked the rivers, blood flowed into the markets, prisoners were used for food, and bleached bones piled up in mountains. The living looked like ghosts, with their spirits entirely spent.

During zhonghe (881-884), when Huang Chao held Chang'an empty-handed, rice sold for up to 30,000 per *dou*.[4] During the guangqi period (885-887), a *dou* ranged from 30,000 to 50,000,[5] and even a catty of gold could not buy 5 *sheng* of rice.[6] This, however, was entirely due to the shortage of food, and was not caused by monetary factors.

The economic causes for the fall of the Tang are very obvious. Years of vexatious taxation had brought the people to a point where they had no way to exist except by banding together to conduct uprisings. Men like Wang Xianzhi and Huang Chao all rose in this way, and Zhu Wen was a subordinate of Huang Chao.

And yet there seems to have been no monetary depreciation during late Tang. Although in depicting the circumstances of Huang Chao's attack on Chang-'an the poets say "a *dou* of gold for a *dou* of rice,"[7] that was because goods were scarce, and not because money was depreciated in value.

The rising of men like Huang Chao rent asunder the institutions of the nation, and aside from a few

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[2] *Searches into a Multitude of Books*, later collection, 59.

[3] *Comprehensive Mirror*, 254.

[4] *Old Tang History*, 200, latter part, "Biography of Huang Chao": "The bandit made it an empty city, and tax revenues did not enter. Foodstuffs shot up in price, with a *dou* of rice going for 30,000. The official armies holding the mountain fortresses took the taxes contributed by the masses for their own provisions, and people obtained several hundred thousand."

[5] *Old Tang History*, 19, latter part, "Annals of Emperor Xizong," guangqi 2 [886], 5th month: "There were successive years of grasshoppers in Jingnan and Xiangyang. A *dou* of rice was 30,000, and there was much cannibalism."

Comprehensive Mirror, 256, guangqi 2, 12th month: "Qin Zongyan besieged Jingnan for two years. Zhang Guiying was defending the city. Inside the walls a *dou* of rice was worth 40 strings of cash."

Old Tang History, 182, "Biography of Gao Bian": "From the 2nd year, 11th month, rain and snow and dark nights. By the 3rd year, 2nd month it had not cleared up. There were successive years without good harvests. . . When bandit Cai . . . attacked the city, inside the walls [of Yangzhou] a *dou* of rice was 50,000, and a majority died of starvation."

Comprehensive Mirror, 257, guangqi 3, 10th month: "Yang Xingmi besieged Guangling for half a year. . . Inside the city there was nothing to eat. A *dou* of rice was worth 50 strings of coins."

[6] *Old Tang History*, 182, "Biography of Qin Yan": "Inside the walls of Yangzhou, precious objects were sold for rice. A catty of gold or a rhinoceros horn belt fetched 5 *sheng* of rice."

[7] Wei Zhuang, "Lament for the Woman Qin." Cf. the Commecial Press edition of the *Lament for the Woman Qin Annotated*, edited by Zhou Yunqing. Some people quote the line as reading "one *dou* of gold for one *sheng* of grain." Cf. A. C. Moule, "A Life of Odoric of Pordenone," *T'oung Pao*, 20, p.

bold-hearted men, no one offered any genuine resistance. They surrendered to the first group that came along.

The central government had no great burden of military expenses, nor did it undertake to assume such a burden. This was because local land taxes were not paid over to the central government,

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and each locality minted its own coins. The central government's treasury was empty. When Zhu Wen took Xiangcheng, aside from several hundred ingots of gold and silver in a secret chamber, there was not a single coin.

As for the value of money then, since each locality minted its own coins, fluctuations were not regulated, and from a national perspective, there was probably still a shortage of coins. For this reason use of gold and silver became more common. Silver in particular came to be used to make a great many payments during the last years of the Tang.

The petty emperors of the Northern and Southern Dynasties of the third through sixth centuries managed to remain fairly well-off, but during the Five Dynasties of the tenth century there was not one government which was not extremely poor.

When Zhu Wen managed to get hold of several hundred ingots of gold and silver from the Xiangcheng prefectural office's secret chamber, he thought it was a miracle, and when 300,000 strings of accumulated back taxes came in from Henan and Guangzhou, that was enough to put him in business as a ruler. By the time of Li Cunzhu (923-926), it was only after he had received several hundred thousand in cash from various commercial towns to help him meet the expenses of the ceremony, that he dared begin acting as Emperor.

Emperor Mo arose in Fengxiang, and gave generous presents to the armies, but when he got to Luoyang and found the treasury to contain only several hundred thousand in gold and silk, he searched the households of the people of the capital, but found nothing to take.

Liu Chengyou (Emperor Wen of Han) heard that neighboring soldiers had come to the river bank, and was greatly frightened. Li Ye told him to go to the prefectural treasury to reward the armies, but each man was only apportioned 10 or 20 strings. After official salaries had been cut in half, they were further discounted.[8] Local officials' salaries were entirely dependent on local funds, and so officials of the same rank were paid different amounts in different areas, depending on the size and wealth of the local population.[9]

Historians have always treated the five small dynasties of Liang, Tang, Jin, Han and Zhou as the legitimate successors to Tang, but these five dynasties only occupied a small part of the north. In terms of political control, Jin and Han can almost be said to have been vassals of the Khitan. As for their money, they produced very few coins. Of the Kaiping coins in collectors' hands, those reckoned genuine were minted by Latter Liang, and these were of very little use since there were too few of them. Even the Tiancheng Original Treasure of Latter Tang are not numerous.

Chinese sources of copper were few, and practically non-existent in those small pieces of land in north China. As a consequence, in tongguang 2, Latter Tang extended the use of the 80 cash per hundred Short-hundred, and at the beginning of tiancheng restricted the export of copper cash. Later the Short-hundred was made shorter, deducting another 5 cash per hundred in addition to the 80, so that payment of 1 string was in fact made with 750 cash.

Another monetary constriction occurred during Latter Jin. Manufacture of copper utensils was banned in tianfu 2, and in the following year the people were permitted free coinage, though the size

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[8] *Old Five Dynasties History*, "History of Tang: Biography of Kong Lian": "It was further memorialized that although the officials' salaries had been much discounted, and that payment of them had not actually been made, it was requested that they be reduced by half and be paid entirely in coin. This was accepted. Before long, a half-year's salary was again discounted."

[9] *Old Five Dynasties History*, 103, "History of Han: Annals of Emperor Wen," latter part: "Qianyou 3, 7th month, the Finance Commissioner memorialized, requesting that salaries of prefectural and district officials be set according to the number of registered households. Districts with households numbering 3,000 or more would pay the magistrate 10,000 per month and the subprefectural registrars 8,000. Those with more than 2,000 households would monthly pay their magistrate 8,000

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and subprefectural registrars 5,000. Those with less than 2,000 households would monthly pay their magistrate 6,000 and their subprefectural registrars 4,000. Each household would pay 500 cash per month."

Old Five Dynasties History, 111, "History of Zhou: Annals of Emperor Taizu," 2, guangshun 1, 4th month, edict: 'The responsibilities of a Defender are not light. For those whose worries of office are the same, the salaries established ought to be equal. There have been rich and poor commanderies which have had equal responsibilities, or distant frontier prefectures, where salaries have been poor. It has been difficult to propose sending people to such places. Just as we discuss the height or lowness of the responsibilities of a place, we suffer from the rising and falling of salaries."

of the coins produced was inadequate, and they were adulterated with lead and iron. As a consequence after several months this measure was abrogated.

The supply of coins was somewhat improved during Latter Han, but during the qianyou period [948] there are references to "the hundred reduced by thirty." Hunan used tin coins, one hundred of which were the equivalent of one copper coin. All of this attests to a coin shortage. Of those in actual
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circulation, most were likely lead and tin or the so-called iron and tin coins. Liu Rengong and his son Liu Shouguang used iron to mint coins, and even made them of clay.

Latter Zhou's Emperor Shizong almost put into effect a policy of having a state monopoly of brass, banning private holdings of copper, with a penalty of transportation for three years for holding from 1 ounce to 5 [*sic*] catties, and capital punishment for quantities in excess of 5 catties. Sold to the government, a catty of pure copper fetched 150 cash, and raw copper fetched 100.[10]

Later, 3,336 Buddhist temples were abolished all over the Empire, and their bronze images were destroyed to make coins.[11] Copper was bought from Korea in xiande 4 [957].[12] Guo Rong (Emperor Shizong) looked upon minting coins as very important. It is said that he set up several dozen large furnaces in the rear palace, and personally oversaw the minting of the Zhouyuan Circulating Treasure.[13] This is why the Zhouyuan Circulating Treasure is somewhat more numerous.

As a consequence, within the territorial sphere of the Five Dynasties, aside from the one monetary depreciation carried out by the Liu-Yan, generally speaking the supply of money was constricted, and money's purchasing power was probably rather high. During Latter Tang, a catty of cow meat was only 5 cash,[14] and a *dou* of grain only 10 cash.[15] During the changxing period (930-933), in levying one type of agricultural tool tax, each *mu* was assessed at 1.5 cash. In Latter Jin's tianfu 8 (943), in converting the field tax, a *sheng* of grain was made the equivalent of two intact coins, and a picul was equated with 200 cash.[16]

Nevertheless, the economic center during that period lay among the Ten Kingdoms, and not the Five Dynasties. The territory controlled by the Ten Kingdoms was big, its population was large, and the monetary changes which occurred were also large.

Chu's Ma Yin minted lead and iron coins, ten of which were equated with one copper coin. Fujian also minted large and small lead and iron coins. We

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[10] *Five Dynasties Collected Statutes*, "Coins": "Xiande 2, 9th month, 1st day, edict. . . from now on, except for court objects, weapons, official objects and mirrors, and cymbals, bells and chimes in temples and monasteries, all other bronze utensils are banned. In the prefectures and districts of the two capital circuits, bronze images and utensils and bells, etc., made of bronze must be destroyed and handed over to the officials within fifty days after the promulgation of the edict. Private parties shall be given coins in exchange in proportion to the weight of metal they have turned in.

"Those who transgress by hoarding from 1 ounce to 1 [*sic*] catty, and those who are aware they are doing so, are to be transported for three years. Those around them are to get 70 strokes of the cane. Those who inform on them are to be rewarded with 10 strings of cash. For amounts from 1 to 5 catties, both offenders and those who were aware of their offense are to be transported for three years, and those around them are to suffer 90 strokes of the cane. Those who informed on them will be rewarded with 20 strings of cash. Those who hoard more than 5 catties, no matter how much the amount, will be executed. Those who knew of what they were doing will be transported for two years, followed by labor service for one year. Those around them will suffer 100 strokes of the cane. Informers will be rewarded with 30 strings of cash. Households handing over pure copper will receive 150 cash per catty from the officials, and 100 cash per catty for raw copper. . ."

[11] *New Five Dynasties History*, "Annals of Zhou," 12: "In the first year after ascending the throne, 3,336 Buddhist temples throughout the Empire were abolished. At this time China was short of coins, and it was proclaimed that all the destroyed Buddhist images would be used to mint coins. It was stated that the Wuchan Buddha had said that his life's experience had been a waste, and he was eager to profit the people. If his true body still existed and could profit the world, he would want to slice it up. How then could he but regret even less this bronze statue?"

[12] *Five Dynasties Collected Statutes*, 27, "Coins," Zhou, xiande 4, 2nd month, 11th day: "Knowing that Korea had much copper, permission was granted to trade for it to the people of Qingzhou, Dengzhou and Laizhou. Those who brought it to China were to sell it to the officials, who would buy it with coins. It could not be bought and sold privately."

[13] Su Qi, *Record of Opened Conversations*.

[14] *Old Five Dynasties History*, 38, "History of Tang: Annals of Emperor Mingzong," 4: "In tiancheng 2, 3rd month, day dingmao, an edict ordered prefectural and district officials to inspect the slaughter of cattle and selling of meat. Transgressors could be punished according to law. Meat could be sold from the time of the death of a cow for no more than 5 cash per catty."

[15] *Old Five Dynasties History*, "History of Tang: Annals of Emperor Mingzong," tiancheng 2, 12th month: "There was profound peace north of the mountains, with no disturbance or incursions along any of the frontiers. From Yanmen on north, and for several thousand *li* to the east and west, a *dou* of grain was only 10 cash.

[16] *Five Dynasties Collected Statutes*, 27, "Granaries."

cannot tell the face value of the Inaugural large coin, but the Yonglong large iron cash was equated with 10 small iron coins, and 100 lead coins. One of the Tiande coins had a face value of 100. The face values of the copper cash are not clear, but there was a tendency toward reduction of weight. The Tiande Heavy Treasure was smaller than the Inaugural large coin. Moreover, the number of copper coins is extremely small, and it is probable that it was mostly lead and iron coins that were in circulation.

Southern Tang must be considered the most important of the Ten Kingdoms. In addition to the Baoda Original Treasure of the baoda year period (943-957), Southern Tang also minted the Perpetual-circulation Spring-money 10-cash large coin. That happened during Emperor Xuanzong's zhongxing 2. Because of difficulties involved in the use of soldiers then, Zhong Mo's request was accepted, and this coin was minted, which amounted to a monetary depreciation. Later, when Zhong Mo was punished, this coin was abolished.[17]

The same year the Tang State Circulating Treasure was minted. Some say it had a face value of two Inaugural coins.[18] Others say that two of these were equal to one Inaugural.[19] Common sense tells us the first thesis is the correct one. Moreover, the Tang State Circulating Treasure is more uniform than the Huichang Inaugural, though it may be that the Southern Tang Inaugural was being referred to.[20] We do not know when such Inaugural coins were minted. Before long a Great Tang Circulating Treasure was minted.

The Tang State coin and the Great Tang coin
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became ever smaller and lighter because of private coining. Originally, a thousand of the Tang State coins weighed 3 catties 12 ounces, but a thousand of the privately minted ones only weigh 1 catty. The Tang State Circulating Treasure 10-cash coin was smaller than the Perpetual-circulation Spring-money. By the time of Emperor Houzhu, Li Yu (964), iron coins were being used.[21]

At first they were circulated along with and at the same face value as the bronze coins,[22] and as a consequence the phenomenon of bad money driving out good appeared. The people hoarded most copper coins, and merchants used ten iron coins to exchange for each copper one, which they then shipped across the state's boundaries, leaving only iron coins circulating inside the borders. The government had no way to stop this disappearance of copper coins.

The people also coined illicitly, causing prices to leap up. Houzhu then issued an order that one copper coin circulate as the equivalent of ten iron coins.[23] After the fall of Southern Tang, the number

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[17] *Five Dynasties History*, 62, "Southern Tang Hereditary House."

[18] *Tang History Continued*, 6, "Annals of Emperor Yuanzong": "Jiaotai 2, xiande 6 of Zhou, Summer, 6th month, day guisi. The ruler of Zhou died, and the Prince of Liang, Zongshun, succeeded to his throne. Autumn, 7th month. Zhong Mo requested the minting of a large coin, the insription on which read Perpetual-circulation Spring-money. One was equated with ten, and they circulated in parallel with old coins. Also minted was the Tang State Circulating Treasure, with one equivalent to two of the Inaugural coins."

[19] *Tang History Continued*, "Treatise on Food and Money": "Jiaotai 2, Autumn, 7th month. At Zhong Mo's advice, large coins were minted, with one of them equated with ten. The inscription read Perpetual-circulation Spring-money, with the word for money appearing on the right, and the word for spring on the left. These circulated along with the old coins. They also minted Tang State Circulating Treasure Coins. Two of these were equated with one Inaugural coin. They had also minted Great Tang Circulating Treasure, which was circulated alongside the Tang State coins. Within a few years these gradually became debased. The masses illicitly coined them, and they became extremely light and small." *Annals of the Ten Kingdoms*, "Tang History," and Wang Gong, *Convenient Miscellaneous Record*, have the same account. Lu You, *Southern Tang History* says that two of them were equal to two Inaugural coins.

[20] *Investigation of Literary Remains*, 9: "The Jiangnan called it the Tang State Circulating Treasure. There were others minted resembling the Tang system [i.e. the Inaugural Circulating Treasure] and with seal script inscriptions [referring to those still in the clerk script style]."

[21] Ma Ling's *Southern Tang History* says that it was only in qiande 2 (third year of Southern Tang's Houzhu) that iron coins were discussed, but Lu You's *Southern Tang History* and
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the *Five Dynasties History*, "Southern Tang Hereditary House" both say that iron coins were already being minted by jianlong 1, but were not put into circulation until qiande 2. The *Record of Coins*, 4, quotes Qian Ruoshui's statement that in jianlong 4, Han Xizai requested the minting of (iron?) coins. The various statements are incompatible.

[22] The histories are not very illuminating on the face values of Southern Tang coins. In addition to the contradictions in the records concerning the price in Inaugural coins of the Tang State and Great Tang coins, they are also not clear on the face value of the iron coins. The *Five Dynasties History*, "Southern Tang Hereditary House" says that one of the iron coins minted by Han Xizai was equal to two. This is quite illogical. How could one iron coin circulate as the equivalent of two bronze coins? Lu You's *Southern Tang History* says that six out of every ten coins were iron, and four were official copper coins.

[23] *Five Dynasties History*, 62, "Southern Tang Hereditary

of copper coins accumulated in the various commanderies reached 670,000 strings.

We cannot tell how many of these bronze and iron coins were minted, but all of them were localized, and limited in their circulation to their places of origin, particularly the iron and lead coins, which would not have been accepted in other regions. Ma Yin's lead coins could only circulate inside the walls of Changsha. Outside the city, bronze coins were used. Because the area within which they circulated was small, it must have been common for local prices to be unstable. The face value 1,000 and 10,000 coins minted by Liu Rengong and his son in Yan territory would have had to have affected prices.

Both copper and iron coins were in use in Sichuan. There was a fixed exchange ratio between the two. At first it took 1,200 cash to buy one bolt of heavy silk.[24] Since the iron coins were very finely made then, probably their number was not large. Later, their numbers gradually increased, and prices rose. By the beginning of Song a bolt of gauze silk went for 10,000 cash.

The consequence of Southern Tang's use of iron coins was also a jump in prices.[25] The consequence of circulating iron and lead coins must have been the melting down of bronze coins and their hoarding. There were bans on iron and tin coins and on lead and tin coins in various places, but with so weak and small a state, their effect could not have been very great.

Within the territories of the Ten Kingdoms, prices were probably very low when calculated in terms of bronze cash. When Qian Liu was in Zhejiang, a *dou* of rice was as low as 2 cash.[26] During the dayou year period of Southern Han, a *dou* of grain fell to as little as 3 cash.[27] In Wu-Yue a picul of white rice was only 50 cash among the people.[28]

Owing to the localized nature of the coinage, and the lack of uniformity in the quality of the coins, there were merchants who brought back lead and tin coins from the Jiangnan north to exchange for good copper coins. The localized and isolated nature of the Song Dynasty's coinage was a heritage of this period.

Because of the small number of bronze coins, in addition to silk cloth,[29] use of silver became still more common. Silver nearly took over the position held by gold during Qin and Han times for paying fines,[30] bribes,[31] meeting daily expenses,[32] paying

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House": "The Heir Apparent, Jing, was in difficulties through use of soldiers. Zhung Mo requested the minting of large coins, with one equivalent to ten, with an inscription reading Perpetual-circulation Spring-money. Mo was found guilty, and the large coins abolished. Han Xizai then minted iron coins, with one equal to two." Also, "in qiande 2 they began to use iron coins. The people hoarded the old coins, and so the old coins became fewer. Many merchants would use ten iron coins to exchange for one bronze coin, and then exported the bronze coins. The officials were unable to ban this. Yu therefore sent down an order making one the equal of ten."

Wang Yong, *Swallow Wing Bequeathed Plans Record*: "The Li-Tang of Jiangnan of old used iron coins. This was because of the advice of Han Xizai to use iron coins for sixty percent of the coinage and copper coins for forty percent. However the price of copper coins deviated considerably, and could not be forced into line. In the last years of this Jiangnan state, ten iron coins were needed to make just one copper coin." *Investigation of Literary Remains*, 9.

[24]*Chengdu Record*: "During its guangzheng era, puppet Shu began to mint iron coins. A thousand of these iron coins were equal to 400 bronze cash. An ounce of silver was worth 1,700 coins, and a bolt of heavy silk was worth 1,200 coins. The workmanship of the iron was very fine, almost as good as that of the bronze coins."

[25]*Tang History Continued*, "Treatise on Food and Money": "When he first succeeded to the position, he minted the Tang State coin. Its inscription read Tang State Circulating Treasure. A thousand of them weighed 3 catties 12 ounces. After a few years abuses arose. The masses illicitly minted them, and a thousand only weighed 1 catty. If you put them into water, they would not sink. Even severe prohibitions did not halt illicit minting. At this point there were recommendations for iron coins. After those had circulated for a few years, prices gradually increased, private coiners in the commanderies became quite numerous, and the coins became light and small."

[26]Lu Shiyi, *Discussion of Reasons for Wealth*. Cf. Feng Menglong, *Annals of the Year Jiashen*.

[27]Hu Wokun, *Circulation of Coins*, 23, "Edicts and Announcements."

[28]*Memorials of Advice on Government by Duke Fan Wenzheng*, first part, "Replies to Edicts on Ten Matters": "I have investigated the high years, and it is said that in former times the Liangzhe did not return to the dynasty. Suzhou had 4 garrison fields stations, with a total of 7-8,000 people solely devoted to agriculture, raising river dikes so as to reduce flood damage. Thereupon, among the people 50 cash could buy a picul of white rice."

[29]Zhang Qixian, *Record of Things Heard of Old of the Gentry of Luoyang*, "The Good Actions of the Literati of Emperor Taizu of Liang": "The lower rank Xu Hui of Fujian contributed a prose poem to Liang. The Liang ruler gave audience and rewarded him, and added that the ancients had a saying that in toasting a literatus one word was worth a thousand *jin*. Since military expenses were so great, one word would be rewarded with one bolt of heavy silk."

[30]*Old Five Dynasties History*, 40., "Tang History: Annals of Emperor Mingzong": "In tiancheng 4, 6th month, the acting

taxes[33] and for salaries.[34]

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There are examples of use of silver for all these purposes.

Although silver still had not fully assumed the role of a money, in so monetarily chaotic an age, it served as an excellent store of value. For example, monetary depreciation pushed up prices during Southern Tang. A bolt of fine smooth silk sold for 30 strings of iron cash, and one ounce of silver equalled 25 strings. Hence, calculated in terms of silver, the price was not too high. One length of smooth silk only cost 1.2 ounces of silver.[35]

5. Summary of Tang Dynasty Prices

If, in taking an overall view of Tang Dynasty money's purchasing power, we adopt the price of rice as our standard, prices were highest [*sic*; should be "lowest"] before the An-Shi disturbances. During the seventh century, especially during the '30s and '40s, rice was cheapest. During the second half of the century, except for the one year of yongchun 1 [682], there were no very high rice prices.

If we average out the rice prices which have been recorded, then during the zhenguan period, that is, during the second quarter of the seventh century, rice only cost 36 cash per picul, and during the last half of the seventh century, it was only 61 cash per picul. These, however, were prices during periods of especially good harvests. We may surmise normal prices during zhenguan to have been 100 cash per picul, or 160 cash per hectoliter.

During the second half of the seventh century, they were 150 cash per picul, or 252 cash per hectoliter.

During the first half of the eighth century, a picul cost 200 cash, or 353 cash per hectoliter.

After the An-Shi disorders, the price level rose sharply. Price figures for the last half of the eighth century were extraordinarily high. In contrast with the material for the most flourishing period of Tang, these are prices for expecially poor harvests or even for times of sieges of cities. The normal cost of rice was probably 2-3,000 cash per picul, and the fity year average was 1,006 cash per picul, or 1,692 cash per hectoliter.

The first half of the ninth century was the period of the most severe monetary contraction. Averaging the material we have collected, we get a figure of only 600 cash per picul, or 1,000 cash per hectoliter. This would be roughly the equivalent of 6 grams of gold, or 33 grams of silver.

There is no material on rice prices for the last half of the ninth century, but there were probably no large changes.

We can only estimate the influence of changes in money's purchasing power on the people's livelihood by comparing money's purchasing power with people's incomes, but a lack of source material gives us no way to calculate the incomes of the populace at large. We are only able to study the changes in officials' salaries over time and consequently in their

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head of Jingnan Military Prefecture, Gao Conghui, sent up a message acknowledging his offense, and offering in restitution tribute a fine of 3,000 ounces."

[31] *New Five Dynasties History*, 36, "Biographies of Adopted Sons: Li Cizhao": "The Jidao Dowager, Madam Yang, was good at accumulating wealth, and in her lifetime there piled up in her residence bribes to the amount of a million. When Cizhao was besieged by Liang, and was confined to the city for years, with military expenses consuming his substance, what Madam Yang had accumulated was of help. By then she had saved several hundred thousand ounces of silver, which had been been used to bribe eunuchs and servants by those who came to the capital. The eunuchs and officials all said that at first Jidao did not have any bad intentions, but had been corrupted by lascivious men."

[32] *Old Five Dynasties History*, 134, "Zhou History: Accounts of Usurpers: Yang Xingmi": "Guangqi 3 . . . At first Lü used it to meet Xingmi in Tianchang, and in pretense said to Xingmi: 'To be used there are 50 ingots of white metal buried under the corridor of the place where I live. On the day of peace, I want to use it to prepare a feast for the generals and officers.'"

[33] Xu Zai, *Record of Things Handed Down from the Wu-Tang* (written during the dazhong-xiangfu periods), "Encouragement of Agriculture and Sericulture": "During the shunyi period of Wu, the trading of official appointments was based on the land tax registers. For fields of the upper sort, each *qing* paid 2 strings and 100 cash. Middling fields paid a tax of of 1 string 800 cash per *qing*. Lower quality fields paid per *qing* 1,500

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cash. These were all in ready cash in full strings. If there was not enough ready cash, payment could be made in gold and silver at the market exchange price.

[34] *Old Five Dynasties History*, 116, "Zhou History: Annals of Emperor Shizong": "In xiande 3, 3rd month, the ruler of the state in Jiangnan, Li Jing, sent his official . . . a salary table was sent up, advancing 1,000 ounces of gold and 100,000 ounces of silver."

[35] Wang Gong, *Convenient Miscellaneous Record*: "Jiang Biaoshi said that in Jiangnan the Li clan . . . at the beginning of jianlong first proclaimed a ban on copper, and minted a Spring-money 10-cash. They also minted the Tang State Circulating Treasure, with 2 equal to 1 Inaugural coin. They then used Han Xizai's scheme for changing the coinage. After that, one bolt of smooth silk sold for thirty, and an ounce of silver for 25 strings. Other goods were in proportion to this. By the end of kaibao, the national treasury was empty."

purchasing power.

Past historians have supposed that

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over the whole course of Chinese history, official salaries were most generous during Han.[1] They reached such a conclusion because they did not know of the differences in weight standards over time and variations in money's purchasing power.

In actual fact, during the first half of Tang, official salaries expressed in real income terms outpaced those of the Han. Tang official salary schedules were changed seven or eight times, and of course most of these changes were attempts to adjust to changes in the purchasing power of money. In real income terms, the highest level was under the kaiyuan [713-42] system, and the lowest under the dali [766-80].

In terms of the nominal quantity of money received, official incomes grew ever larger: For example, of those holding the Three Ducal Ranks, Yang Guozhong of the tianbao year period [742-56] would only have received several dozen strings of cash as his monthly salary if he had depended only on his income as Grand Minister of Works. However, he held several posts simultaneously, and brought in several million cash per month from various sources. During the dali period, Guo Ziyi brought in 120 strings a month as salary for his post as Grand Marshall. Ma Suijing of the zhenyuan period [785-805] could have gotten 200 strings.

If, however, we convert these to real income, the situation becomes different: If we take the price of rice as our standard, then Yang Guozhong got 160 hectoliters per month, and Guo Ziyi got less than 40. The situation of lower ranking officials was similar, but those of rank seven and below received relatively more generous incomes during kaiyuan, doing far better than officials of the same ranks during the dali period.

TANG OFFICIALS MONTHLY SALARY CHANGES[2]

Grade	Kaiyuan System		Dali System	
	Money Income (cash)	Real Income (hctltrs of rice)	Money Income (cash)	Real Income (hctltrs of rice)
1	54,333	161.47	120,000	40.00
2	40,666	120.84	80,000	26.67
3	30,332	90.17	60,000	20.00
4	21,567	64.10	40,000	13.33
5	15,866	47.14	30,000	10.00
6	8,632	25.66	20,000	6.67
7	6,766	20.11	10,000	3.33
8	4,875	14.49	4,116	1.37
9	3,817	11.34	1,917	0.64

Unfortunately we cannot compare the kaiyuan system with that of Western Han, because the Western Han salary system records are incomplete, but if we compare the kaiyuan system with the Eastern Han yanping system, we can tell that the incomes of officials of Eastern Han (at the beginning of the second century A.D.), whether in nominal or real income terms,

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were far less than those of high Tang (first half of the eighth century) officials.

Eastern Han's highest rank, the Two-thousand Picul rank, only got 18 strings of cash per month. Discounted into pearl rice, this only came to 26 hectoliters. A grade-three official of the kaiyuan period received more than 30 strings of cash per month, which in real terms was equal to 90 hectoliters of rice per month. Eastern Han's lowest ranked official, called the One-hundred Picul rank, got 1,600 cash per month, or in real terms, 2 hectoliters of rice.

A Tang grade-nine official of the kaiyuan period got over 3,800 cash per month, which in real terms came to more than 11 hectoliters of rice.

Because official salaries during Han were calculated in terms of a grain standard to begin with, they suffered relatively little from oscillations in the purchasing power of money. Changes in these amounts and differences in the measures employed during Eastern and Western Han could not have made for very great differences in official incomes during the most flourishing period of Western Han as compared with the Eastern Han level.

Even if we assume that salaries during Western Han were twice those of Eastern Han, they still

[1] *Qing Dynasty Investigation of Literary Remains Continued*, 141, "Official Ranks," item 27: "Official salaries flourished most during Han. Tang and Song did not come up to that level."

[2] Official salaries are according to *New Tang History*, 55. Rice prices in the table for the kaiyuan system are taken as 200 cash per picul, or 336 cash per hectoliter. For dali, a price of 2,000 cash per picul or 3,360 cash per hectoliter is used as the basis for the calculation. After dali, monthly salaries were determined on the basis of the office held, and not on the basis of rank. Regardless of rank, what is displayed in the table is for convenience of observation, so that the facts may be made fully clear.

would not have been up to the kaiyuan level. However, Han officials did regularly receive imperial gifts.[3] These gifts formed a part of their incomes, and one suspects, no small part of total incomes in general. This was especially true for generals, like Wei Qing. The gifts he received after a single victorious battle exceeded a lifetime's official salary income. This, however, is an atypical example, and Tang is not without similar cases. The gifts received by Guo Ziyi were also likely not few. Therefore some say that both Han and Tang were particularly generous to generals.

HAN-TANG OFFICIAL SALARIES
COMPARATIVE TABLE

Official Rank	Money Income (cash)		Real Income (hctltrs rice)	
	Han (yanping)	Tang (kaiyuan)	Han (yanping)	Tang (kaiyuan)
Han 10,000-picul=Tang grade 1		54,333		161.47
Han Mid-2,000-picul=Tang grade 2	18,000	40,666	26.15	120.84
Han 2,000-p. =Tang gr 3	10,000	30,332	13.34	90.17
Han 1,000-p. =Tang gr 4	8,000	21,567	11.23	64.10
Han 600-p. =Tang gr 5	7,000	15,866	8.78	47.14
Han 400-p. =Tang gr 6	5,000	8,632	6.27	25.66
Han 300-p. =Tang gr 7	4,000	6.766	5.02	20.11
Han 200-p. =Tang gr 8	2,000	4,875	3.10	14.49
Han 100-p. =Tang gr 9	1,600	3,817	2.01	11.34

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Nevertheless, for the most part the number of gifts diminished after Han, and there were inflexible rules concerning them, including during Tang. Tang officials, however, did in addition have office lands income, which has not been included here.

Capital officials' office lands during Tang ranged from 12 *qing* for first rank down to 2 *qing* for ninth rank officials. One *qing* produced 50 piculs of rice.[4] If the official actually received 60 percent of these amounts, then a first rank official would receive each month 17.83 hectoliters, and a ninth rank official 2.97 hectoliters in office lands income.

There is not much material on the income of laboring people. During the reign of Xuanzong in the first half of the eighth century, a laborer's wages were 3 *chi* of heavy silk per day.[5] If we calculate on the basis of a price of 550 cash per bolt of heavy silk, then the cost of a month's substitute labor service would be 1,237 cash, or 3.66 hectoliters. This was equal to one-third the income of a ninth rank official. Sometimes, however, a bolt could only be sold for 200 cash.

In Emperor Dezong's jianzhong 1 [780], a gardener's annual wage was 960 cash, with 7 *hu* and 2 *dou* of rice in addition.[6] Prices then were very high. Rice probably cost one or two thousand cash per *hu*, so in real terms such a laborer's monthly income was only 0.4 hectoliters of rice.

During the taizhong year period [847-860] of Emperor Xuanzong, the wages of hired labor were 500 per month.[7] There is no documentation on the price of rice then. If we calculate on the basis of the cost of rice during the kaicheng period [836-41], then this was equal to 0.36 hectoliters.

The Tang dynasty, however, had a formula for allocating agricultural land on a per capita basis, which provided most people with a basic income. Wages can only be said to have provided supplementary income.

[3] *Han History*, "Biography of Gong Yu," records a communication sent up by Yu which reads: ". . . was appointed Grandee Remonstrant, with a rank of 800 piculs, receiving 9,200 cash per month, and also Grand Provisioner of the Public Granaries. He was also given as gifts during the four seasons various kinds of cloth, clothing, wine, meat and various fruits. . . He was then appointed Imperial Court Grandee, at 2,000 picul rank, receiving monthly cash of 12,000, and many gifts, so that his family daily grew more rich."

[4] *New Tang History*, 54, "Treatise on Food and Money": "Fields, averaging the most with the least fertile, produce over 50 *hu* of rice per *qing*." The *hu* used here was probably the same as the picul [*dan*].

[5] *Six Statutes of Tang*, "Board of Census," 3: "All individuals to work at labor service for two ten-day periods per year (with two days added in years with intercalated months). If there is no work, then the cost of their hire will be collected, which is 3 *chi* per day (with one-fifth more for plain cloth)."

[6] *Tang Collected Statutes*, 89, "Channels for Profiting Men."

[7] Li Junyan, *Continued Record of the Deep and Unusual*, 1, "The Unicorn Guest."

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4.3 Monetary Studies

1. Monetary Theory

There were a great many changes in the circulation of money during Tang. At the beginning of the dynasty a natural economy predominated. During mid-Tang there occurred a severe monetary depreciation, followed by a deflation. Near the end of the dynasty there was to a certain extent regression back to a natural economy. As a consequence of all these changes, there were quite a few opinions expressed on money.

From the early years right down through the kaiyuan era, domestic peace was maintained, commerce underwent development, and the quantity of money was evidently inadequate. Particularly because of the chaotic state of the coinage of the Northern and Southern Dynasties period, the greater proportion of the coins at the beginning of Tang were of insufficient size.

The monetary reform of wude 4 [621] abolished the use of these old coins, and put in their place the new Inaugural Circulating Treasures. The supply of money was to be entirely dependent on the new coin. Since this rendered the number of coins still fewer, a natural economy flourished.

The conferring of furnaces for minting coins on privileged people had not then been given up as a way of supplementing coin production. Those who paid attention to monetary questions often advocated the minting of coins, many on the basis of a somewhat bullionist point of view.

Chen Zi'ang (661-702) is an example of such a view. In his "Matters for the Benefit of the State" he wrote:

> In my opinion, the mountains of Jiannan [roughly, modern Sichuan] contain much copper ore. If this is taken to cast coins, it may enrich the state. Now the mountains are all shut off. The officials have nothing with which to cast. Revenues for the army and state have contracted. This causes the public offices to be empty, private dwellings to be impoverished and mean, and the precious things of Heaven and Earth to be abandoned without consideration.[1]

In kaiyuan 20 [732] because of the small number of coins, the authorities ordered the merchants and people in general to not exclusively use coins, but to also employ fine smooth silk, gauze, heavy silk, plain cloth and other commodities as money. But use of commodities as money suffered from a number of inconveniences, and in kaiyuan 22 [734] Zhang Jiuling (673-740) drafted for Emperor Xuanzong an "Imperial Message Allowing Private Casting of Coins,"[2] which opposed commodity moneys and advocated free coinage:

> Cloth cannot be exchanged by the foot or inch. Grain may not be traded by the spoonful. Hence, when the ancients made coins, they used them to circulate commodities. [This decree and the texts of the contributions made by Zhang, Liu Zhi *et al* to the debate it tripped off in 734 are fully translated in Penelope A. Herbert, "A Debate in T'ang China on the State Monopoly on Casting Coin," *T'oung Pao*, LXII, 4-5 (1973), 253-292. Cf. also the translation in W. Vissering, *On Chinese Currency*. Leiden: Brill, 1867, p. 107.]

The last two characters in this quotation, *huobi*, still referred to commodities in general, and not money. Zhang Jiuling not only considered a monetary economy to be better than a natural economy,

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he also believed that too small a quantity of money would cause prices to be too low, and that this would affect production. For this reason, to maintain production it was necessary to raise commodity prices, and so it was necessary to increase the minting of coins:

> Not long ago, tilling and weaving were the sources of wealth. Then, cheaper prices harmed these fundamental activities. Polished and cast objects, because fewer in number, became more expensive. Now, though the officials cast coins, what comes in does not amount to much. Though it is a basic principle to economize on labor, the expense of wages has become great. Among both public and private sectors, needs are not supplied, and people continually speak of the abuses. How can we not change the medium of circulation?

His method of changing the medium of circulation was to let the people cast coins privately:

> Formerly, at the time of Emperor Wen of Han, there were orders permitting coining. Though not approved by Jia Yi, these measures were not rescinded by a virtuous ruler. From antiquity to the present, times and circumstances have changed. How can principles remain fixed, if they contravene the tenets of righteousness? If matters are kept restricted to the end, there is certain to be an insufficiency for use. And so I desire to not forbid private coinage. The various officials can discuss in detail the principles involved and

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[1] *Collected Works of Chen Boyu*, 1.

[2] *Collected Works of Duke Zhang Wenxian of Qujiang* (woodblock edition of Guangxu year renchen [1892]).

the arguments for and against them. His Majesty can personally observe these arguments, and choose the good advice to follow.

Opponents of this view were, however, very numerous. Neither Pei Yueqing nor Li Linfu approved of private coinage. Liu Zhi raised five reasons why it would be unsuitable:

> The Former Kings aimed to protect objects of value, to watch over human affairs, and pacify All Under Heaven. Those measures which they used to mandate these things were called measures or standards. Standards caused some objects to be high and some low, rather than all being the same. Hence their giving was in the hands of the sovereign. Their taking away was in the hands of the sovereign. Enrichment was in the hands of the sovereign. . . The use of this technique was the sovereign power of the ruler. The coins of the present day are simply the lower money of the ancients. If Your Majesty simply gives them up, and entrusts them to the people, then there will be no way for the superior to guard the inferior, or for the inferior to serve the superior. This is the first objection.
>
> When goods are cheap, agriculture is harmed. When coins are light, then trade is harmed. Hence, those who would do good for the state keep watch over the prices of goods and the weight of the coins. If goods are in heavy demand, then coins will be lightly demanded. Light demand for coins is owing to goods [This should read "coins"] being numerous. If numerous, then methods should be devised to draw them in and render them fewer in number. If fewer, they will be more heavily demanded. If heavily demanded, then methods should be devised to distribute them, and cause them to be more lightly demanded. The basis of lightness and heaviness of demand must lie in this. How can it be hypocritically put off onto the people? This is the second objection.
>
> In casting coins, if they are not adulterated with lead and iron, then there will not be profit. If adulterated with lead and iron, they will be bad. If bad things are not strictly banned, then evil will not be chastised and stopped. Moreover, even though we now block off the road to private coining, people still risk death to transgress against it. If we open up the source of such activity, can we expect people to follow the orders issued concerning it? This would be to dig a pit, and then entice people to fall into it. This is the third objection.
>
> When you permit people to cast coins, if it is without profit, then people will not do it. If it is profitable, then masses of people will leave the fields of the south. If masses leave the fields of the south, then the sod will not be broken, and as a consequence cold and hunger will approach. This is the fourth objection.
>
> Some people's wealth will be excessive, and thus it will not be possible to exhort them through the prospect of rewards. Some will be poor and hungry, and thus it will not be possible to awe them with prohibitions. As a consequence, the laws will not be observed, and human rationality will be disjointed by both wealth and poverty. If assent is given to their casting of coins, then the poor will not be able to get by, and I fear that they will become still poorer, and be reduced to the status of servants in the households of the rich. The rich households will take advantage of this to become still more licentious. . . If one insists on consenting to private coinage, this will give men a sovereign right to profit, and to abandon the state's authority. This is the fifth objection.[3] [Cf. Vissering, pp. 109-112.]

Liu Zhi's five objections are not at all novel, being for the most part drawn from the *Guan Zi* and the theories of the Han Dynasty Legalists. He does not derive his objections to private coinage from the need for a unified monetary system, but from the need to uphold the ruler's monopoly of sovereign power. He regards money as an instrument of the ruler, and in this respect he is even more congruent with the Legalists.

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Hence he goes on to say:

> Money, the spring, flows from on high. It may be used to equalize lightness and heaviness of demand, and to secure sovereign control over the primary and secondary activities. The Chief Minister of Qi [Guan Zhong. EHK] obtained this technique, and his state secured the hegemony. King Jing of Zhou lost the Way, and the people's use of it fell into abuses.[4]

He links private coining with production, and says that private coining will cause the gap between poor and rich to grow ever greater, because the poor will generally cast coins on behalf of the rich. In this respect he displays some sympathy for the poor.

Liu Zhi was also a quantity theorist. He believed in controlling the quantity of money so as to stabilize prices. He also raised the connection between the value of money and population size, something which his predecessors had not discussed:

> The reason coins are in heavy demand is that the number of people has steadily increased as compared to before, and the furnaces have not increased over the old number.[5]

That is to say, if the quantity of money is unchanged, and population keeps on increasing, then the value of the money would increase. This clearly explains why the private coining during the first

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[3] *Old Tang History*, "Treatise on Food and Money."

[4] "Request for Prohibition of Private Casting of Coins," *Literary Fragments of the Tang*.

[5] *Old Tang History*, "Treatise on Food and Money."

century of Tang did not cause a large-scale rise in prices. It was because during this century the number of households had more than doubled. During zhenguan [627-50] there were no more than 3 million households. By kaiyuan 20 [732], their number had increased to 7,861,236. Naturally production also increased, and so still more money was needed.

It is worthy of note that during Tang, when a natural economy predominated, not many people openly advocated objectivism. Evidently, since they were actually living under the circumstances of a natural economy, everyone was aware of its inconveniences, and everyone hoped to use coins.

Du You (735-812) displayed such an attitude. In the chapter on money in his *Universal Statutes* he wrote:

> The significance of the original establishment of coinage was truly deep and truly far-reaching. Of all the myriad of things, there is none which is without its quantity. Since they have quantity, then it is necessary to establish one thing to be their master.

He seems also to have believed money to have been the creation of the monarchs. He considered money to be a unit of account or unit of value used to measure the multitude of things. The word "quantity" as he uses it must not refer to the quantity of things, but to the quantity of value or units of value, because different things cannot be compared in terms of the number of their units, but only in terms of their quantity of value.

The usefulness of money lies in its ability to transform the multitude of things into quantities of the common substance, value, so that they may be compared. With this insight, he had elucidated a basic function of money, its function as a measure of value. Of course he did not indicate what the basis of that value was. He merely saw the need for a standard measure

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to serve as a basis for comparing otherwise incommensurate things.

He went on to discuss why China did not use gold and silver or grain and cloth as moneys, and had to use coins.

> Gold and silver are engrossed for the making of utensils and ornaments. Grain and cloth suffer from the burden of being carried about and broken up. Only coins may be traded and circulated without obstruction, like a spring of water. If grain and cloth are used for exchange in the market, not only would bad practices result from the burden of their transport and fragility, it would also be difficult to use them by the grain and ounce or foot and inch.

Here he is simultaneously setting forth in a forceful way the superiority of manufactured money over commodity moneys, and is touching on another of money's basic functions, its function as a medium of circulation.

He seems to not even approve of the use of gold and silver, but that is because at that time China did not mint gold and silver into coins. Grain and cloth are unsuitable for use as money simply because of their inconvenience. The five grains are inconvenient to carry, and cloth is inconvenient to subdivide.

Du You probably wrote these words during zhenyuan [785-805]. In zhenyuan 12 the authorities ordered that fine smooth silk, gauze, heavy silk, plain cloth and other goods be used jointly with coins in making market exchanges. It was possibly only after seeing the defects of this form of barter economy that he wrote those words. Actually, a decree of kaiyuan 22 [734], 3rd month had already stated that "cloth may not be exchanged by the foot or inch; grain may not be traded by the spoonful." Perhaps Du You was merely reiterating these two phrases.

In Emperor Dezong's jianzhong 1 (780), the Double Tax was instituted, and thereafter various taxes had to be paid in cash. This ought to have greatly promoted the advance of a monetary economy, but as the supply of coins was inadequate and most coins flowed into the state's treasuries and were not allowed to flow out again, prices fell.

Rich men struggled to hoard coins, causing the markets to become still more constricted. The peasantry were obliged to sell off still more agricultural products before they would be able to pay the same amount of money in as tax.

At that point a number of men concerned with economic questions advocated the substitution of cloth for ready cash as part of their opposition to the Double Tax. Lu Zhi, Han Yu, Yang Yuling and Li Ao all expressed this view.

Lu Zhi expressed his attitude toward money in his "Second Essay on Equalizing and Moderating Taxes to Relieve the Masses."[6] To begin with, he considered money to have been established for a definite purpose by the monarchs:

> The Former Kings, fearing a failure of equity in prices would hinder exchange among the people, set up the rules for currency so as to regulate lightness and heaviness suitably. Accumulation and dispersal, relaxation and tension in the markets, were necessarily all derived from this. This is the great instrument for guarding wealth, and profiting the sovereign power of the state. Its preservation is in the hands

[6] *Collected Works of Duke Lu Xuan*, 22.

of the officials, and it is not to be delegated to those below. Thus, grain and cloth are made by the people; coins are made by the officials. That which is made by the people should be taken in taxes. That which is made by the officials should be the form in which revenues are dispersed. This is clearly the logic of affairs.

He also states:

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The Sages of ancient times took the stores of value of the mountains and marshes to make the round and spade coin forms of treasure. For this reason the state monopolizes the profit from these things, and does not give them over to the people.

His reference to failure of equity in prices may be explained by noting that if there is no basis for comparing values, there will be no standard for making exchanges, but it may even more likely refer to an inverse relationship between price and value. That is, a large value having a low price, and something of small value having a high price. This too would be a failure of equity.

[If so, Lu Zhi would have been alluding to the "paradox of value" --e.g. the apparent fact that diamonds have a higher price than bread-- that so puzzled Adam Smith, and was not resolved until the "marginal revolution" in economic theory of the late nineteenth century showed that the *first* unit of bread a person acquires is actually valued higher by him than his first unit of diamonds, but because bread is so abundant, later units of bread are soon valued lower than diamonds. The failure to resolve this paradox has tended to discredit markets as unfair, and thereby justify interventions in the market both in China and the West. EHK]

Hence Lu Zhi believes money's fundamental function is to serve as a measure of value, and that to make profitable use of this function to carry out government's pricing policies would demonstrate the sovereign power to guard wealth.

How would the nation use money to regulate prices? Lu Zhi holds that it would do so by increasing or decreasing the quantity of money:

Goods are cheap because coins are few. If few in number, they are heavily demanded. If they are heavily demanded, then increase the number minted and distribute them, causing them to become lightly demanded. If goods are expensive, it is owing to an abundance of coins. If abundant, they are lightly demanded. If they are lightly demanded, then work out methods for gathering them in, causing them to become heavily demanded. The prices of goods are linked to the numbers of coins. The number of coins depends on the officials'constrictive or expansionary policies.

If the officials lose control, the initiative will fall to the people. If the people do not get to cast coins, but are constrained by edicts to pay them in taxes, this will cause the poor to lose their property, and falsely assign their wealth to rich households. If the rich store up commodities, and usurp the sovereign right to circulate light or heavy coins, then below men will be placed in difficulties, and above they will usurp the means to profit. What we now suffer from is precisely this.

His words are virtually a repetition of those of Liu Zhi, but his statement that the prices of goods are linked to the numbers of coins is a classic example of the quantity theory. No previous quantity theorist had stated things so clearly or fundamentally. This is why he advocated minting coins and banning copper utensils:

Exploitation of the mountains for making coins ought to be sincerely encouraged, and use of copper for utensils should be rigorously banned. If such arrangements are maintained, then coins will no longer be so heavily demanded.

Another practice he opposed was payment of taxes in cash:

Why if people are forbidden to cast coins, should taxes be paid in coins?

If carried to its logical conclusion, this sentence would result in adoption of a natural economy, with each using what he had to exchange for what he lacked, since if the people did not mint coins and could not use them to pay taxes, they could not use them to buy goods either. In that case, the coins minted by the government would only be issued, and never collected. How could such coins circulate anywhere but within the ruling class?

[The government could and did itself market those commodities it had collected as taxes, but then it incurred the uncertainty caused by changing prices. EHK]

Nevertheless, this statement is representative of the ideas of that time. A great many people supposed that since the people did not mint coins, this was a reason to oppose the monetization of taxes.

Han Yu (768-824), in his "Petition on the Heavy Demand for Coins and Light Demand for Goods," offered a policy proposal for dealing with the constriction of money in circulation. He proposed several methods for handling the situation:[7]

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First, with regard to tribute in local products: The five grains, plain cloth and silk are what the peasants are capable

[7] *Collected Works of Mr. Changli*, 37.

of providing, and the laborers are capable of making. The people cannot mint coins, and to have them sell their cloth and grain so as to pay the officials is to make goods still more cheap and coins still more expensive. Now, villages which produce plain cloth should pay their taxes entirely in plain cloth. Places that produce silk and various other commodities should pay their taxes in those commodities.

Places a hundred *li* from the capital would all put out hay; those 300 *li* away would use grain; those within 500 *li* along the Yellow and Wei Rivers could use them to transport their tribute in hay or grain, as they preferred. Thereby the people will turn increasingly to agriculture, coins will be increasingly lightly demanded, and grain and cloth will be increasingly heavily demanded.

Obviously this passage is directed against the Double Tax, and is colored by objectivism, but Han Yu is not an objectivist. He simultaneously advocated the payment of taxes in kind and the continued use of money:

Second, with regard to stopping up the cracks and not causing leakages: Forbid men from using copper for utensils. Forbid the casting of copper into Buddhist images and bells. Order capital punishment without mercy for all those who hoard copper in excess of a given weight, and who recast coins into other objects. Forbid export of coins beyond the Five Mountain Ranges. Use silver for all purchases and sales. All those who illegally export coins and transgress against the edicts in doing business, should be put to death. Allow men to carry old coins [back?] from beyond the frontiers. If all these things are done, then coins are certain to become more lightly demanded.

The phrase "use silver for all purchases and sales" is not very clear. If he was truly advocating the use of silver, he would have been the first in China to have done so. However, he does not go on to elaborate on this statement, and his main point was about minting coins, which is in contradiction with this statement about "using silver for all purchases and sales." Probably silver was substituted for "coins" as a copyist's error, and his meaning was: Pay taxes with goods; in doing business solely use coins. [It is also possible that he meant that *foreign* trade should be financed with silver rather than copper cash. EHK] This is because he not only did not advocate the abolition of coinage, he even called for carrying out a monetary depreciation to overcome the shortage of coins:

Third, increase their face value, causing one coin to be equal to five, and keep using old coins along with the new. The expense of casting a thousand coins has also been a thousand. Now the casting of a thousand coins will yield coins worth 5,000, and so more can be turned out.

Fourth, brave the impediments to make certain the procedures are established. Any procedure is bound to have impediments when first established. Now, if people are obliged to send in their local goods in payment of taxes, the prefectures and districts will lack ready cash, and if that is the case, and if grain and cloth are no longer heavily demanded, then there will not be enough to meet expenses, and officials' monthly salaries will be reduced. If one-third [of income] is devoted to minting coins, and the new coins are increased five-fold in face value,-demand and supply will be matched, and the difficulties brought to an end.

There are some differences between his currency depreciation scheme and the usual sort of exploitative depreciations. His aim was merely to restore the prices of agricultural products. But he did not realize that restoring such a price would be misleading, like someone covering his ears while he steals a bell. Moreover, it could not be carried out anyway. In his plan to have the old coins continue in use along with the new ones, he is, of course, referring to having the new face-value 5 coins and the existing standard coins simultaneously in circulation. Since the two coins would be the same weight, the phenomenon of bad money driving out good would be bound to appear.

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The old coins would be melted down and recast into other objects, driving them out of circulation.

Liu Zongyuan (773-819) called for a policy of lowering prices:

If money is in heavy demand, then there will be profit. It may be asked, will this not harm agriculture? I reply, taxes will not be paid in coin, and the quantity of cloth paid will be regulated. Thus, agriculture will not be harmed. If coins were used, then more cloth would have to be sold off, and then there would be harm.[8]

Obviously, he is taking the standpoint of the consumer, and at the same time he also wants to protect the profitability of the tax-paying peasant household. By establishing a fixed amount of cloth [and perhaps varying the amount according to price levels. EHK] as the tax payment, he would avoid having the burden become excessively heavy.

When Emperor Muzong ascended the throne (820), all still felt that hardship was being caused by insufficient demand for goods and excessive demand for coins. When Emperor Muzong ordered the officials to devise a plan to deal with this, they unanimously advocated a strict prohibition on the man-

[8] *Collected Works of Liu Hedong*, 44, "Words Against the State, first part, Large Coins."

ufacture of copper utensils. Yang Yuling (753-830) then advocated letting the people pay taxes in cloth and local products, and not insist on collecting cash. In passing, he discussed the origins and functions of money:

> The kings regulated coins so as to exercise sovereign control over the multitude of goods, and so that trade could move things from those who had them to those who did not. Unceasing exchange caused goods to be neither too expensive nor too cheap. The skill involved was none other's than the ruler's.[9]

This is almost identical to Lu Zhi's position, and is in line with the views of the Legalists.

The account in the *Comprehensive Mirror for Illumination of the Prince* differs somewhat, and is rather more detailed. This discussion was directed against the Double Tax. Yang Yuling said:

> Coins are used to exercise soverign control over the multitude of commodities, and so that trade could move things from those who had them to those that did not. They ought to flow and be dispersed. They ought not to be gathered in and hoarded. Now, when the masses are taxed, coins are amassed in the public offices. Moreover, during the kaiyuan era, there were in the Empire more than seventy furnaces for casting coins, with an annual income of one million. Now, there are only a dozen or so mints, with annual income of 150,000. Cash piles up in the mansions of the merchants, and flows into the hands of the external barbarians.
>
> Prior to dali, in the trade of Ziqing, Taiyuan and Weibo, iron and lead coins were used intermixed with the regular coins. In the Lingnan, gold, silver, cinnabar and elephant tusks were all used. Now, these places all use coins. Given these facts, how could coins not be heavily demanded? How could goods not be lightly demanded? (*Comprehensive Mirror for Illumination of the Prince*, 242,"Annals of Tang," 58, Emperor Muzong, changqing 1.)

This passage includes his opinion of money's functions. He evidently emphasises money's two most important functions: its role as a measure of value and as a medium of circulation. He also clearly states the reasons why money was in greater demand than goods, and gives a theoretical reason for keeping money in circulation rather than in hoards.

Li Ao's "Petition for a Change in the Tax Law" was also written during this time. He too opposed the Double Tax, and also advocated use of cloth in place of coins. He says that prices then were much lower than forty years previously, when the Double Tax was first established. As a consequence peasants

[9] *New Tang History*, "Treatise on Food and Money."

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had to sell several times more grain and cloth before they could pay the same amount of tax. Hence, though the amount of the tax had not changed, the peasantry's actual burden had increased threefold. He wrote:

> We press the fundamental activity into malpractices because we enforce excessive demand for coins on that which the masses depend upon for their livelihood. Coins are cast by the official bureaus. Grain and cloth are what the farmers put forth. Now we cause the farmers to sell their grain and plain cloth cheaply in exchange for coins to pay in to the officials. Is this not to turn things upside down, and to take from those who have not? Because of this, the rich households and great merchants all accumulate coins so as to drive up demand. Hence the farmers daily grow more straitened, and those who take up secondary occupations daily increase in number. . .
>
> Now, it should be proclaimed to the Empire that, no matter how far or near, all are ordered not to use coins, and all are to pay [taxes] in cloth. All official bureaus in their payments and collections should be allowed to use plain cloth and silk of breadth not to exceed one *chi* nine *cun*, and of length no greater than forty *chi*. This would be a *chi* greater than at the beginning of the Double Tax.[10]

The thesis that because the masses did not cast coins they ought not to pay taxes in coin was quite current at that time. Bo Juyi (774-846) said the same thing. This phrase was often used as a pretext for opposing the use of coins, but in principle it cannot stand scrutiny. Its use merely proves that these people did not understand monetary questions.

They did not realize that under the circumstances of those times they ought to have reduced the tax rates rather than have reverted to a natural economy. Because they did not understand monetary questions, we cannot say that they were objectivists. They did not intend to abolish money except for the purpose of paying taxes. They advocated use of cloth as a temporary measure, as an expedient.

Pi Rixiu, who lived during the last half of the ninth century, was a nominalist. In his view, a good's price had nothing to do with its own nature, but was determined by the subjective will of the monarch, or by a law determined by this subjective will. In his "The Original Treasure"[11] he states:

> The most precious goods are gold and jade. What men are most urgently in need of are grain and cloth. When a people

[10] *Collected Works of Duke Li Wen* (Library of Mao Jin edition), 9.

[11] *Master Pi's Anthology* (Japanese edition of 1427), 3.

is starving, it requires grain to fill its stomachs. When a people is cold, it requires cloth to warm it. I have not heard of gold being able to cure famine, or of white jade being able to relieve cold. The people do not perversely make these expensive. Then from whence comes the preciousness of gold and jade? It is said that gold and jade were made precious by the Sage Kings of antiquity.

If we speak of them in such terms, then gold and jade are what the kings use. If those who make policy sent down their orders, saying: Gold and jade are not to be hoarded in the people's households, and those who hoard them, will be subject to the criminal law, then the people will not hoard them. If the law is so arranged, then the people are certain to value grain and plain cloth, and gold and jade will disappear. Under these circumstances, even if you wished that the men would not plow and the women would not weave, how could you get them to abstain from these activities?

The word *huobi* apparently took on its modern meaning of "money" during Tang. In fact the two characters *huo* and *bi* were rarely used together as one word before Tang. When *huo* and *bi* first appeared, they had no definite meaning. Sometimes they referred to commodities, sometimes to money.

At the beginning of Tang, Zhang Jiuling

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wrote "the ancients made coins to circulate *huobi*." Here *huobi* evidently still alludes to commodities, but the two characters were already being used together as a noun.

By the ninth century, Yuan Zhen (779-831) said "from the mountain ranges south, they use gold and silver as *huobi*."[12] Here *huobi* had taken on its modern meaning. This noun's evolution clearly illustrates the evolution of money itself. It shows that money evolved out of commodities.

Because of the monetary contraction of the yuanhe period [806-21], and the hoarding of coins by rich families, people were deeply impressed with the necessity of keeping money in circulation. They understood that money in dead storage did not produce any effect. The prohibition on storing up coins during Emperor Xianzong's time was determined on the basis of this understanding. In yuanhe 3 (808), an edict stated:

The law of money and goods requires that they circulate. If coins are stopped up, then goods must become increasingly cheap.[13]

In yuanhe 12, there was another edict:

In recent days, cloth has become lightly demanded, and coins have gradually lessened in number. They have all been drawn in and stopped up, and have not gotten to circulate.[14]

The principle which underlay these edicts was that money's usefulness only appeared when it was in circulation. If a piece of money was in dead storage in a household, for all practical purposes this money did not exist. If it circulated a number of times, that was the equivalent of having rather more money.

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2. Monetary History

The *Sui History* and *Jin History*, which were compiled at the beginning of Tang, each contained a "Treatise on Food and Money." The one in the *Jin History* consisted of one *juan* divided into three subsections. The first two subsections discuss general economic questions, including monetary matters. The third subsection is solely devoted to monetary history.

It takes up where Ban Gu's "Treatise on Food and Money" leaves off, beginning with Gongsun Shu [d. 36 A.D.] and continuing right up to the Eastern Jin Emperor An's yuanxing period [402].

In all, hoever, it only contains 1,792 characters. It includes the comments of Zhang Lin, Liu Tao and Kong Linzhi, but there is very little historical material truly concerned with money. There is hardly a word about the monetary system of Western Jin. It merely mentions that Jin used the Five-grainer set up by Emperor Ming of Wei. For Eastern Jin, it simply records that the old coins of the Sun dynasty of Wu were used, and that coins of three denominations of weight were used.

The "Treatise on Food and Money" in the *Sui History* has three subsections dealing with money, for a total of 1,200-1,300 characters. It deals with the Northern and Southern Dynasties as well as with Sui, but is not complete. Of the Southern Dynasties, it deals only with Liang and Chen, and of the Northern Dynasties, only with Northern Qi and Northern Zhou. This method of composition is very odd. There is something to be said for its omission of Northern Wei, because there is a *Wei History*, but its omission of Song and Qi among the Southern Dynasties constitutes a real gap, particularly since the *Jin History* was written at about the same time,

[12] *Mr. Yuan's Changqing Collection*, 34, "Recommendations on Coins and Goods."

[13] *Old Tang History*, "Treatise on Food and Money."

[14] *Old Tang History*, "Treatise on Food and Money."

and the *Sui History* logically ought to have taken up where the *Jin History* left off.

The *Jin History* and *Sui History* aimed at restoring the *Historical Records* and *Han History* tradition of making the treatise on food and money a part of history, and including within it monetary history, but they were only able to remain in the old rut. They were unable to develop the genre further, and their contents were too abbreviated.

Du You's (735-812) *Universal Statutes* was the first work to evolve further. Previous histories had been narratives focusing on individual men. The various systems of statutes had all been associated with particular men. This caused later generations of scholars specializing in history considerable trouble to correct. Du You created a new form of history, one which took systems of statutes as their subject, and gathered historical materials of similar nature into one place. This undoubtedly performed a great work of organization for later historians.

The "Food and Money" section of the *Universal Statutes* has twelve *juan*. "Coins" occupies two *juan*, totaling 13-14,000 characters. The first *juan* is divided into seven sections: 1. General discussion, 2. The Zhou System, 3. The Qin System, 4. Former Han, 5. Latter Han, 6.

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Wei, 7. Jin. The second *juan* is divided into nine sections: 1. Song, 2. Qi, 3. Liang, 4. Chen, 5. Latter Wei, 6. Northern Qi, 7. Latter Zhou, 8. Sui, 9. Tang.

It should be pointed out that the title "Coins" refers to money in general, and not to the way the word coin is used in the Chinese word for numismatics [literally "study of coins." EHK], since the author was basing his account on documentary materials, and not on the actual coins themselves. The work goes from the origin of coins to the Tang Dynasty Qianyuan Heavy Treasure coins.

Obviously it is a comprehensive history, and is China's first organized and relatively complete monetary history. For the period prior to Qin and Han it borrows its material entirely from the "Treatise on Food and Money" in the *Han History*, including the Nine Offices Round System of Duke Tai and the Large Coin Treasure Money of King Jing of Zhou. It also quotes the *Guan Zi* on the casting of money by Tang and Yu, and the *Historical Records* on the story of King Zhuang of Chu changing small coins into large coins. All of this material is suspect.

For the monetary history of Qin and Han, it bases itself on the *Han History*'s "Treatise on Food and Money," but with some supplementary material taken from the "Basic Annals" and "Biographies" sections of the *Han History*. For example, the Eight-grainer of year 2 of Empress Gao and the Five-fen of her year 6 are not mentioned in the "Treatise on Food and Money" of the *Han History*, but the *Universal Statutes* includes both.

Materials on the Latter Han, Wei and Jin are copied from the *Jin History* "Treatise on Food and Money." Material on Liu-Song and Xiao-Qi were taken over from the *Liu-Song History* and *Qi History* biographies sections. Northern Wei material comes from the *Wei History*, and the rest from the *Sui History*, "Treatise on Food and Money." Only the material on Tang is original.

Therefore, Du You's contribution lay in assembling past materials concerning monetary history, editing them, and arranging them chronologically by dynasty. His work can only be said to be a compendium of historical materials, rather than a work of original composition.

It is unreasonable for later historians to judge the *Historical Records* and *Han History* solely as universal and particular period histories. Given the limitations of the the chronolical narrative style of history prevalent during ancient times, if all historians had written universal histories, their work would have had little value if they had not copied material from their predecessors.

Liu Xun [?] (887-946) of Latter Jin had a two *juan* "Treatise on Food and Money" in his *Tang History*. Included within it was a subsection on the history of the Tang Dynasty's money, totaling 5,277 characters. It begins with the abolition of the Five-grainer and its replacement by the Inaugural Circulating Treasure in wude 4, 7th month [621] and stops with the new Inaugural coins of huichang 6 [846]. It is somewhat more detailed than the *Universal Statutes*.

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3. Numismatics

There were no notable accomplishments in numismatics during the Tang Dynasty. It was not until the Five Dynasties that much of importance was written, but unfortunately none of those works have survived.

The undeveloped state of numismatics during the Tang is easily explainable as a consequence of the extreme simplicity of the Tang Dynasty monetary system. Except during the period of the An-Shi disorders, the Inaugural coins were in use from beginning to end of the dynasty, and so coins were unable to evoke people's interest.

There were only two works on money during Tang. One is Zhang Yue's (667-730) *Coin Compen-*

dium in two *juan*, mentioned without description of its contents in *Universal Record*, "Outline of Literature. The other is Feng Yan's *Coin Catalog Continued* in one *juan*, mentioned in the *New Tang History*'s "Treatise on Literary Works." It was supposed to be a continuation of *Gu Xuan's Coin Catalog*.

Feng Yan was a metropolitan graduate of the last part of the tianbao period [742-56], and was a district magistrate during the dali period [766-80]. During the reign of Emperor Dezong he achieved the position of Palace Assistant Imperial Secretary.[1] The *Coin Catalog Continued* is no longer extant. Hong Zun's *Record of Coins* quotes someone named Feng, and this might be Feng Yan, but the *Record of Coins* only cites five items from him:

One is a Three-grainer, actually one of the variant forms of the Half-ouncer. He says the character *liang* (ounce) follows the numeral ten and not the character for man; that below the hole are three perpendicular strokes; and that it weighed 3 grains. Obviously this Mr. Feng had never seen a genuine Three-grainer coin.

The second is a *yao*[a] coin, with an inscription reading "value ten." This is one of Wang Mang's Spring coins.

The third is a Value-hundred Five-grainer, and is classified among those of unknown date.

The fourth is what *Gu Xuan's Coin Catalog* calls a "Center King Coin" from among the Palace Vestment Repository coins. Probably this is a market town treasury coin or a coin commemorating the opening of a mint.

The fifth is the so-called Lord Prefect's Hundred Furnaces cash. In the notes to Luo Bi's *History of the Circuits*, Feng Yan is quoted on the so-called Gaoyang money as saying that the obverse bears tadpole script.[2] From this we may judge that Feng's knowledge of coins was not broad, nor was his research deep.

Hong Zun's *Record of Coins* refers to two other men: One named Xu, and a Dun Su. Since the coins they cite are all Tang or pre-Tang coins, they must have been men of the Tang era. No details about them can be discovered.

There was a Xu Xuan (916-991),[3] and the *Record of Coins* cites Xu Xuan's *Investigation of Spirits Record*, but I do not know if they are the same person. However, the person cited under the family name Xu in the *Record of Coins* deals almost entirely with foreign coins, aside from a Bright Moon coin, a Large Money Six-grainer, a Yongguang and a Five-metal. The entries are very vague, as for example references to the coins of countries like He,[b] Kang,[c] Bahan,[d] Wutuo[e] and Tufan.[f] Much the same is true of Dun Su, but he mentions a Two-zi (erroneously written

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[][g] instead of [],[h] and a *yuan* ([],[i] erroneously written as [][j]). Previous writers had not mentioned these.

By Five Dynasties times, coinage systems had become more complex, which provided a profitable precondition for the development of numismatics.

Zhang Tai's *Register of Coins* in one *juan*[4] is a relatively important work. The old histories say Zhang Tai lived during Tang, but as he refers to the Hunan Ma Chu coins, he must date to the Five Dynasties. The *Record of Coins* cites 28 items from him. He had personally examined coins from as early as pre-Qin spade coins down to the Tianci Fubao of Ma Yin of Chu, and the great majority of them were coins in formal use. Though he did not understand some of the inscriptions, he transcribed them faithfully.

For example, there is an unusual spade coin, the inscription on the back of which can be determined from his transcription to read "An-city Two-ax." He was able to fix the origin of the Value-hundred Five-grainer from the region where they had been discovered. He wrote "This coin is now most frequently found from Ba and Shu down to the Xiang and Han region. There can be no doubt that this reflects their place of origin." This shows that his methods were scientific. His *Register of Coins* must have been illustrated, because in the item on Han knives (i.e. the Gold-inlaid-knife) he writes "I have a coin like this illustration." He provides a comprehensive discussion of the various Five-grainers.

In addition, he was the first to mention the dali and jianzhong coins, and to recognize that the jianzhong coins had not been put into circulation. He also thought these were the tutenag large coins that Zhao Zan had devised, though he was in error on this point.

The largest number of items cited by Hong Zun's *Record of Coins*, more than sixty items, are from an old catalog, the name of which is not given. Hong Zun refers to Mr. Feng and Dun Su by name, so this old catalog cannot be one of their coin catalogs. On thesse occasions he must, therefore, be

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[1] Lu Jianceng, preface to *Notes of Things Seen and Heard by Mr. Feng*.

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[2] *History of the Circuits*, latter record, 8 (Sibu beiyao edition from the Zhonghua shuju), p. 102.

[3] Cf. *Complete Investigation of Monetary Springs*.

[4] Cf. *Song History*, "Treatise on Literary Works."

referring to some other work.

The material cited from it ranges from pre-Qin knife and spade coins, and ring coins down to the Tang Dynasty Xiantong Mysterious Treasure. This is the earliest citation of the Xiantong coins, which are not mentioned in the general histories. It also gives a very detailed account of the Huichang Inaugurals, calling them the new Inaugural coins. It does not avoid the Tang taboo words, so its author did not live during Tang times, but rather during Five Dynasties.[5]

This old catalog puts especially heavy emphasis on the inscriptions on and weights of coins, and these are the two most important points for numismatics. Concerning the Two-grainer, however, it says "the inscription reads 2 grains," which shows that it is relying on hearsay about that coin. All the other descriptions seem to be based on personal inspections of the coins, as, for example the one-*wen* coin (i.e. the character *yuan*[i] ring coin) and the four curved line coins and knife and spade coins. Though he could not identify these coins, he had actually handled them. The old catalog also seems to have been illustrated.[6]

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[5]*Dong You's Coin Catalog*, in its "Spade Coins" section, quotes a Mr. Shi[k] saying something nearly identical to the statements Hong Zun's *Record of Coins* attributes to the old catalog. Perhaps the old catalog was the one written by Shi.

[6]Cf. *Record of Coins*, "Large-spring-equals-thousand" item.

a么 b何 c庚 d拔汗 e屋馬犬
f口土蕃 g曹 h益 i垣 j一文
k石

4.4 Credit and Credit Institutions

1. The Development of Commerce and the Birth of the Chang'an Financial Market

In the early years of Tang, national unity and domestic peace led to great development of both internal commerce and foreign trade. Most people believed international trade was a good thing, and looked upon it with respect, feeling that such trade brought a constant stream of foreign goods, including a number of unusual objects, flowing into China in abundance.[1] Wei Zheng's remark that "merchants come, and thus the border peoples profit from it,"[2] may be taken as representative of the attitude of the entire court.

The Han Dynasty's foreign trade, both to the west and the south, mainly went by way of the land route. During the chaotic and war-ridden Northern and Southern Dynasties period, this route was probably temporarily broken From the time during the reign of Emperor Yang of Sui when Pei Ju reopened the trade route to the western frontiers, there were again large groups of barbarian merchants hurrying to China to do business. Two sea routes were also opened. As a consequence a flourishing Sino-barbarian trade grew. These so-called barbarians included the Persians and the various Muslim states.

This was the period of rise of the Islamic religion. The strength of the Arab people was developing in a very lively way in both military and commercial terms, and an extraordinarily large number of their businessmen came to China. Sometimes they brought the goods of the Orient back to Alexandria in Egypt for transshipment to Europe, and so Sino-European trade then also used the Arabs as intermediaries.

Frequently, however, the Chinese did not distinguish between Persians and Arabs, calling them all Persians. Perhaps this was because the Persians had come to China before the Arabs, and most of the Arabs set out for China from the Persian Gulf. At that time, places in China like the Lingnan, Fujian and Yangzhou had these foreign merchants in
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residence.

Guangzhou was still more a center of China's foreign trade. Every year a great many merchant vessels came there from Persia and the Muslim Empire to trade with China. At times the tax revenue from this trade was equal to that produced by the Double Tax.[3]

The capital, Chang'an, also had a good many of the so-called Persian barbarians and Persian shops. In addition, Chinese merchant vessels frequently left from Fuzhou to go to Japan to carry on trade.

Not even Han's domestic trade could compare with that of Tang times. This can be seen from the size of the capital during the two periods. At its largest, Han Dynasty Chang'an had only eight streets and nine roads, and was divided into 160 communities.[4] Ban Gu said that it had only three large streets and twelve gates.[5] The *Yellow Diagram of the Three Capital Districts* says there were nine markets, each 266 paces square.[6]

How could this compare with the Tang markets? During the kaiyuan period, "east to Songpian, west to Qizhou, the narrow road has inns at intervals awaiting guests with an abundance of food and drink. Each inn has asses for the guests to ride. They are placed every several dozen *li*, and are called postal station donkeys. South to Jingzhou and Xiangzhou, north to Taiyuan and Fanyang, and west to Shuchuan and Liangfu exist these inns to aid the commercial traveller. To go several thousand *li* you need not carry even a one inch knife."[7]

In recent years the ruins of ancient Chang'an have been excavated, proving that the Tang city wall had a circumference of over 70 *li*, that there were 14 streets running east-west and 11 running north-south. The widest of these, Vermilion Sparrow Gate Avenue, was 140 meters wide. It has been calculated that the population then was more than a million persons.[8]

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[1] Han Yu, "Preface to Seeing Off Deng Nanshu."

[2] *New Tang History*, 97, "Biography of Wei Zheng."

[3] *Old Tang History*, 15, "Biography of Wang E."

[4] *Old Times in the Three Capital Districts*: "One community has 25 families. The *Rituals of Zhou* says 'five families make a neighborhood, and five neighborhoods make a community.'"

[5] Ban Gu, *Prose Poem on the Western Capital*: "Three broad roads open up, and there stand twelve gates."

[6] Cf. Jing Ming's woodblock edition of *Ancient and Modern Anecdotal History*, 2, "The Nine Markets of Chang'an." *Ibid.*, 1, "Han Chang'an Old City," quoting "Han Old Ceremonies": "In the city of Chang'an the warp and woof are each 32 *li* and 18 paces long, forming an area of 972 *qing*. There are 8 streets, 9 roads, 3 palaces, 9 prefectures, 3 temples, 12 gates, 9 markets and 16 bridges." *Book Hall of the Original Tortoise*, 13, "Cities," says: "The city of Chang'an is 63 *li* square, its warp and woof
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each 15 *li* long. There are 12 gates in the wall. There is an area of 973 *qing* inside the wall, all of which belongs to Chang'an. . . ."

[7] *Universal Statutes*, 7.

[8] According to the Academia Sinica's calculations, the population then was over one million, spread over 108 wards. The

In addition to the capital, Chang'an, there were also purely commercial cities, like the center of international trade, Guangzhou, and the entrepot for domestic and international trade, Yangzhou. There is very little material on the situation in Guangzhou, but during the Northern and Southern Dynasties the statement was made that "the Inspector of Guangzhou need only go through the city gate to obtain thirty million."[9] The situation in Yangzhou is reflected in such statements from literary works as "a ten *li* long street lined with marts,"[10] and "at night the market's thousand lights reflect on the clouds."[11]

We can imagine the splendors of the age from these allusions. Even Hangzhou had a population of several hundred thousand.[12] The Central Plain then truly was

> to the side in touch with Ba and Han, and ahead points to Min and Yue. Seven marshes and ten swamps, three southern rivers and five lakes are all linked to the Yellow and Luo Rivers, bearing loads to the Huai and the sea. Capacious vessels by the thousand and ten-thousand go back and forth from dawn to dusk all the days.[13]

Although the status of merchants was not as high as that of officials, it was higher than that of ordinary commoners.[14]

The development of domestic and foreign trade had a definite relationship to the establishment of internal peace, nor can it be separated from the strengthening of the circulation of money.

Several chaotic centuries had culminated in monetary unification. Although a natural economy still bulked large at the beginning of Tang because of the inadequacy of the quantity of money, the supply of money steadily increased, and by the kaiyuan and tongbao years in the middle of the eighth century, its supply was essentially able to match demand.

Actually, the development of credit frequently begins precisely because of

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a shortage of money. Credit instruments come into existence as substitutes for money, and so are called credit money by some.

We do not know much about the financial trade then in Guangzhou and Yangzhou, but judging from the situation in Chang'an, we can be sure that it was rather well developed.

Chang'an's commerce was centered in the Eastern and Western Markets. The Eastern Market was 600 paces on each side, and "within the market there was wealth, 220 establishments, screens set up on all sides, rare and precious things everywhere heaped up." The Western Market was even more impressive. There were measurement offices, clothing stores, weight stations, restaurants and famous houses of beauty.[15]

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narrowest street was 69 meters wide. The broadest was over 440 meters wide. Generally, the streets were 100 meters wide. Cf. Archeology Studies Institute of the Academia Sinica, "Excavation of Tang Dynasty Chang'an," *China Pictorial*, 10 (1961). If this data is accurate, then it was several times the area of a modern big city like Shanghai. Otherwise it could not have contained so large a population. According to the article "Tang Dynasty Chang'an's Ruins Have Been Excavated," in *Wenhuibao*, December 12, 1961, the widest street, Vermillion Sparrow Gate Avenue, was 140 meters wide.

[9] *Southern Qi History*, "Biography of Wang Kun."

[10] Wang Shu, *Wilderness Guest Collected Conversations*, 15, article on "Tang Period Yangzhou and Tongzhou" quotes Zhang You's ode: "Ten *li* long street lined with marts, The moon illuminates the bridges as though there are immortal spirits; If in a man's life he can but get to Yangzhou before he dies, With his contemplative knowledge he can illuminate from the mountain the grave and field."

[11] *Ibid.*, quoting the ode by Wang Jian. During Tang, however, night markets were probably limited to Yangzhou and Guangzhou in the southeast. Markets were forbidden to do business at night in Chang'an and Luoyang.

[12] Cf. Wu Zimu, *Record of a Dream of Liang*.

[13] In the words of Cui Rong (a man of the time of Empress Wu Zetian).

[14] *Old Tang History*, 74, "Biography of Ma Zhou": "During wude he was sent to Bozhou to aid in education, where he daily drank strong wine, so that he did not carry on his duties. The Inspector forgave him, and took over his responsibilities. Zhou then put on a Buddhist monk's robes, and travelled to . . . Chang'an, lodging in the New Abundance Inn. The proprietor only gave trade to merchants, and would not deal with Zhou."

[15] *Investigation of the Two Capital Cities of Tang*, 3. According to Abu Zeyd, the account of Ebn [*sic*, "Ibn"?] Wahab, who visited Chang'an at that time, is pretty much in agreement with the aforementioned narrative. Ebn Wahab said that: "The City was very large and extremely populous; that it was divided into two great Parts by a very long and very broad Street; that the Emperor, his Chief Ministers, the Soldiery, the Supreme judge . . . lived in that Part of the City which is on the right hand Eastward; . . . the Part on [*sic*] left hand Westward is inhabited by the People and the Merchants, where are also great Squares and Market for all the necessaries of life." Cf. *Ancient Accounts of India and China*, p. 58.

This is a very clear reference to the Eastern and Western Markets of Chang'an. The book refers to Chang'an as "Cumdan," and an explanatory note says that it was the southern capital. This is based on a misunderstanding of Chinese history, the author mistakenly supposing that Nanking was China's capital

Chang'an's Western Market was also early China's financial market, and in this financial market various forms of credit circulated. Providers of such credit, in addition to individual rich merchants and officials, included pawnshops offering credit for pledges, public offices offering general credit, counting houses which accepted and paid out deposits or offered safe deposit facilities, forwarding shops and various mercantile shops. Some carried on the business of exchanging currencies, some bought and sold gold and silver. Some were organized by merchants to carry on large scale remittance of funds. Several of the most important types of modern financial businesses were already present then.

This financial market sometimes found it difficult to avoid becoming mixed up with political power. For example, late in the eighth century, in Emperor Dezong's jianzhong 3 (782), Li Xilie's uprising forced the government to borrow 2 million from the Chang'an financial market to meet military expenses. There had been previous borrowings from rich merchants without incident, but most of the coins of the financial market belonged to merchant-commoners, and the pawn shops were financial institutions used by these merchants. The money in the counting houses had been deposited by a number of merchants. When, as a consequence of resistance to this demand, Chang'an's market closed down, in the end the government had no choice but to yield. This was a great victory for the merchant capitalists.

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2. Loans

Loans may be divided into two types: unsecured loans, and loans secured by pledges.

Unsecured loans are loans based on trust, what the Northern and Southern Dynasty period called *chuze* and *judai*. People of the Tang called it *chuju*,[1] *jufang*,[2] *juzhai*,[3] *fangzhai*,[4] putting out coin at interest [*fangxiqian*] or coin held at interest [*zexiqian*].[5]

Of course it was mostly rich merchants who lent money out unsecured. Both Chinese and foreign merchants[6] were involved, but money was also lent at interest by officials, members of the imperial family and aristocrats.[7]

Aside from merchants and people in general, the main targets of loans were officials. We can discern from this fact the existence of a struggle then between the usurious capitalists and the feudal rulers. If the feudal rulers were themselves engaged in usury,

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then. Actually, Cumdan must have been a transliteration of the capital's name. Chang'an was originally called Jingcheng (i.e. capital city), and perhaps during Tang times, if one used the Fujian or Guangdong pronunciation, "Jingcheng" was not far from the sound of "Cumdan."

[1]*Tang Orders Supplemented*, 857: "The princesses and officials did not attend to their business personally. Their subordinates within the town carried on business in the market, and carried on business in unsecured loans [*chuju*] in the shops."

[2]*Tang Collected Statutes*, 88, "Miscellaneous Payments," edict of kaiyuan 16: "Recently there has been raising of loans [*jufang*] from both public and private sources. Rather deep interest has been taken, causing harm to the poor and lowly. This practice must be reformed. From now on, for loans undertaken anywhere in the Empire, interest of only four tenths may be taken, five tenths for official capital."

Collected Works of Duke Lu Xuan, 1, "Regulation for a General Amnesty Upon the Return of the Imperial Carriage to the Capital After the Pacification of Zhu Ci": "Before the end of jianzhong 4 . . . the officials and army commissioners made loans [*jufang*] in coin at interest. This year, before the 6th month, collection from those of the masses who had not made repayment was halted."

[3]*Taiping Broad Record*, 234: "There was a shopkeeper called Liu The Key in the village by the Longyou water gate, whose given name is not recorded. He took making unsecured loans [*juzhai*] as his family occupation, and amassed a thousand in metal. He was able to seek out a good accumulation of hard to obtain objects of wealth. He took wealth from people as though he were using a key to unlock people's strongboxes, so that their jewels disappeared without a trace. Therefore he had the nickname The Key."

[4]*Tang Collected Statutes*, 88, "Miscellaneous Records": "Kaiyuan 15 . . . an edict to the officials and their staffs in the prefectures and districts of Yingtian who raise money and who put out unsecured loans [*fangzhai*], ordering the halt of this practice."

[5]*New Tang History*, 113, "Biography of Xu Yougong": "[In the time of Empress Wu] the Inspector of Bozhou, Wang Zhong of Langye, had coin out at interest in Guixiang, and sent a family servant out to collect it."

[6]*Complete Tang Writings*, 72: "Recently within the capital city, many sons of the gentry, military commissioners as well as merchants and commoners have been taking loans from foreign guests."

[7]*Old Tang History*, 78, "Biography of Gao Jifu": "At the beginning of zhenguan . . . then said that now the mansions of princesses, and enfeoffed towns have capital sufficient for use. Aristocratic families have received salaries sufficient to provide utensils and clothing. If they are moved by thrift and temperance or drawn by conspicuous waste, they put out funds at interest for which they seek ten percent. If even dukes and marquises seek after profit, how can commoners feel it wrong?"

then they could rely on their political power to exploit people, but if the usurers made loans to the officials, then the officials would at times have to bear the burden, and at such times the relative power of the two sides might be judged.[8] If minor or new officials were involved, then they would have no choice but to become more avaricious themselves so as to repay their own debts.[9]

During every reign of the Tang, the government issued funds to the bureaus at various levels to be used to seek profit which would then be used to pay official salaries. These capital funds were called Public Office Capital Cash [*gongxie benqian*][10] or Provision Profit Capital Cash [*shili benqian*].[11]

This was a practice inherited from the Sui Dynasty. During Tang it developed a step further. This business came to be called cash-catching, and those in charge of it were called cash-catching subprefects. Its abolition was recommended by Chu Suiliang in zhenguan 12 (638).[12] Later, however, it was restored. Some people did not want the government to put out the capital, but themselves set up blank tallies to carry on this business. Because cash-catchers avoided the labor service tax, the prefectures and districts did not dare to denounce lawbreakers.[13]

There were also officials who increased the stock of capital of private persons, and there were even merchants and rich men who threw themselves into the search for office, using public capital to broadly seek private profit. Any profit earned entered their own pockets. If there was a deficit and loss of capital, it would be debited to the public accounts.[14]

Nor could the government be sure of its income. At the beginning, the interest doubled the capital each year. Later, the profit was apparently gradually reduced. At the beginning of kaiyuan [713], the

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[8] *Old Tang History*, 154, "Biography of Xu Mengrong": "[Yuanhe 4], Li Yu falsely borrowed 8,000 strings of cash from a rich man of Chang'an, and for a full three years did not repay the loan. Mengrong sent a clerk to collect it, setting a day for its return, and warning that he would die if he did not meet the deadline."

[9] *Tang Collected Statutes*, 92, huichang 1: "After the selection of officials had been completed, they all raised loans inside the city. When the time came to repay them, they sought funds avariciously. There are none who do not behave this way."

Comprehensive Mirror for Illumination of the Prince, 243: "Ever since the dali era, most of the regional commandants had come out of the Palace Guard. The generals of the Palace Guard who had much wealth, all borrow money from the rich households at interest which doubles the principal. To bribe a middle sheriff, it takes more than several tens of thousands."

[10] *Tang Collected Statutes*, 93, "Capital Cash of Various Offices and Kinds," first part: "In wude 1, 12th month, Public Office Capital Cash was established, with a prefectural official in charge of it called the Cash-catching Subprefect. Each office had nine men appointed by the Board of Personnel. The fund they controlled was only 50,000 cash or less, which they were to turn over in the market, and for which they would receive 4,000 cash per month in interest. At the end of the year this would be paid over to the officials."

[11] *Op. cit.*, under yuanhe 11, 9th month.

[12] *Tang Collected Statutes*, 91, "Payment of Inner and Outer Officials in Cash and Kind," first part: "In zhenguan 12, 2nd month, the Policy Critic Adviser, Chu Suiliang, sent up a communication saying . . .

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'Your Majesty has recently assented to the taking of Public Office Capital Cash by various subprefects. The people who do this in the various offices are called cash-catching subprefects. These men are selected not for their knowledge of letters or the arts, but for their ability to carry on trade, and for the possession of enough wealth by their families. They are carried on the rolls of the Board of Personnel. For the most part, they take no more than between 40 and 50 strings of cash, set themselves up in the market, and throw themselves into trade. Each month they take in a profit of 4,000, and in all pay in 50,000 in the course of a year. If they do not fail to deliver the profit, at the end of the year they receive office. And yet those in charge of the state have laughed at the selling of offices by Han, though this road which has been opened is of the same sort as that.' . . . That month on the 23rd day an edict halted this."

[13] *Tang Collected Statutes*, 93, "Capital Cash of Various Offices and Kinds," first part: "Edict of Qianyuan 1. In each of the two districts of Chang'an and Wannian there are 10,000 strings of cash which each month bring in profit to finance the Harmonious Purchase system. At this time . . . the two districts have set up capital cash for households which have offered security and which provides interest to meet expenses. The cash-catching officials have been given certificates exempting them from labor service. The prefectures and districts dare not control those who have committed crimes. Among the people there are those who do not take capital cash, but set up blank tallies, which their sons and grandsons succeed them in handling."

[14] *Ibid.*: "Yuanhe 11, 8th month . . . The Right Executive Censor, Cui Cong, memorialized that 'the previously established coin-catchers have been mixing their own with the public capital to a greater extent than before, and have been making up for their own losses from the official profits. Recently it has been heard that merchants and rich men have thrown themselves into the search for office, using public capital to broadly seek private profit. Those who make the collections fill their families' coffers, or use official money to meet deficiencies. There has been more than one instance of improper compulsion. Now I request that assent be given to limiting cash-catching households to inserting no more of their private capital than there is official capital involved. For those who exceed these limits, I request that they be removed from office.' This was assented to."

monthly interest was 7 percent.[15] In mid-kaiyuan, the rate was 6 percent.[16] At the beginning of jianzhong [780] it was 5 percent.[17] By the huichang period [841-847], the monthly yield was only 4 percent.[18]

This, however, is not enough to show that the interest rate during Tang was steadily falling, because this income was not the same as the pure rate of interest.

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When this income was large, it could have included profit, because in addition to being used for loans, the capital was also being applied to various businesses and speculative activities. A portion of it even included tax revenues, since tax farming was being practiced.

Moreover, the nature of Public Office Cash itself is not clear. Sometimes it appears to have been lent to merchants, with interest taken in proportion to the length of time of the loan. Sometimes it appears as though officials and private parties formed partnerships to do business.

The later decline in income might be explained in several ways: One might be that a part of income began to enter private pockets. Another might be because the general monetary constriction kept the market from being active, and this caused more defaults on loans. Government loans bore very high interest rates. Private usurers' interest rates were still higher.[19]

Because of excessively heavy interest exacted by both public and private creditors, debtors were often unable to repay their debts, or were driven to their deaths, or absconded. The government exploited its debtors ever more severely.

For example, in yuanhe 11 [816], the Luoyang Censorate memorialized that of the loans their office had made from zhenyuan 11 to yuanhe 11, a period of 21 years, there had been 25 households which owed interest of ten times the original principal of their loans. During the 16 years from zhenyuan 16 to yuanhe 11, 156 households owed interest of seven times the original principal. During the 12 years from zhenyuan 20 to yuanhe 11, 166 households owed interest of four times the original principal.

The principal and interest would be taken from a man's sons and grandsons if he himself died. If he had no direct descendants, the money would be taken from his collateral relatives. If he had no collateral relatives, then it would be taken from his guarantor. If the guarantor fled or died, then a substitute would be sought out.[20] This was truly a case of collective responsibility being imposed for a loan taken out by an individual.

Borrowing was not limited to ready cash. Sometimes commodities like grain constituted the things borrowed. Repayment was sometimes in cash, and sometimes in the commodity originally borrowed.[21]

There were two kinds of lending on the basis of pledges. The first did not require handing over the pledge or security before borrowing. The second was pawnbroking. The former type of secured loan was called "attached rent" [*tielin*].[22] Pledges were

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[15] *Tang Collected Statutes*, 88, "Miscellaneous Records": "[At the beginning of kaiyuan] a capital stock of 5,000 at an interest rate of 7 percent brought in 4,200 in one year. Labor expense brought it to less than 5,000."

[16] *Tang Collected Statutes*, 93, "Capital Cash of Various Offices and Various Kinds," first part, item under kaiyuan 18.

[17] *New Tang History*, 132, "Biography of Shen Jiji": "In jianzhong 2, an edict to the Secretariat and Chancellery Departments set up 30 Expectant Edict Officials . . . with authority to take measures to provide for collection of public cash by taking interest. Jiji remonstrated: 'Nowadays good government suffers from abuses by the officials, not from there being too few officials. . . Now 30 more officials are to be appointed, which will cost no less than one million each month. To earn that much in interest, a capital sum of 20 million will be required. Two-hundred families will have to be allocated, and the amount which will have to be drawn in will cause considerable harm. The situation at the excise impost stations is not healthy. All are saying that the interest being collected by the officials is destroying their houses and ruining their property. . . ."

[18] *Tang Collected Statutes*, 93, "Capital Cash of Various Offices and Various Kinds," first part: "In huichang 1 . . . 6th month, Sun Jian, the Regional Supervisor of Jinzhou, Jiangzhou and Cizhou in Hezhong memorialized to request a document of pardon, estimating that the capital cash in large and small districts was bringing in monthly interest of 4 percent."

[19] *Taiping Broad Record*, 434, quoting *Record of Original Transformations*: "During the zhenyuan period, there was a man named Dai Wen in Haiyanxian, Suzhou. His family was rich and he was avaricious. Whenever a fellow townsman raised a loan [*juzhai*] from him, he had to pay interest of several fold."

[20] *Tang Collected Statutes*, 93.

[21] *Tang Orders Supplemented*: "Putting out of loans in grain, with repayment in grain, should be handled by private contract, with no interference by officials. Such loans should be limited to a term of one year. There should not be more interest than there is principal, nor should the interest be added to the principal.

[22] *Universal Statutes*, order of kaiyuan 25: "Fields may not be used as security for attached rent loans. Violators will lose their property and be exiled, with the land returned to its original owner. If a person takes on labor service at a distance, and there is no one to whom he can entrust his business, then he may use it as security for attached rent." The fields referred to in this document were individual allotment fields and perpetual property fields. Cf. Katō Shigashi, "Use of Land Grants as Security Dur-

mostly agricultural land. Houses were also sometimes pledged. The term *zhi*[23] was sometimes used for such pledges, but its use was not limited to immovable property.

The most common form of borrowing on the basis of a pledge was, of course, the pawnshop loan. The men of Tang called this *zhi* or "collecting a pledge" [*shouzhi*].[24] Pawnshops were therefore called "pledge treasuries" [*zhiku*]. These usages continued right through the Five Dynasties.[25] There was also something called a "hire-counter" [*jiugui*], which was said to be very much like a *zhiku*.[26] Others say this was another name for a counting house [*guifang*].

During the Northern and Southern Dynasties, pawnbroking was managed by temples and monasteries, but by the time of the Tang Dynasty pawnbroking had become an independent activity. Merchants, officials and aristocrats often established pawnshops to seek profit.[27]

The Tang government placed limits on the exaction of interest on loans, but from time to time it raised or lowered them. It was only

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the compounding of interest that from beginning to end of the dynasty was never permitted.[28] For pawnshops, the rule was that they could not sell off the pawned articles as they pleased. Only if the interest came to exceed the principal, and the article had still not been redeemed, could report be made to the local government, and the pledge sold. If, however, there was a surplus after the pledge had been sold, this had to be returned to the debtor.[29]

3. Deposits

Before the Tang Dynasty, when the Chinese had idle funds, they would either hoard them or leave them with friends and relatives. The friend or relative was supposed only to preserve the money as a kind of trust. He could not put it to profitable use.

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ing the Tang Dynasty," *Tōyō gakkubo*, 12, 1.

[23]*Comprehensive Mirror for Illumination of the Prince*, 237, Emperor Xianzong, yuanhe 4, intercalary 3rd month: "Wei Zheng's great-great grandson, Chou, was extremely poor, and for this reason pawned his ancestral mansion for cash. The Regional Commandant of Pinglu, Li Shidao, asked to be allowed to use his own resources to redeem the place. The Ruler mandated Bo Juyi to draft an edict. Juyi memorialized to say that the matter was unusual and ought to be handled by the court. Why should Shidao dare to take over so beautiful a place? He hoped there would be an edict to the officials to use public money to redeem the place and return it to the heir. The Ruler accepted this, and sent out 2,000 strings from the Inner Treasury to redeem it and give it to Wei Chou, and the sale of the pledge was forbidden."

[24]*Taiping Broad Record*, 165, "The Frugal: Yang Cheng": "Cheng became a court scholar. His family was bitterly poor. He frequently used his wooden pillow and clothing as pledges for several

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tens of thousands of cash. Men competed to take them." "Biography of Li Wa": "During the tianbao era . . . on another day Wa said to Sheng that she had been in intercourse with the master for a year, and was still without an infant heir. She had often heard that the Bamboo Grove Spirit responded like an echo, and could she go to make an offering? Sheng had not known of her plan. Greatly pleased, he pawned [*zhi*] his clothing at a shop so as to provide for the ceremony of sacrifice, and went along with Wa to the temple to worship."

[25]*New Five Dynasties History*, 53, "Biography of Murong Yanzhao": "He had set up a treasury in the commercial town for pledges for cash. There was an evil commoner who made false silver to pawn. The chief clerk had taken a long time to realize this. Yanzhao secretly instructed the clerk to hide at night in the treasury wall after moving all of his gold and cloth to another place because of thieves. Yanzhao then put up a placard in the marketplace to have the people take their own pledges so that he could redeem them. The people all competed to identify their own pledges, and so he found out who had pledged the false silver. He sequestered the man deep in his house, and had him teach a dozen other people, who he then put to work day and night making the stuff. Its substance was entirely of iron, but it was clad in silver, and was called iron-wombed silver."

[26]*Comprehensive Mirror*, note by Hu Sansheng: "Among the people, goods were pledged for cash, and at another time redeemed. In addition to the mother cash [i.e. principal], child cash [i.e. interest] was paid as well. The place was called a *jiugui*."

[27]*Old Tang History*, 183, "Biography of the Heir to Wu Cheng, the Auspicious Taiping Princess": "Having registered her family, [the Taiping Princess's] wealth piled up like a mountain. Precious and unusual treasures appeared in the court. Horses, sheep, pastures, gardens and pawnshops [*zhiku*] for several years brought in money unceasingly." *Complete Tang Writings*, 78, huichang 5: "One hears that gentry at court of whatever faction privately establish pawnshops and stores to compete with the people for profit."

[28]*Tang Collected Statutes*, 88: "Chang'an 1, 11th month, 13th day, edict. In making loans, it is not permitted to add the interest to the principal, or to charge interest outside the regulations. The prefectures and districts are ordered to strictly ban this practice."

[29]*Tang Orders Supplemented*.

Neither of these procedures can, therefore, be said to have constituted deposit. There was no credit trade.

In addition to hoarding, among the merchants of the Tang Dynasty, the depositing of money with outsiders was also very common. Sometimes money was deposited with family or friends.[1] Sometimes it was deposited with monks.[2] If, under this procedure, the protector of the money was unable to put it to profitable use, it would not have been much different from hoarding. The money-box was no doubt a common item among the people. Yao Chong had a "money-box thief."[3]

When merchants went out to trade during the Northern and Southern Dynasties period, they deposited with inns the money they had brought along to buy goods, or the funds they had received for selling goods, since they could not carry the money on their persons all day. It would have been both inconvenient and risky to merely have locked this money in their own chests.[4]

By the Tang Dynasty deposit of funds had gradually taken on a new convenience. Contributing to this convenience

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were various sorts of shops. There were some slight differences between this form of deposit and the earlier practice of entrusting funds to relatives and friends.

This type of deposit often began in the course of making exchanges,[5] or had something to do with commerce.[6] Accepting such deposits were drug

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[1]*Grove of Tang Words*, 1, "Virtuous Acts": "Protector of the Heir Apparent, Xuanjian Duke Du, during the dali era, was left a hundred ounces of gold by a man for some reason. Three years later, when serving as Regional Commandant of Huainan, the man's son came to stay, and the Duke took the gold and returned it. The seal was untouched."

Old Five Dynasties History, 58, "Tang History: Biography of Zhao Guangfeng": "At the beginning of tongguang . . . there was a woman who lodged one *yi* of gold with his family. The times were chaotic, and the woman was sent to another place. For the next twenty years there was no way to return the gold. It was paid over to the Prefect of Henan, Zhang Quanyi, with the request that he forward it to the palaces. The original seal was still intact."

[2]*Record of the Prosperity of Huichang Times*, "Niu Sheng": "Niu Sheng was proceeding from Hedong to the examinations . . . and arrived at a Buddhist temple. . . A monk happily said, 'Jin Yang often lodged cash to the amount of 3,000 strings here, but never came back for it. The years wore on, and one morning you arrive with nothing to hand over. Now we will give it all to you.'"

[3]*Complete Tang Writings*, 206.

[4]*Zhou History*, 22, "Biography of Liu Qing": During the time of Emperor Taizu, "there was a merchant carrying 20 catties of gold to the capital to carry on trade. He lodged it at the place where he stopped. Whenever he wanted to go out, he carried the key himself. There was no way it could be sealed off, so it was no wonder that he lost it. He said this man had stolen it. The commandery and district questioned the proprietor, and he subsequently made a false confession.

"When Qing heard of this he sighed, and ordered the merchant brought in for interrogation. He asked the man, 'Where did you normally put the key?' The reply was 'I always carried it on my person.' Qing asked, 'Did you spend the night with someone?' The answer was, 'No.' 'Did you have a drink with someone?' 'One day I had a drinking bout with a certain monk, got drunk, and slept 'til dawn.'

"Qing said, 'The proprietor was coerced into a false confession. He is not the thief. That monk is the true thief.' He sent a man to arrest the monk, but the monk had run off into hiding with the gold. When he was later arrested, all the lost gold was recovered."

[5]*Taiping Broad Record*, 23, quoting *Record of the Broadly Unusual*, "The Two Dukes, Zhang and Li": "During the kaiyuan period of Tang, there were two dukes, Zhang and Li, who had the same ambition. . . At the end of the tianbao era, Li had reached the rank of Executive of the High Court of Justice. . . Zhang . . . said to Li: 'How much money do you need to fulfill your desires?' Li replied: 'If I get 300 strings, I can manage my affairs.' Zhang took off his hat and said to Li: 'You can take this to the drug shop. Ask for the proprietor, old Wang, or for Third-son Zhang, and order them to take this for 300 strings. They will give them to you.' . . .

"The next day . . . he took the hat to Wang's place to seek out the money. Old Wang took the hat and asked the people of his establishment if this was indeed Zhang's hat. His wife said: 'The embroidered border resembles his.' Li asked who Zhang was. Wang replied: 'Fifty years ago it was the property of a seller of tuckahoe. There are now over 2,000 strings of cash [in his name] in the drug establishment.' Li took the money and returned."

[6]Zheng Huangu, *Record of the Mysterious and Unusual Continued*, "Biography of Du Zichun": "Du Zichun lived during Zhou and Sui. When young, he fell into dire straits, and did not serve in his family's business. . . Thrown among relatives, he was abandoned because he did not work. He was even without winter clothing, and went alone into Chang'an. . . There was an old man with a walking stick in front of him. The man asked him:

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'Why, sir, are you sighing?' Dichun unburdened his heart. . . The old man said: 'How many strings would allow you to live abundantly?' Zichun replied: 'With 3 million, I could live.'. . Thereupon the man took one string from his sleeve and said: 'I'll give you this tonight. Tomorrow at noon I will await you at the Persian Residence in the Western Market. I hope you will not be

shops and Persian shops, both of which were large commercial establishments then. The Persian shops were, like the foreign firms of later times, shops run by foreigners, and not necessarily all of them Persians, since Arabs were also called Persians. Of the stores then, however, those closest to being specialists in deposits were the counting houses and the consignment shops.

The term "counting house" [*guifang*] is mentioned several times in Tang documents, as in Wen Tingjun's *Qian Sun Zi*[7] and in the text of the amnesty edict of qianfu 2 [875].[8] There are, however, no detailed accounts of their nature. We know only that they were places where money was placed for safekeeping. The texts sometimes speak of coins locked up in the counting houses of the Western Market. Sometimes they only speak of locking up in the Western Market.[9] Sometimes they speak of accumulating cash in the Eastern and Western Markets.[10] Probably at that time Chang'an's Western Market, or even its Eastern Market as well, had a number of counting house firms[11] or other shops which accepted deposits.

Judging from the meaning of the characters for counting house --the first of which must mean cupboard or chest, originally something used to hold coins and clothing-- counting houses must have ori-

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late.' At the agreed time, Zichun went there, the old man did indeed give him 3 million, and left without telling him his name."

[7]Wen Tingjun lived during the time of Emperor Xuanzong (in the middle of the ninth century). The *Qian Sun Zi* has been lost, but the section "Dou Yi Upholds the Customs," which mentions counting houses, is quoted in *Taiping Broad Record*, 242. The original text runs as follows:

"There was a barbarian named Mi Liang, to whom Yi had given money and cloth because he was hungry and cold. For seven years he did not ask about it. One day he again saw Liang, who complained he was hungry and cold, and gave him another 5,000 cash. Liang was moved, and said to people: 'I will some day requite my lord.' Yi was living at ease, and had no problems, when Liang arrived and said to him: 'I have a small residence for sale at Chongxianli. It is worth 200 strings of cash, if your lordship will hasten to buy it.' Yi had extra cash in a counting house in the Western Market, and bought the place at the price asked.

"On the day the contract was made, Liang said to Yi: 'I have worked as a jade inspector, and have seen some black stone inside the house. Very few people would know it, but this rock for washing clothes is really filled with jade which can make your lordship rich in a day.' When Yi did not believe him, Liang added: 'Call in a jade worker from the Yanshou district to examine it.' The jade worker was startled and said: 'This is an unusual article. If worked, it will yield twenty belt hooks, each worth 3,000 strings of cash.' These were subsequently ordered made, and indeed fetched a price of several hundred thousand. He and his son also obtained various kinds and colors of belt ends. When sold, they also calculated they would get several hundred thousand strings for those as well."

[8]*Tang Major Collected Edicts*, 72, text of the southern Suburbs Amnesty of qianfu 2: ". . . From now on, if any put forward coins to buy office or pay in silver to seek rank, upon discovery being announced, they will be taken with those of the same offense and not let go. Their money and goods will be sent by the prosecutor to the Censorate as punishment for their offense. The money of the Persian foreigners may also serve this function. Counting house proprietors who know what is going on and do not come forward to inform and pay over all the goods in question to the officials will be judged with severity, and sentenced to be transported to a distance."

[9]*Taiping Broad Record*, quoting *Record of the Broadly Unusual*, "The Three Guards": "At the beginning of kaiyuan, there were three guards . . . who entered the capital to sell heavy silk. The buyers heard they were seeking 20,000. Everyone laughed at them as madmen. A few days later, a fellow on a white horse came to buy, and paid a price of 20,000. They did not hesitate, but first locked up their money in the Western Market."

Taiping Broad Record, 499, "Miscellaneous Records," 7, quoting *Stories of the Middle Reigns*, "Wang Shizi": "After the imperial carriage had fled from Huang Chao, places which had been destroyed were being repaired. . . An edict of Emperor Xizong ordered that after the Anguo Temple had been rebuilt, the imperial carriage would visit it for a great maigre feast. Ten new bells were cast, and 10,000 strings of cash given in alms. The high officials were ordered to give as they wished. The Ruler said that for each thousand strings of cash in alms given, a person could strike the bell once. After the feast, Drunkard Wang came in half-drunk, went right up to the bell tower, and struck the bell a hundred times. He then had 100,000 strings from the Western Market transported into the temple."

[10]*New Tang History*, 152, "Biography of Li Jiang": "In yuanhe 8, the Emperor sent down an edict that those able to catch a thief would be rewarded with 10 million cash and the fifth official rank. Those who gave away the plans of thieves and were able to get thieves to give themselves up would also be rewarded. Anything not in accord with the edict would be classified. Cash accumulated in the Eastern and Western Markets would be used to reward informers."

[11]*New Tang History*, 208, "Eunuchs, latter part: Biography of Tian Lingzi": "When Xizong ascended the throne . . . gold coins of the Left Treasury and Equal to Heaven Treasury were issued and given to skilled child singers at a rate of tens of thousands a day, emptying the treasury. Lingzi . . . exhorted the Emperor to register the precious goods of the foreign and native merchants in the two markets so that they might be sent into the inner treasury. Commissioners secretly observed the counting houses and tea pavilions. Those who came to denounce them were all beaten to death."

ginated as chests or cupboards. The *Zhuang Zi* contains the phrase "robbers who take chests." Some people or shops might have had especially strong chests for holding precious objects.[12] The several hundred ingots of gold and silver that Zhu Quanzhong grabbed in Xiangcheng were found in a large chest.[13]

To meet the needs of travelling merchants, it would have been very natural for the shops of the capital to set up cupboards or chests, or even "chest rooms" --the literal meaning of the term here translated as "counting house"-- to safeguard the money of resident guests.

Later, because of the large number of people demanding this convenience, some people would set up specialized counting houses. These could have been the stages through which counting houses passed.

In foreign countries, even modern credit institutions still bear the names of treasure chests, like the worde *caisse* in French, or *cassa* in Italian, *casa* in Spanish, *Kasse* in German, and *kassa* in Russian.[14] Although China's modern financial institutions are not descended from the counting houses, the meaning of the term coffer or treasury is close to that used for this institution in Chinese.

It is still a question as to whether or not the counting house was a genuine credit institution. First, we do not know if safeguarding deposits was their sole or main function, or if it was a secondary activity. Second, we do not know if the deposits were the responsibility of the counting house or were placed there at the risk of the depositor. Third, we do not know if the counting house paid interest on deposits, or collected a fee for safeguarding them. Fourth, we do not know if the counting house was able to put the deposits to profitable use or not. Of these four points,

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the last two are the most important, and are interconnected.

Basically there are at least two ways to interpret the practice of making deposits:

The first is as a way to protect valuable objects. Their protector is not supposed to move them, and when the time comes, he should return the original objects.

The second is as the deposit of money, in which, as in the case of the Ming Dynasty, only a certain sum is protected, such as a certain number of ounces of gold or a certain number of strings of cash. When the time comes, the protector need only hand over this sum, and it does not matter whether he has done anything with the money before that time, since there is no necessity to transfer back to the depositor the same gold or copper cash originally deposited with him.[15]

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[12] *Old Tang History*, 135, "Biography of Wang Shuwen": "In the mansion was a large cupboard without doors. As soon as he peeped into it, he saw it could hold precious goods."

Zhang Yue, *Biography of Qiu Ranke*: "At the foot of the tower in a cupboard was 100,000 cash."

Huangfu Shi, *Record of Original Transformations*, "Wang Jia": "In a cave like a hall, there was a great stone cupboard a *zhang* or more tall. It was locked. Jia's hand opened it and took out its contents. He raised it up in his hand and saw that inside the chest was another metal chest, perhaps 3 *chi* high, closed with a metal lock."

Taiping Broad Record, 402, "Treasure of Three Water Pearls": "The Da'anguo Temple was the old residence of Emperor Ruizong when he was Prince of Xiang. When the Emperor ascended the throne, a Daoist ordination platform was established there. The Prince conferred a precious pearl on the temple which was ordered placed in its treasury. It was said to be worth hundreds of millions. A monk of the temple placed it in a cupboard, and hardly thought it precious at all. In kaiyuan 10, the temple monks were doing good works, and opened up the cupboard to inspect the treasures it contained, and were going to sell it. . ."

The Song work, *Brocade from the Sleeve of the Old Man of the Great Peace*: "A thief said there are three things to fear in entering a house by night. The first is that there might be old men. The second is that there might be children. The third is that if there is so much gold and silver,

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there will be a large chest, with iron rivets, so that thieves cannot get into it."

[13] *Old Five Dynasties History*, 2, "Annals of Emperor Taizu," tianyou 2, 9th month: "On this day Xiangcheng was entered. The Emperor searched all around the prefectural office . . . and behind a door was a large chest . . . inside which were several hundred ingots of gold and silver."

[14] There are French banks called *caisse* (coffer or treasury), such as the *caisse d'épargne* (preservation treasury) and *caisse des dépôts et des consignation* (deposit and trust office). Italy also has banks with the word *cassa* in their names, *cassa* having the same meaning as the French *caisse*. For example, the provincial bank of Basilicata is called the *Cassa Provinciale*. The provincial credit bank of Sardinia is called the *Cassa Provinciali di Credito*. The agricultural village cooperative bank is called the *Cassa rurali*. The Soviet Union's savings depository is called the *Sberegatel'naya kassa*.

[15] In the sixteenth century, English law distinguished three forms of entrustment. The first was the pure trust ("bare naked bailment"). The deposit was locked up in a chest or other container, and it was entirely a matter of guarding its safety. The person safeguarding the deposit could not make use of the items entrusted to him. The second type allowed the safeguarder to use

Tang law made it a crime for a person to put to profitable use money entrusted to him,[16] but precisely because this was clearly stated in the law, we can be sure that this practice of making profitable use of deposits was in fact occurring.

If counting houses could put such deposits to profitable use, then they could have paid interest, and with that they would have become genuine credit institutions. It is, however, also possible that they neither paid interest nor levied charges for their safeguarding service, but nevertheless surrepeti tiously put the funds to use. This too would have made them one type of credit institution.

If, however, they only safeguarded deposits, and put them to no use, then of course they would have had to collect a fee for this service. This sort of safe deposit would still have been a convenience to merchants, and would have indirectly aided the development of commerce. Such a service is still one part of modern banking, but if the counting houses solely depended on this aspect of the business, we cannot say they were genuine credit organizations.

Whatever the nature of the counting houses may have been, another aspect of the Tang Dynasty's deposit trade had undoubtedly transcended the stage of safeguarding things in chests or cupboards, because the check had in principle already come into use. The principle of the check is that once the deposit has been made, one need not go in person to withdraw the funds, but can transfer the authority to do so to some other person. At that time some shops provided this sort of convenience.

The depositor could mandate the deposit organization to pay over funds to a third party, sometimes on the basis of some object.[17] Sometimes this was done with cards or written cards, called *tie* or *shutie*. These can probably be said to have been the world's earliest checks. On them was the amount to be paid, the date of the check, the name of the person receiving the funds, and the name of the payer. The only difference from the modern check was that they were written out at the time of payment, and were not printed blank forms.[18] All such payments were entirely made from deposits of money.

During the jianzhong period [780-784], Zhao Zan once took out hire-counter [*jiugui*] pledge cash, which he was going to use for army expenses to chastise Li Xilie. Some say that a *jiugui* was similar to a *zhiku*, that is a pawn shop. In modern times, some have doubted this.[19] There is a basis for these doubts. The character for "rent" or "hire" [*jiu*] in

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the entrusted goods for some special purpose, such as doing business. The third was deposit of money ("bailment of money"), in which the safeguarder was only responsible for a particular sum of money, so that he could put the money entrusted to him to profitable use. Cf. Ellis T. Powell, *Evolution of Money Market (1385-1915)*, chap. II.

[16] *Tang Penal Laws Outlines*, 26, article on "Expending Goods Accepted on Trust."

[17] *Informal History*, "The Two Teachers Lu and Li": "He then said, 'How much official cash do you lack?' The reply was, 'Twenty-thousand strings.' He then gave him a stick and said, 'Take this to the Persian shop to withdraw the money.' . . . As soon as the Persian saw the stick, he said with alacrity, 'This is second uncle Lu's stick. How did you get it?' As he spoke, he paid over the coins." Cf. *Old Stories* and also *Record of the Broadly Unusual*, "The Two Dukes Zhang and Li." Cf. note 5 above.

[18] *Taiping Broad Record*, 146, quoting the *Tang Informal History*, "Yuchi Jingde":

"At the end of Sui there was a scholar who lived in Taiyuan, and who suffered from the poverty of his family. He taught for a living. At the place where he lived he found an official treasury. When he went into a cave, he found several tens of thousands of strings of cash inside, which he then wanted to draw out. There was a man wearing metal armor and carrying a halberd, who said, 'If you want the coins, you can do so with Yuchi's check. These are Yuchi Jingde's coins.'

"The scholar searched, but could not find such a check, but when he got to an iron smelter, there was a piece of wrought iron with the name Yuchi Jingde on it. He bared his head while the forging was going on. The scholar watched until the end, and then bowed before him. Lord Yuchi asked, 'Why are you here?' The scholar replied, 'I am enmeshed in poverty, while below my feet are wealth and rank. May I get 500 strings of cash?' Lord Yuchi angrily retorted, 'I am a smithy. How could I have wealth and rank? You are deceiving me.' The scholar said, 'If you have pity for me, just give me a check, and another day you will understand.'

"Yuchi had no choice but to order the scholar to take up a brush and write, 'Pay to so-and-so 500 strings.' He wrote the date and signed his name at the bottom. The scholar bowed his thanks and left. Lord Yuchi and his apprentices clapped their hands and laughed aloud, thinking he was insane.

"The scholar, having gotten his check, went to the treasury, and again saw the man in metal armor. He presented it to him, and laughed as he said, 'Here it is.' He was ordered to hang it on a high place on a beam. Then the scholar was sent to withdraw the cash, up to a limit of 500 strings.

"Later, Jingde's assistant spirit, Yao, having gained special merit, asked to be returned to his village, and an edict awarded him money. As soon as the treasury had been opened to get this money, it was observed that there was a deficiency of 500 strings. When they took the check down from the rafters, and Jingde saw it, he realized it was the check he had written while forging iron."

[19] Katō Shigashi, "Investigation of Counting Houses," in Wu Jie (trans.), *Investigations of Chinese Economic History*, 1.

jiugui is mainly used as a verb meaning "to rent out," as in "rent a chest, redeem a pawned pledge, amass money, store up grain." So it could have just referred to renting a chest from a counting house.

In addition to the counting house, there was a kind of deposit shop which was a form of consignment shop [*jifupu*]. Since ancient times, the Chinese
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had entrusted money to family and friends, and during Tang there were probably people who specialized in running consignment shops which safeguarded money and other valuables for merchants, and which put consigned goods up for sale on behalf of their consigners. The Jingxianzhai firm in the Western Market of Chang'an was such a consignment shop.[20]

Some people have attempted to link the counting house, consignment shop, and checks. They say that the consignment shop was the same thing as a counting house, and that its depositors could make withdrawals with checks.[21] Though this hypothesis is not impossible, there is no evidence for it. Before the nature of the counting house has been rendered clear, there would be no point in offering arbitrary and strained explanations of it.

If the counting houses were only places which rented out safe deposit boxes, their proprietors could not have accepted checks for withdrawing funds from them. Payments of money on credit are only attributed to Persian shops and to drug shops in the written sources, and not to counting houses.

[20]*Biography of Huo Xiaoyu*: "Frequently there were private orders to the maidservant to secretly sell the luxury goods in the chest. Most were entrusted to the Jingxian consignment shop in the Western Market for sale. The serving maid Huansha was once ordered to bring a certain hairpin to the Jingxian to be sold. On the street she met an old jade worker. When he saw what Huansha was carrying, he came up, recongnized it, and said, 'I made this hairpin. Prince Huo's daughter liked to put it in her hair. When he had me make this, he tipped me with 10,000 cash. I wouldn't forget that. Who are you? Where have you come from?'"

[21]Katō Shigashi's "Investigation of Counting Houses," surmises that consignment shops and counting houses were identical, but simultaneously acknowledges that the documentation is scanty, and that it is not possible
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to decide for certain. In addition, without any basis at all, he says that counting houses accepted checks to pay out money.

4. Buying and Selling of Unminted Gold and Silver

Use of gold in China had gradually increased since Warring States times. From Han times on, silver utensils became popular, and therefore all during those times buying and selling of gold and silver was occurring.[1] Of course buying and selling of gold and silver cannot be said to constitute money conversion, since that term implies the conversion of one money into another, and only the strengthening of the monetary character of gold and silver would have turned the buying and selling of these metals into money conversion.

Therefore, the study of the Chinese exchange trade or the the history of the gold and silver market must begin with the study of the history of the gold and silver smiths and the gold and silver shops. These gold and silver smiths and shops hold an important place in the history of the development of Chinese finance. Though they did not, like their English equivalents, develop into modern financial institutions, they were the main money exchange institutions in China prior to the appearance of the money shops, and sometimes even transcended the sphere of the money exchange trade.

Of course demand for the products of gold and silver artisanship was a prerequisite for the development of the gold and silver smith trade. Gold and silver ornaments probably originated as soon as gold and silver were discovered. Mankind adopted gold and silver as stores of value and instruments of payment precisely because of their usefulness for making articles of adornment.

As royalty and aristocrats were already using utensils of gold and silver during Han, gold and silver smiths must already have existed by then. Given the prevalence of gold jewelry during Eastern Han, Wei and Jin, goldsmiths must have become still more numerous. Before Eastern Han, however, manufacture of gold and silver utensils and jewelry may have been in the hands of slaves of the aristocratic families themselves.[2]

Only later, after gold jewelry had spread among the common people, did genuine goldsmiths appear, but their status then remain very low. Most of them were supported by the aristocracy, and worked in aristocratic households. They were simple artisans, and likely did not have much capital of their own, so they probably did not trade in gold and silver on their own.

As late as Northern Wei (444), there are examples of prohibitions on the private keeping of gold

[1]Cf. chapter 1.2.2, note 14.

[2]Cf. chapter 2.1.3.

and silver smiths.[3] There were already gold shops by then. When Liu Zuan of Southern Qi went to Latter Wei, he entered a gold and jade shop, and wanted to make a large purchase, but was embarrassed by a few words spoken by Li Anshi.[4]

By the time of the Tang Dynasty, with its internal unity and peace, commerce and manufacture developed, and the social position of the gold and silver smiths rose in parallel with their economic strength. They slowly evolved from being itinerant craftsmen, to setting up their own establishments, and these turned into

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gold and silver shops. A number of these formed a gold and silver guild and constituted a gold and silver market.

There was a gold and silver guild in Suzhou during Tang.[5] In all probability there were also a great many gold and silver shops in Yangzhou.[6] Chang'an had its gold market.[7] This was the money exchange market or market for buying and selling raw gold and silver in Chang'an then.

The business of the gold and silver shops was, of course, mainly the manufacture of utensils and jewelry, but they probably also bought and sold such objects as well as raw gold and silver. Some also sold pearls and jade.[8] Out of the buying and selling of gold and silver there grew the trade of gold and silver assaying.[9]

During Tang, the circulatory media were mainly coins and cloth, but gold and silver were still the main stores of value.[10] At times they were used as a

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[3]*Wei History*, 4, "Annals of Emperor Shizu," edict of taiping zhenjun 5, 1st month: "All those from princely and ducal ranks down to commoner level who privately keep monks, sorcerers and gold and silver smiths in their households must turn them over to the officials, and may not conceal them."

Northern Qi History, 47, "Biographies of Cruel Officials: Bi Yiyun": "When Emperor Wenxuan accepted Buddhism . . . Yiyun's paternal uncle's elder son was a monk in debt to the officials, but the former senior clerk of the capital district would not accept his allegiance, and set limits to what he could collect. For this reason he bore him a grudge. . . He was also accused of privately harboring artisans. His household had more than ten weavers of brocade and artificers of gold and silver utensils, though this was forbidden."

[4]*Wei History*, 53, "Biography of Li Anshi": "The state had an emissary from the south arrive. Many precious goods were taken out of hoards and rich households of the capital were ordered to market them. The emissary was to be allowed to send off what he pleased. The emissary [the Southern Qi emissary Liu Zuan] went to a gold and jade shop to inquire about prices. Zuan said the gold and jade of the north was too cheap, as though these were things which had come out of the hills and streams. Anshi replied, 'the Sagely Dynasty did not value gold and jade, and so they were as cheap as tiles and pebbles. His Majesty's virtue is miraculously illuminating. In the mountains, he does not love the precious, and so there are no streams without gold, and no mountains without jade.' Zuan was originally going to make a big purchase, but when he heard Anshi's words, he abandoned this in shame."

[5]*Taiping Broad Record*, 280, quoting *Record of Compilations of the Unusual*, "Liu Jingfu": "The Wutaibo Temple was west of the East Village Gate. Every Spring and Autumn the market shops all assess their members a fee to beseech good fortune from the Three Abdicators, and offer many pictures of fine horses, decorated carts and girls to them. There is not a month without a holiday. On the day yichou in the Spring, the head of the gold and silver guild brings together his members carrying silk pictures of beautiful women and barbarian fiddles following behind. The paintings are of great beauties of olden days. With their windows and gilded walls, these firms first and last each contribute no less than a bolt of cloth."

[6]The Japanese monk Ennin sold gold dust in Yangzhou during the kaicheng period. Cf. his *Entering Tang in Search of the Law*. Zhao Lin's *Record of Words' Consequences* also mentions selling gold in Yangzhou.

[7]Xue Yongruo, *Collected Oddities Record*, "Fourth Lord Wang": "In Huai he put out gold weighing perhaps 5 ounces, of a color like a cock's comb, and then said, 'This cannot

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be priced like the ordinary sort.' When he reached the capital, he inquired after Zhang Fengzi in the gold market, and transferred it to him for 200 strings." There was also a gold market in Luoyang. Lu Ji, *Luoyang Record*: "There are three markets. The large market was called the gold market, and was in the main city." Cf. *Taiping yulan*, 827, "Property, 7, Markets."

[8]Gao Yanxiu, *Omissions from Tang History*, latter part, "Wang Jushi's Miraculous Drug": "Indeed there were [in Chang'an], in the Yanshou ward, sellers of gold, silver, pearls and jade."

[9]Katō Shigashi, in his *Studies of Gold and Silver During the Tang and Song Periods*, divides the business of the gold and silver shops into four sorts (five sorts for the Song Dynasty): 1) the buying and selling of gold and silver utensils and jewelry; 2) the buying and selling of gold and silver ingots and cakes; 3) the assaying of gold and silver; 4) the manufacture of gold and silver utensils and jewelry and ingots.

[10]Xue Diao, *Biography of Liu Wushuang*: "The Jingyuan soldiers and officers rebelled. Yao Lingyan led his troops into the Jinyuan Palace. The Son of Heaven went out through the park by the Northern Gate. The officials hurried after the Travelling Court. I, concerned about my wife, went back to my office, and hurriedly called to Xianke, 'If you will help me take care of my family affairs, I will marry Wushuang to you.' Xianke immediately assented, and with pleasure bowed his thanks.

"I then packed twenty loads of gold, silver, gauze and broc-

means of payment, and so there was also a need for buying and selling of raw gold and silver.[11]

The buying and selling of raw gold and silver is not the same thing as monetary exchange. When raw gold and silver are bought and sold, they are being treated as commodities. In monetary exchange they are treated as moneys. Because there are instances during Tang of use of gold and silver as instruments for making payments, and in the Lingnan silver even served as a money in circulation,[12] Tang Dynasty gold and silver shops had something of the nature of money exchange institutions.

By Five Dynasties times, use of silver increased, and silversmiths' shops gradually became more important.[13]

ade, then said to Xianke, 'When you trade the clothing, pawn these goods. Go out the Kaiyuan Gate, and look for the Shaanxi store. . . '"

Old Tang History, 151, "Biography of Wang E": "The Guangzhi Mansion had memorialized to request the registration of the quarter so as to increase its size. A double-walled cave was made, and gold and coins were put inside it."

[11]*Record of Original Transformations*, "Zhou Xianzhe": "During the reign of Empress Wu Zetian and her Zhou dynasty . . . Zhou Sheng said 'The matter has still not germinated, and this is unreasonable. Hurry to the capital to inform elder brother of what I have said, and ask him for 50 *yi* of gold. ' . . . Xianzhe . . . said to the finance officer, . . . 'I have known you for a long time, and cannot allow you to suffer the same calamity as elder brother. I can only ask you for 100 ounces of gold, and give you a medal of request from the Emperor. . . Thereupon the finance officer sold the gold to Xianzhe." Cf. *Old Stories*, B, 4.

New Tang History, "Treatise on Food and Money": "When Muzong ascended the throne, 10 ounces of gold and silver were sold in the capital at a discount of one ounce."

[12]Yuan Zhen, *Debates on Money*. Zhang Ji, *A Guest Sent South*. Cf. also chapter 4.1.4, note 21.

[13]Sun Guangxian, *Northern Dreams Petty Talk*, "He Kui": "At the time of the false prince of Shu, there was a Langzhou native, He Kui, who knew no trade, but was a clever talker. As he was a fake diviner, people nicknamed him He See-ghosts. There was a recently ennobled man of Shu, Xian Shenzhi. Someone who had been suffering from white scabies was in a silver selling shop. His was the second generation with that affliction. When He saw this, he said to the man, 'I know how you are suffering. For a wedding gift, I need a few rings, bracelets and hairpins. Can you deliver them? If so, your suffering will be alleviated.'"

5. *The Appearance of Money Remittance*

Monetary remittance was invented very early on in foreign countries.[1] It did not, however, appear in China until the Tang Dynasty. There were four reasons for the appearance of monetary remittance during Tang: First, there was a shortage of coins. Second, because coins were few, localities gradually enacted bans on export of coins beyond their borders.[2] Third, there were many tax stations, and funds derived through taxation often had to be transported. Fourth, the development of commerce had slowly led to the feeling that it was inconvenient to carry bronze cash.

The Tang Dynasty's monetary remittance system was called "flying cash" [*feiqian*]. It was managed by both merchants and local government offices. At that time the local governments of all the circuits had offices to represent them in the capital. These were called memorial offering bureaus. These bureaus specialized in keeping up connections with the central government, so naturally they frequently needed cash.

After merchants had sold off their goods in the capital, if they did not want to carry ready money back home with them, they could hand over their money to the memorial offering bureau of their

[1]Babylon had an instrument resembling a certificate of exchange in the ninth century B.C. A person in place A would write on a clay tablet that after a given time, he would pay over to a person in place B a certain sum of money. Sometimes the amount of interest would be recorded. This sort of arrangement arose because the transportation of ready cash was inconvenient, since merchants of those times employed camel caravans, and the places through which they passed were full of bandits. During the Middle Ages the Jews and Italians reinvented the certificate of exchange under identical circumstances. Cf. A. R. Burns, *Money and Monetary Policy in Early Times*, pp. 284-285.

The appearance of the monetary remittance trade in India also occurred much earlier than in China. It is said that 2,500-2,600 years ago (in the early years of China's Warring States epoch), exchange certificates (*hundi*) were already being issued, and these seem to have closely resembled China's "flying cash." Cf. L. C. Jain, *Indigenous Banking in India* (London, 1933). I do not know if there is any connection between India's exchange certificate system and flying cash.

[2]*Tang Collected Statutes*, 89, dali 14: "The Salt and Iron Commissioner, Li Ruochu, memorialized, that since the quantity of coins had become small recently in most prefectures, fabrics had turned cheap, and coins had been prohibited from passing their borders, profits had declined and commerce was stalling. He requested that it be commanded that ready cash be allowed to move freely, and such prohibitions be rescinded. This was accepted."

home circuit, and the bureau would issue them a certificate called
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a *wendie* or *gongju*.

This document or receipt was divided into two parts. One half was given to the person making the exchange. The other half was sent to the home circuit. When the merchant returned to his home circuit, the two halves were placed together, and if they fitted exactly, he could withdraw the sum of money. In this way, it was possible for the merchants to avoid the dangers of transporting cash home, while local governments avoided having to constantly transport cash to the capital.

This method of matching tallies to withdraw cash was actually an outgrowth of the process used in borrowing money, except that the movement over time of loans was transformed into a movement over space for the exchange process. This development occurred at the beginning of yuanhe [c.806].[3] The governmental organs involved in this trade, in addition to the memorial advancing bureaus, included the various armies and commissioners, as well as the Ministry of Finance, the Funds Commission and the Salt and Iron Commission.

Merchants engaged in flying cash operations did so because they had branch houses in various circuits, or did business in them, and wanted to avoid transporting ready cash, or even because they were looking for a way to make further profit.

Monetary remittance then was apparently a one-for-one exchange, with no charge for the service. Naturally the government wanted to be able to somewhat increase its expenditures. Probably for this reason, or because it did not clearly understand the advantages of monetary remittance, in yuanhe 6 (811) it finally banned the practice.[4] This practice could have economized on the use of money, and relieved the difficulties caused by constriction of the money supply.

With its prohibition, the merchants were obliged to transport ready cash. This both lowered the velocity of money's circulation and, because merchants were sending cash out of the capital, reduced the quantity of money there, causing prices to fall.

Only then did the government realize that banning flying cash was an unwise move, and so in yuanhe 7 [812] it again permitted merchants to obtain flying cash from the Ministry of Finance, the Funds Commission and the Salt and Iron Commission, but for each 1,000 cash a charge of 100 cash was made. No merchant would make exchanges under these terms, and so the one-for-one exchange was restored.

In fact, at that time the money supply was so constricted that the government had to institute a policy of subsidization before it could increase the amount of exchange. Otherwise people would have kept their ready money on their persons.[5]

Flying cash was also called "convenient exchange" [*bianhuan*].[6] In fact the term convenient

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[3]*New Tang History*, 54, "Treatise on Food and Money": "Under Emperor Xianzong, because cash was scarce, use of bronze utensils was again prohibited. At that time, when merchants came to the capital, they would entrust their cash to the circuits' memorial offering bureaus, and to the various armies, commissioners and rich families, so as to lighten their burdens as they hurried away in all directions. When the tallies were matched, they could withdraw their money. This was called flying cash."

[4]*Tang Collected Statutes*, 89, "Money": "Yuanhe 6 . . . Convenient exchange of public and private ready cash by tea merchants and others must be halted." *New Tang History*, "Treatise on Food and Money": "The Capital Prefect, Pei Wu, requested the prohibition of giving merchants flying cash."

[5]*New Tang History*, 54, "Treatise on Food and Money": "Since the banning of flying cash in the capital, families had been hoarding cash. Prices were constantly low. The Supervisor of Funds, Lu Tan, the Minister of War and Supervisor of the Ministry of Finance, Wang Zhao, and the Salt and Iron Commissioner, Wang Bo, all requested that merchants be permitted to obtain flying cash from the Ministry of Finance, the Funds Commission and the Salt and Iron Commission for a premium of 100 cash for each 1,000 cash. No merchants came, however. Permission was restored for merchants to exchange strings of cash at par, but cash remained heavily demanded and cloth lightly demanded, as before."

[6]*Record of Words' Consequences*: "There was a gentleman who sold goods away from home, obtaining several hundred strings for them. Fearing that it would be hard to bring them across the rivers and roads, he entreated someone whom he knew to place the money in the public treasury, and brought a certificate back with him. This was what was then called convenient exchange."

Old Tang History, 48, "Treatise on Food and Money": "In yuanhe 7, 5th month, the Minister of Finance, Wang Zhao, the Funds Commissioner, Lu Tan and the Salt and Iron Commissioner, Wang Bo, memorialized that 'because ready cash is in heavy demand in the capital, there is not enough for the officials to make their expenditures on time. This is because recently merchants have not been permitted to make convenient exchange, and thus wealthy families hoard their money. As a consequence, prices have become high. [The character for "high" has, I suspect, been erroneouly substituted for "low" here.] Most coins do not come out. We have now considered matters, and request that it be ordered that merchants be allowed to make convenient exchange at the Three Offices. . .'"

Book Hall of the Original Tortoise, 501: "The Funds Com-

exchange was used even more frequently, and after Tang this practice was always called convenient exchange.

Flying cash or convenient exchange may be said to have been a form of credit. When a merchant bought exchange, this was no different from extending a loan to the organization issuing the exchange, but only if the unit to which the payment was initially made kept faith could the completion of the transaction take place.

That is, those in the capital who paid over money to the government there had to depend on the local bureau being sufficiently trustworthy as to cash in the certificates when presented to them. Otherwise the merchants would have suffered a loss, or at least some inconvenience. During the reign of Yizong (860-873), when the merchants brought exchange certificates to the prefectures to cash them in, there were instances of prefectures delaying payment, causing the merchants to fear making further exchanges. Therefore, in xiantong 8
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(867), an order was issued to the prefectures to not obstruct such payments.[7]

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missioner, Minister of Finance, and the Salt and Iron Commissioner memorialized that 'previously it was ordered that merchants add a fee of 100 cash for each 1,000 cash that they exchange. Now no one is willing to do this. We request that the merchants be allowed to exchange each string of cash at par according to the yuanhe 5 regulation.' Assented to."

[7] *Tang Collected Statutes*: "Xiantong 8, 10th moth. The Supervisor of Funds of the Ministry of Finance, Cui Yanzhao memorialized: 'Prior to this year, in order to receive Double Tax, ferry and wine tax money from the Yangtze and Huai circuits prefectures, this office has allowed the old rules followed for years to be used, which permitted merchants to deposit convenient cash. Since the uprising of the southern barbarians, military supply commissioners have been set up to use this office's cash held in the prefectural treasuries. But there are still merchants making convenient exchange.

"'When these merchants bring the convenient exchange certificates to their home prefectures for payment, they have all been told by these prefectures that the money has been detained by the military supply commissioners. For this reason, the merchants have become suspicious, and it has reached the point where this office does not have sufficient funds to meet its expenses. It is requested that orders be issued to the various circuits and prefectural taxing authorities, and to the Salt Administration that they pay out in accord with the limits established, and that they not obstruct repayment to the merchants.' Assented to."

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5.0 MONEY OF THE TWO SONG DYNASTIES

5.1 The Monetary System

1. Coinage

The monetary system of Song remained mainly based on use of coins. Cloth had gradually reverted to the status of an article for daily use, but silver grew enormously in importance. The most notable aspect of the dynasty's monetary system was the appearance and spread of paper money.

Song's coinage was the most complex in the history of Chinese money. This complexity was displayed in many ways:

First, there were many materials used to make coins. The parallel use of bronze and iron coins, for example, was inherited from the Five Dynasties. Then, however, it was an abnormal phenomenon, whereas Song's iron cash formed a regular system. In addition, there were various sorts of paper money to make the situation still more complicated.

Second, money's circulation was localized. Most general historians consider Song to have been a centralized feudal empire, but one could not discern this from the Song monetary system. In monetary terms, Song was even more fragmented than other dynasties. Though I have said that bronze and iron coins were both used, this does not mean that all regions used both types of coins simultaneously, and this resulted in fragmentation.

During Northern Song, in Kaifeng and the dozen circuits of Jingdong, Jingxi, Jiangbei, Huainan, Liangzhe, Fujian, Jiangnandong, Jiangnanxi, Jinghunan, Guangnandong, Guangnanxi and Jingxibei, for the most part only bronze cash were used. In the circuits of Chengdufu, Zizhou, Lizhou and Guizhou only iron coins were used. In Shanfuxi and Hedong circuits, bronze and iron cash were used together.

During Southern Song, bronze cash were limited to the southeast, and Sichuan used iron cash, but actually paper money was used everywhere. Metal money was simply too scarce. Paper money differed by locality. During the first part of Southern Song there were 236, and during the latter part 416 places with their own monetary units.[1]

Third, the coins came in large and small sizes, and the face values of bronze and iron coins

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were not determinate. The number of different types of Song coins cannot, of course, compare with the complexity of Wang Mang's coinage, but his systems had a short lifetime, and were not really put into effect. The small and large coins of Song were normal parts of its system.

Generally these were the small ordinary or standard coin of 1-cash value and a 2-cash coin. Frequently there were also 3-cash, 5-cash and 10-cash coins. Southern Song added a 100-cash coin.

The exchange price between bronze and iron coins may be said to have been indeterminate. Even though there was an official exchange rate, it could rarely be maintained.

Fourth, there were many different names for coins. Though the Tang had such coins as the Qianfeng Spring-treasure, the Qianyuan Heavy Treasure, and the Dali and Jianzhong coins, these were all atypical, and the Tang Dynasty's main coin was the Inaugural. This situation changed by Song times.

We may say that it was only by Song times that genuine year-period coins were in circulation. A new coin was minted for practically every change in year-period, with only an extremely small number of exceptions, and changes of year-period were particularly numerous during Song. As under Emperor Wu of Western Han, an emperor would change the year period several times during his reign.

In addition, coins were sometimes called Circulating Treasure, sometimes Original Treasure and at times the same coins would be given both labels. Southern Song's Jiading iron coins alternated one or two dozen different characters before the character for Treasure.

Fifth, a variety of calligraphic styles was used for the coins' inscriptions. Northern Song coins bore inscriptions in sealscript, clerkscript, regular square script, running script, abstract manuscript, and thin gold style. Generally, each type of coin was produced with at least two and sometimes three different calligraphic styles.

There were large differences between the coinages of Northern and Southern Song. Northern Song mainly relied on bronze cash, and Southern Song mainly on iron cash. Northern Song's coins were mainly of the small 1-cash denomination. Southern Song mostly relied on 2-cash coins. There was great variety among Northern Song coins. Southern Song coins were relatively uniform.

In jianlong 1 (960), Emperor Taizu minted the Song Original Circulating Treasure [Cf. Plate xlvi,1 at end of this subsection]. This was the first Song coin, but it was not a year-period coin. All those who read the Inaugural coin's inscription as Opening Circulation Original Treasure (i.e. *kaitong yuanbao*) read this coin as Song Circulating Original

[1] Arthur Sunle, *Deutsche Münz- und Geldgeschichte von den Anfängen bis*

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zum 15. Jahrhundert, pp. 183-220.

Treasure (*Song tong yuanbao*). In the same fashion, they read the Five Dynasties' Hanyuan Circulating Treasure and Zhouyuan Circulating Treasure as Han Circulating Original Treasure and Zhou Circulating Original Treasure.

There were no year-period coins minted all through Emperor Taizu's reign. The Qiande was a Ten Kingdoms coin, rather than one minted during Taizu's qiande year-period. It is said that when the era name was changed to qiande during jianlong 4 [963], the chief minister was particularly instructed not to select an era name belonging to a previous dynasty. Later, the Emperor saw the inscription qiande 4 on a bronze mirror inside the palace, and asked Dou Yi about it. Dou replied that this was a Shu era name. Upon inquiry, the mirror indeed proved to have come from Sichuan, whereupon the Emperor sighed and said, "The chief minister really must employ some scholars!"[2]

The Song Original coin comes in both blank reverse and dot and crescent bearing reverse versions. In having so many variations it resembles the Zhou Original coin. If, however, a coin bore a dot, then it would not have a crescent. Dots and crescents appear above, below or on either side of the hole. Sometimes crescents appear at the hole's

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four corners. There are iron versions of the Song Original, which were minted in Baizhangxian, Yazhou, in Sichuan.[3] These are small, have wide holes, and are not numerous.

During the taiping/xingguo period (976-983), Emperor Taizong minted the Taiping Circulating Treasure [Plate xlvi,2]. This was Song's first year-period coin. The reverses of some also bear dots and crescents, but the variations are not so numerous as among the Song Original. Iron versions were minted in Sichuan and Fujian. Those minted in Sichuan were small coins; those in Fujian were large coins. There is extant a thick and large iron coin with a large dot above the hole on its reverse, which was probably minted in Jianzhou, Fujian.

In chunhua 5 (994), the Chunhua Original Treasure was minted [Plate xlvi,3-5]. The Song Original and Taiping coins both employed clerkscript inscriptions, resembling those of the Inaugural coin. A change was made during chunhua to formally establish what became the Song system of having a variety of calligraphic styles.

The Chunhua coins come in three calligraphic forms: formal block style, manuscript style and abstract manuscript style, which were written by Zhao Gui, the Emperor, himself. This was the beginning of the imperial calligraphy coins.[4] There are also both large and small iron versions of the Chunhua coin. The large one was a 10-cash coin, but only some 3,000 strings of them were made.[5] Very few have survived.

The Zhidao Original Treasure of the zhidao year-period (995-997) [Plate xlvi,6-8] also comes in block, manuscript and abstract- calligraphic styles, and these too were probably in the imperial hand. During the zhidao period the number of coin inspectorates [i.e. mints. EHK] increased. The Raozhou Ever-normal Inspectorate set up a Chizhou Yongfeng branch Inspectorate, Fuzhou set up a Fengguo Inspectorate, and Jiangzhou a Guangning Inspectorate.[6] Hence Zhidao coins are relatively common.

In chunhua 5 [994], 1st month, Li Shun occupied Chengdu. In the 5th month he was proclaimed King of Shu, changed the era name to yingyun, and minted Yingyun Original Treasure bronze coins and Yingyun Circulating Treasure bronze and iron coins. All of these had their inscriptions read circumferentially.[7]

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[2]Ouyang Xiu, *Record of a Return to the Fields*, 1.

[3]*Investigation of Literary Remains*, "Investigation of Coins, 2."

[4]*Song Collected Statutes Compiled Draft*, "Food and Money: Measures, 41.28": "The imperial calligraphy block, manuscript and abstract style Chunhua coins were fixed at a weight of 2.4 grains per coin, with 2,400 of them making 15 catties as a standard weight." Wang Yucheng's ode runs:

The exiled official sans salary, his hearth sans smoke,
He merely plucks his lute and dozes all day over his book;
He still has a set of Zhao Victory Ones,
And in his pocket, there's still an imperial script coin.

[5]*Song History*, "Treatise on Food and Money."

[6]*Sea of Jade*.

[7]Yingyun and Yinggan coins are said to have been excavated in 1939 in Hujiachang, Jianyang in Sichuan. Included among the several thousand iron coins were Inaugurals, Song Originals, Taiping and Chunhua coins. There were also several Guangzheng coins, but no coins later than the chunhua period [990-995]. Included in this find were two Yingyun and one Yinggan coin. Cf. "Yingyun Iron Coins," *Coins* magazine, no. 26, and "Yinggan Iron Coins," *Coins*, no. 30.

This was not the first find of Yingyun coins. Hong Zun's *Record of Coins*, 14, "Miraculous Objects," has an entry on "Yingyun Coins," which quotes Shen Gua, *Mountain Stream Dream Jottings* as saying, "The Taiping Monastery on Mount Lu was a shrine of the Taoist Nine Heavens Coverers, and was established during the kaiyuan period of Tang. In yuanfeng 2 [1079], a Daoist priest found a bottle in the earth. It was sealed very tightly. When broken open, there was revealed a bronze coin, the inscription on which consisted of the four characters, *ying, yuan, bao* and *yun*. This was not taken as unusual. In

There is also an Yinggan Circulating Treasure iron coin which could also have been minted by Li Shun. Li Shun was defeated only four or five months after being proclaimed king, so hardly any of these coins have survived. It is, however, really hard to explain why within four or five months there should have been two era names, and why the Yingyun coins should have been called both Original Treasure and Circulating Treasure.

During the xianping era (998-1003), Emperor Zhenzong minted the Xianping Original Treasure [Plate xlvi,9]. During jingde (1004-1007), the Jingde Original Treasures were minted [Plate xlvi,10]. During the dazhong/xiangfu era (1008-1016), the Xiangfu Original Treasure and Xiangfu Circulating Treasure were turned out [Plate xlvi,11-12]. The Tianxi Circulating Treasure was minted during the tianxi era (1017-1021) [Plate xlvi,13]. There are only block style inscription versions of these coins, so there are no matching sets for them.

A large iron version of the Jingde Original Treasure exists. These were minted in Jiazhou and Qiongzhou in Sichuan. A string of them weighed 25 catties 8 ounces.[8] Each coin weighed over 0.4 ounces. There is also a large iron version of the Xiangfu Original Treasure which was minted in dazhong/xiangfu 7 [1014], and a string of which weighed 20

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catties 10 ounces. These had a face value of 10-cash.[9] There is also an iron Tianxi Circulating Treasure.

Emperor Renzong issued the Tiansheng Original Treasure in tiansheng 1 (1023), the Mingdao Original Treasure in mingdao 1 (1032), the Jingyou Original Treasure in jingyou 1 (1034) and the Imperial Song Circulation Treasure in baoyuan 2 (1039) [Plate xlvii,1-8]. All of these coins come in sealscript and clerkscript matched sets, and most were of iron.

During the kangding period (1040), there was only the Kangding Original Treasure iron coin. None of these were made of copper.

There were only large coins made during qingli (1041-1048) [Plate xlvii,9-11]. These large coins were made of both copper and iron, and all were of

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yuanfeng 4, there was suddenly issued an edict promoting someone called the Daoist Nine Heavens Coverer as the Yingyuan paoyun True Ruler, which corresponded to the inscription on the coin. The monastery showed this coin to him." This could have been a misreading of "Yingyun yuanbao," with the homonym meaning "protect" substituted for the more complex character meaning "treasure."

Luo Muyuan, "The *Record of Coins*' Misreading of Yingyuan baoyun Coin Corrected," *Coins*, no. 17, differs from the qiandao period woodblock edition of *Jottings*. He gives it as follows: "In yuanfeng 2, the Daoist priest Tao Zhixian was preparing a shed, and ordered his servants, Chen Ruojue and Dong Zuo, to dig up the earth. They unexpectedly found a tightly sealed bottle. When they broke it open, they found five-colored soil and just one bronze coin, which bore the four-character inscription *ying, yuan, bao* and *yun*. Ruojue took it to his master, and nothing much was thought of it." He also quotes the *Daoist Studies Temple Jottings* as saying that when Shun was about to be defeated, he dressed up as a monk, and fled into hiding. He was finally caught and executed more than thirty years later. He supposes that the Mount Lu coin was buried by Li Shun or one of his band.

Wang Yinjia, "The Supernatural Yingyun Original Treasure Coin," *Coins*, no. 21, quotes an old edition of Meng Ren's *Small Compendium of Opinions*: "Mister Mu Luhan [Tan] suffered from poverty in his youth. After receiving a recommendation from his township, he was registered as a scholar. In year renzi, he was travelling between Jing and Luo when suddenly a person came in carrying documents and invitation money, and said, 'I have received my master's orders to ask you, sir, to accept him as a disciple.' Mu then happily set out to see the man. Upon reaching the side door, he saw the gate was broad and stout, as though it were the home of a duke or marquis. . . . But at first the master was not to be seen, and he began to harbor doubts. He inquired of the servant, but received no reply. He inquired of the disciples, but was merely given excuses in reply, and so his doubts multiplied. He wanted to peek in surrepetitiously, but the master had already pushed his way inside, as though he knew that the gentleman wanted to look at him. He said, 'You, sir, need not doubt that I am really an official of Hades. As I respect your learning, I have invited you to teach my child. He is good for nothing, and if he could be enriched by some education, I would be truly fortunate. However, sir, your reputation for merit is well known, and I could not long constrain you. I now give you one coin, and the coin's inscription is *yingyun er yuan*, the Great Chief of All Under Heaven. Treasure it! Treasure it!' He then sent someone to escort him back, giving him a very generous gift. The next year, year guichou, the gentleman went to take the examinations, and indeed passed in the first rank."

Wang Yinjia believed that the words about someone sending him back with a gift "all record the activities of men, not spirits, and refer to the activities of green forest knights [i.e. bandits]. At that time, things were tranquil, and the authorities were clearly in control. To have written plainly would have been indiscreet. It was preferable to indicate indirectly what was going on, with these few words about a gift of a coin. In this context, to have inserted the four characters *yingyun yuanbao* would not have been at all forced."

[8] *Investigation of Literary Remains*, "Investigation of Coins, 2."

[9] Fei Zhu, *Catalogue of Coins*.

10-cash denomination. Their inscription was Qingli Heavy Treasure. The bronze coin is read circumferentially; some of the iron coins are also read circumferentially; others in straight lines.

The histories say that large bronze and iron Huangyou Original Treasures were minted during huangyou (1049-1053),[10] but none have survived.

During the zhihe period (1054-1055), a small Zhihe Original Treasure and Zhihe Heavy Treasure 2-cash and 3-cash coins were minted, but very few of the large coins were turned out [Plate xlvii,12-13]. The reverses on some of the 3-cash coins bear the characters *guo* and *fang*. These are the earliest Song coins to bear place names. The Zhihe small coins come in matching sets.

The Jiayou Original Treasure and Jiayou Circulating Treasure of the jiayou period (1056-1063) also come in matching sets [Plate xlvii,14-15].

Emperor Yingzong minted the Zhiping Original Treasure and Zhiping Circulating Treasure during zhiping (1064-1067), each in three calligraphic styles, including two different forms of the seal-script [Plate xlviii,1-3]. At that time the coin inspectorates of six prefectures, Raozhou, Chizhou, Jiangzhou, Jianzhou, Zhaozhou and Yizhou were minting bronze cash, as were the Jiyuan Inspectorate of Xingyuanfu in the west and the Fumin Inspectorate of Huizhou. The three prefectures of Jiazhou, Qiungzhou and Xingzhou in Sichuan were turning out iron coins.

During the reign of Emperor Shenzong, the quantity of coins increased enormously, and 2-cash coins began to circulate. The Xining Original Treasure was issued in xining 1 (1068), and in 1071 the Xining Heavy Treasure 10-cash coin [Plate xlviii,4-7]. This was to meet military needs. Later, illicit minting forced it to be revalued to 3-cash, and in 1073 to 2-cash. This was the reason for the circulation of the 2-cash coin. As a consequence the sizes and weights of Xining Heavy Treasures vary, and it is hard to distinguish between the 10-cash, 3-cash and 2-cash denominations.

There are still more numerous variants of the 1-cash small coin because the number of coin inspectorates had increased, and each of them turned out a larger number of coins. Some of the 1-cash and 2-cash coins' reverses bear the character *wei*, all of them much worn down, so that this character looks like *heng*. Both of these places had coin inspectorates. All the Xining coins form matched sets.

The Yuanfeng Circulating Treasure small coins and 2-cash coins were minted during yuanfeng (1078-1085) [Plate xlviii,8-10]. The yuanfeng era was the Song period during which the greatest number of coins were minted. There were 17 inspectorates for bronze coins, and these annually turned out five

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million and more strings.

There were 9 mints for iron coins, and these produced over 1 million strings of coins per year.[11] Ten

[10] *Yongle Encyclopedia*.

[11] The quantity of coins produced by each mint during the yuanfeng era must be pieced together from various sources, but an approximate figure would be 5,060,000 strings of bronze coins and 1,139,234 strings of iron coins. Assuming this as the total amount, we may draw on the *Investigation of Literary Remains*, the *Sea of Jade* and the *Song Collected Statutes Compiled Draft* for the annual production figures of individual mints:

1) Bronze Coins

Western Capital Fucai Inspectorate	200,000 strings

(Investigation of Literary Remains makes it 200,000 strings each from the Two Capitals Fuccai Inspectorates).

Weizhou Liyang Inspectorate	200,000 strings
Yongxingjun	200,000 strings
Huazhou	200,000 strings
Shanfu	200,000 strings

(*Investigation of Literary Remains* assigns 200,000 strings to each of the inspectorates of Yongxingjun, Huazhou and Shanfu, for a total of 600,000.)

Jiangzhou, Yuanqu Inspectorate	260,000 strings
Shuzhou, Tong'an Inspectorate	100,000 strings
Muzhou, Shenquan Inspectorate	100,000 strings
Xingguojun, Fumin Inspectorate	200,000 strings

(Investigation of Literary Remains makes it 20,000)

Hengzhou, Xi'ning Inspectorate	200,000 strings
Ezhou, Baoquan Inspectorate	100,000 strings
Jiangzhou, Guangning Inspectorate	340,000 strings
Chizhou, Yongfeng Inspectorate	445,000 strings
Raozhou, Yongping Inspectorate	615,000 strings
Jianzhou, Fengguo Inspectorate	200,000 strings
Shaozhou, Yongtong Inspectorate	800,000 strings
Huizhou, Fumin Inspectorate	700,000 strings

2) Iron Coins

Guozhou, Zaicheng Inspectorate	125,000 strings
Zhuyang Inspectorate	125,000 strings
Shangzhou, Fumin Inspectorate	125,000 strings
Luonan Inspectorate	125,000 strings

(*Song Collected Statutes Compiled Draft* says the outputs of the preceding four mints were all 2-cash coins)

Tongyuanjun, Weiyuanzhen	250,000 strings
Minzhou, Taoshanzhen	250,000 strings

(*Song Collected Statutes Compiled Draft* gives the combined output of the above two mints as 200,000 strings)

Jiazhou	250,000 strings
Qiongzhou	73,234 strings
Xingzhou	41,000 strings

(*Song Collected Statutes Compiled Draft* makes the output of

of the 17 mints producing bronze coins were in the south. Six of the 9 iron coin mints were in Shaanxi, and 3 were in Sichuan.

The Yuanfeng coins also come in sealscript and manuscript matching sets, with a very large number of variant forms. The level of their calligraphy is quite high. There is one type of clerkscript Yuanfeng coin which is traditionally held to bear the calligraphy of Su Shi, and which is therefore called the Dongpo Yuanfeng (after Su Shi's alternate name), but very few of those have come down to us. Because of their large scale production, there are very few completely fine quality Xining or Yuanfeng coins.

Emperor Zhezong minted the Yuanyou Circulating Treasure during the yuanyou period (1086-1093) [Plate xlix,1-2]. There are 2-cash and 1-cash denominations in bronze and iron, with matching sets in both metals. Their inscriptions are said to have been written by Sima Guang and Su Shi. Some of the reverses of the small bronze version bear the character *shaan*. These were minted in Shaanxi in yuanyou 8, 8th month.

During the shaosheng era (1094-1097), the Shaosheng Original Treasure and Shaosheng Circulating Treasure were minted, the former in bronze and iron versions [Plate xlix,3-4]. Both versions come in 1-cash and 2-cash denominations. The iron version has these and also has a 3-cash version. All come in sealscript and manuscript style matched sets. There are dots and crescents on the reverses of the 1-cash bronze coin. The Shaosheng Circulating Treasure comes in bronze and iron versions, the bronze version only in a 1-cash blockscript type.

The iron version is also 1-cash, but some have their inscriptions read in straight lines and some circumferentially. The straight line read inscriptions come in block script and clerk script versions. A bronze "mother" mold of the circumferential inscription version exists with the character *shi* on its reverse. This was produced by the Shizhou, Hubei Guangji Inspectorate.

The Yuanfu Original Treasure was produced during yuanfu (1097-1100) in 1-cash and 2-cash bronze and iron versions [Plate xlix,5-8]. The bronze version come in a sealscript and manuscript style matching set. There is also a Shaosheng Heavy Treasure large iron coin.

In jianzhong/jingguo 1 (1101), Emperor Huizong minted the Sagely Song Original Treasure in 1-cash and 2-cash versions, both also in iron [Plate li,1-4]. The Sagely Song coin is not a year-period coin because the current year period had four characters, and so was not suitable for use as a coin inscription. Nor was it possible to imitate the example of minting the Jianzhong coin during the taiping xingguo period, since jianzhong was a Tang Dynasty year-period name.

Collectors possess a Jianguo Original Treasure which resembles coins of Emperor Huizong's time. There are sealscript and block script versions, but I have seen no reference to this coin in the histories. Perhaps it was a trial minting of that time, but that awaits further study.

There is in Shaanxi a 5-cash coin the same size as 1-cash coins, which was equal to five iron coins. It comes in sealscript and ordinary script matching sets. Hardly any are extant.

During the chongning period (1102-1106), the Chongning Circulating Treasure 1-cash and 10-cash coins were minted, and there were also Chongning Heavy Treasure 10-cash and 2-cash coins mixed with tin [Plate l,1-5]. There is an iron version of the latter, and also a Chongning Original Treasure iron coin which is smaller.

During the daguan period (1107-1110), several large and small Daguan Circulating Treasure coins were minted [Plate l,6-9]. These included 1-cash, 2-cash, 5-cash and 10-cash denominations. The histories say the 5-cash coin was admixed with iron and tin,

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but numismatists and collectors have never been able to tell which coin this was. Among the bronze coins, there is one sort which is thicker and heavier than the 3-cash, which most have treated as a 5-cash coin. They are scarce, and may be an early issue of the 3-cash coin. There were both large and small iron coins during daguan.

Aside from the Chongning Heavy Treasure, which is in clerkscript, all the other Chongning and Daguan coins bear the personal calligraphy of Zhao Ji [Emperor Huizong] in the thin-gold style. What has been called its iron strokes and silver hooks have been prized by collectors down through the ages. The Daguan Circulating Treasure small coin comes in a manuscript style version, also from the brush of Zhao Ji. These coins are exceptionally fine and handsome, but only a handful have survived, and these were probably the "mother" coins for casting the clay molds for the iron versions. They are popularly called the "iron mothers."

During the zhenghe period (1111-1117) there were minted the Zhenghe Circulating Treasure small coin and the Zhenghe Heavy Treasure 2-cash coin [Plate li,5-8]. There is another Zhenghe Circulating Treasure the reverse of which bears the two characters meaning "equal to five" [*dangwu*] atop and below the hole. It is the same size as a 1-cash coin.

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the above three mints all 10-cash large coins)

The Zhonghe Circulating Treasure was minted during the zhonghe period (1118), with both sealscript and clerkscript inscriptions forming a matched set [Plate li,9-10]. The zhonghe period only lasted three months, and so there are very few of these coins.

During Xuanhe (1119-1125) Xuanhe Original Treasure and Xuanhe Circulating Treasure were minted [Plate li,11-16]. There are very few of the Original Treasure. The Circulating Treasure comes in 1-cash and 2-cash versions. The 1-cash coin comes in iron, with thin-gold style inscription, and with the character *shan* above the hole on the reverse. It was minted in Shaanxi. There is a xuanhe era bronze coin which also bears this character. It is generally said to be a mother coin for casting molds for iron coins, but may be too numerous for that to be true.

The Song Dynasty's monetary culture reached its peak at this time.

The term monetary culture mainly refers to the artistry of the coins. The coins of ancient Greece, for example, achieved the highest artistic levels, constituting objects of art in their own right. One may trace from these coins the specific stages of development of Greek art. In the art of human sculpture in particular, later ages have not been able to come up to their level.

China and the Islamic nations did not put human representations on their coins. Even decorative patterns are lacking. Basically, there are no pictures, only words. The Islamic nations wanted to avoid idolatry. Though the Koran does not contain a clear prohibition on doing so, Mohammed opposed the making of any kind of image.

The old-time literati of China had always venerated words and calligraphy and treated the arts and drawing lightly. Calligraphy and drawing do in fact differ. Drawings are easy to understand, but not everyone can appreciate the beauties of calligraphy. It was probably for just that reason that the old-time literati of China placed calligraphy above drawing. Hence China's numismatic art differed from Europe's.

Even though Chinese coins bore only words on their surfaces, this would not prevent them from becoming works of art. In fact

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the Song Dynasty's coins reflected the artistic specialties and level of development of the times. If we take painting as representative of the fine arts of the Song, it has been well described as "crowds of mountains competing in elegance, myriads of ravines contending to flow." Porcelain ceramics were being competitively produced in many kilns, not as in later dynasties, only by the official kilns. Numismatic art fit this pattern. Particularly during the time of Emperor Huizong, one may detect the flavor of the period.

Aspects of the numismatic art of China include the shape of the coin itself, the size of the hole, the width of the rim and the purity of the bronze alloy, but the most important aspect is the calligraphy of the inscription.

There are a number of very beautiful inscriptions on ancient Chinese coins, as, for example, the coins of Wang Mang and those of Northern Zhou. The inscriptions on Inaugural coins were written by famous calligraphers. Nevertheless, the strokes used in sealscript and clerkscript are somewhat stereotyped, leaving the calligrapher with little room for creativity, and often making it impossible to discern his individuality.

By Song times, not only did coin inscriptions come in a variety of styles, this in itself reflecting the strength of cultural life, there were also frequent changes in the names of coins, giving calligraphers the chance to fully display their talents. As a consequence, the inscriptions on Song coins are more lively and flowing than those on previous dynasties' coins, and there is simply no comparison between later dynasties' coins and those of Song.

Whether we are talking about the early Song Chunhua and Zhidao coins or the later Yuanfeng and Yuanyou coins, the inscriptions on all of them are worth examination. Nevertheless, those which make the deepest impression are those bearing Zhao Ji's thin-gold calligraphy. No matter how good the calligraphy on other coins, their style is conventional, whereas the thin-gold calligraphy is something out of the ordinary, and draws especial notice.

The large Chongning and Daguan coins gave the calligrapher a larger field on which to display his mettle, and because during those several decades the coins were particularly finely made, the effect of the beauty of the calligraphy was strengthened.

The edges of Song coins were generally wider than those of the Inaugural coins. Some wide edged coins have a certain elegance which itself gives an impression of beauty, but generally speaking, wide edged coins are not particularly good looking. The coins of Emperor Huizong's time are mostly narrow edged, and this harmonizes better with the coins' inscriptions.

Not all coins were done in the thin-gold style during the administration of Emperor Huizong. It was only most of the Chongning coins, all of the Daguan coins, and the character *shan* Xuanhe coins that employed it. It is said that some Chongning coin inscriptions were written by the chief minister, Cai Jing, but there is no way to distinguish them from the others, and so we cannot tell if this is true or not.

There are some Zhenghe coins labeled as thin-gold style which we can determine to not have been written by Zhao Ji. During the 23 years from chongning to xuanhe [1102-26], the thin-gold calligraphy on the coins continued to develop and change. At the beginning of chongning, Zhao Ji was only 22 or 23 years old, and was overflowing with vitality. The four characters *chongning tongbao* are thin and yet strong. The allusions to iron strokes and silver hooks must refer to the characters of this period. During daguan [1107-11], he was a man approaching

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the age of thirty, an age of youthful robustness, but because of the decadence of palace life, he had probably already begun to age, and so the four characters *daguan tongbao* are bloated. By the xuanhe period, he was past forty, despondent and dejected, and so the inscription on the character *shan* Xuanhe coin is round and blurred, without any strength at all.

The course of this development can be discerned just from the two characters for Circulating Treasure [*tongbao*], particularly from the *yong* portion on the lower right of the former and the *bei* component on the bottom of the latter. The calligrapher's strength flows out of the two shoulders on the Chongning coins; on the Daguan coins, the shoulders have become flat; by the time of the Xuanhe coins, the shoulders are sloping down, as though they could no longer bear their burden.

Some later dynasties' coin inscriptions are also in what is called thin-gold style. These include Southern Song, Jin and Ming coins, but probably none of their calligraphers had really studied this style. They had merely unconsciously been influenced by it. Otherwise, they could not have learned so different a version of it.

Another aspect of the artistic side of Song coins is the matching set, that is, the simulataneous use of two or three different calligraphic styles on coins of the same year-period. These coins are identical in shape, size of hole, width of rim, coin thickness, height of the inscription above the base of the coin, and in fineness of alloy. Sometimes the variants would even have their molds intermixed, and would be broken apart only after the metal had been poured.

As for the inscriptions, the size and position of the characters, the thickness of the strokes, all corresponded. They differed only in that one would be in sealscript and one in clerkscript, or one would be in sealscript and one in block writing. Thus was engendered a kind of beauty of parallelism. Such beauty of symmetry is fundamental to both Chinese art and literature, but is not strongly emphasized in European art and culture, and is sometimes even intentionally shunned there for fear of seeming banal.

The Chinese have boldly made use of symmetry. In the arts, architecture provides a conspicuous example. Symmetry is very evident in Chinese architecture. In painting, it would not seem to be evident, but Chinese portrait painting mainly depicts people full face, unlike European portraiture which mainly employs profiles, and full-face portraiture aims at symmetry. In literature, because Chinese characters come in squared-off units, the Chinese like to arrange them symmetrically, as in matched verse and parallel prose. Symmetry is also sought in poetry, particularly in the regulated ode.

In numismatic terms, from the rise of cowry money down to the minting of the Ant-nose coins, spade coins and ring coins, symmetry was always a criterion. The characters on the Ant-nose coin, like cowry [*bei*], metal [*jin*] and *xing*, are all arranged symmetrically from left to right. The inscriptions on spade and ring coins were also arranged symmetrically. This was not originally the case with hollow-socket spades, but by the time of the pointed foot and square foot spades, practically all inscriptions were symmetrical. Nor were ring coin inscriptions originally symmetrical. The Half-*qiong*, however, changed from an asymmetrical to a symmetrical format. Inscriptions on square hole coins were arranged still more symmetrically. This was even more the case with Emperor Huizong's matching coins.

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Sometimes, in the course of being circulated, matching coins would undergo identical fates: They might be buried at the same same, and when dug up display identical verdigris patterns. If they fell in water together, they would show identical patterns of water corrosion. If burned together, they would turn black to the same degree.

Matching sets of coins were invented during Southern Tang. They flourished during Northern Song, reaching their peak during the reign of Emperor Huizong. During his reign, except for the Chongning and Daguan coins, the Sagely Song, Zhenghe, Zhonghe and Xuanhe coins all came in matching sets.

Very few of the Zhonghe coins were minted, but the other three have a total of several dozen variants, which are very interesting when set alongside each other. For example, among Xuanhe coins, to speak only of the color of the bronze, the "stooped Xuan" is of red copper; the "upward facing Bao with four radii reverse" has turned silver white. Jiangxi's Raozhou and Ganzhou mints used 3 ounces of iron per string in the coins it minted, and so the coins minted there of the "short Bao" type, sometimes bear an iron rust which is different from what is found on the common run of such coins.

Nevertheless, the unique aspect of the artistry of Northern Song coins lies in the beauty of particular coins, rather than in their innovations. If we speak of particular coins, then aside from some coins of the reign of Huizong, there are no coins comparable in fineness and beauty to the Western Han Five-grainer, Wang Mang's Monetary-springs and monetary-spades, or to the Northern Zhou Perpetual-circulation-myriad-states coin, or the Tang Inaugural Circulating Treasure.

Emperor Qinzong minted the Jingkang Original Treasure and Jingkang Circulating Treasure during the jingkang period (1126-1127), each in 1-cash and 2-cash denominations. The Original Treasure comes in seal script and clerk script matching sets, but I have yet to see a matching set of the Circulating Treasure. There is a Sichuan iron mother coin which is especially thick. A 3-cash seal script Circulating Treasure is extant, so there is probably also a block script version which has not yet been found.

Because they were minted for so short a time, and just when the Jin attack occurred, the number minted was extraordinarily small. The small version is still more rare, as scarce as a phoenix's feathers or a unicorn's horn, but most of the Circulating Treasure variants are not like this. There is an iron version of the small Circulating Treasure.

There is a contradiction between a coin's artistic value and its economic value. From the perspective of numismatic art, changes are necessary; the more changes, the greater the variety of objects.

From the perspective of the monetary economy, however, it is best that there be no changes; the fewer the changes, the more stable the economic lives of the people. This is precisely why the Five-grainer and Inaugural coins were the most successful coins in the history of the Chinese economy, though during the times when these two coins were in use numismatics was still undeveloped. In economic terms, the coins of the Northern and Southern Dynasties and Northern Song were causes of instability, though in terms of numismatic esthetics, they were of very high value.

In Europe, ancient Greece's Athens and Medieval Venice were both places with highly developed cultures, especially in in the arts, but their coins were not especially beautiful, and they never improved. This is because the

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foreign trade of those two places was especially well developed, and the sphere of circulation of their coins was extraordinarily broad. To preserve trust in them by foreigners, they dared not change the design and construction of their coins, and hence preserved their original forms for long periods.

Therefore, when I say that the coins of Greece reflected its level of artistic development, I am mainly referring to places outside of Athens, especially the coins of a few small places. The coins of Medieval Venice did not at all reflect the level of artistic development of that time. Coins that did reflect the contemporary artistic level of Medieval Europe were those of places without well-developed international trade. Obviously, economic questions were given first consideration.

The Song Dynasty's monetary culture influenced other nations. The most important of these was Vietnam. Like Korea, Vietnam's links to China were particularly close. During the Tang Dynasty, however, some places in Vietnam probably still used cowry money, or basically did not use money at all.

In Song's kaibao 1 (968), Ding Buling conquered the twelve external commanderies and established the Ding [Vietnamese, Dinh] Dynasty. He gave his state the name Daqu Yue, and three years later proclaimed the daping year period.[12] A bronze Daping Prosperous Treasure was minted with the character *ding* (or Dinh, the dynasty's name) on the reverse above the hole. Style and construction resemble Chinese coins.

In Great Yue's daping 11 (980), Li Heng made himself emperor and established the Leh Dynasty. He changed the era name to tianfu, and five years later minted the Tianfu Tranquil Treasure, with the character *li* [Vietnamese *Leh*] on the reverse.

In Song's dazhong xiangfu 2 (1009), under the Li family's authority (1009-1229), the Mingdao Original Treasure and Tiangan Original Treasure were minted.

The Chen authority (1225-1400) minted a Jianzhong Circulating Treasure, a Zhengping Circulating Treasure, a Yuanfeng Circulating Treasure, and a Shaolong Circulating Treasure.

Except for the two earliest ones, all of these Vietnamese coins survive only in very small numbers, and probably money was still not very generally circulated there.

Korea also began to mint coins during the Northern Song period. The Qianyuan Heavy Treasure was to some degree a test coinage, since at the

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[12]The characters *daping* rather than *taiping* are found on his coins. Chinese numismatists have read the inscription Daping Prosperous Treasure as Taiping Prosperous Treasure, even though Song's taiping/xingguo (Great Peace Prosperity for the State) era name occurred after this time, making it appear as though the later Chinese ministers were reduced to taking over someone else's era name. The later era name of tian-

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sheng had also just been used by the kingdom of Southern Zhao in southwestern China (Mingtong Tiansheng).

beginning of Northern Song, Korea was still using cloth and rice as media of exchange, and prices were sometimes expressed in silver.[13]

It was not until the chongning period [1102-1107] that minting of coins was formally begun.[14] Apparently, three coins were minted simultaneously. The Eastern State, Three Han, and Sea's East, all came in Circulating Treasure and Heavy Treasure forms, and in several calligraphic styles. Inscriptions come in straight line and circumferentially read arrangements. In these respects they resemble Song coins.

Because Southern Song issued paper money, there was a great decrease in the number of coins it minted, particularly of small 1-cash coins. Of every ten Song coins, barely one might be Southern Song. Based on later excavations, 98 percent of all Song coins are Northern Song, and only 2 percent are Southern Song.[15] This was because Southern Song only circulated bronze coins in the southeast, and in **[408]**
Sichuan used only iron coins. Iron coins were also used in Hubei and Liang Huai. In addition, both bronze and iron coins served as secondary money to paper money, and were sometimes used to support the purchasing power of paper money.

The monetary system of the early years of Southern Song continued the Northern Song traditions. Coin inscriptions came in several calligraphic styles, forming matching sets. For example, the Jianyan and Shaoxing coins of the reign of Emperor Gaozong were all of this sort [Plate lii]. The Jianyan coins come in a great number of variations. There is a Jianyan Circulating Treasure, a Jianyan Original Treasure, and also a Jianyan Heavy Treasure.

The Circulating Treasure comes in 1-cash, 2-cash and 3-cash denominations, all forming sealscript and block script matching sets. The 1-cash versions minted in Sichuan, however, imitated the thin-gold style of inscription. The character *chuan* appears above the hole on the reverses of those first minted. There is a large 3-cash variant which some say was a 5-cash denomination, but I have not seen anything to this effect in the histories. There is a small iron version of the Circulating Treasure. Only a 2-cash seal script version of the Jianyan Original Treasure has been found. The Heavy Treasure is a 10-cash coin with sealscript inscription.

The Shaoxing coins comprise an Original Treasure and a Circulating Treasure. The Original Treasure comes in 1-cash and 2-cash denominations with clerk script and block script matching sets. The Circulating Treasure comes in 1-cash, 2-cash, and 3-cash denominations made of both bronze and iron, but only in block script, and not in matching sets.

Of the small Southern Song coins, those of the shaoxing period are the rarest, particularly the Original Treasure, even though the shaoxing era lasted for 32 years. Above the hole on the reverse of iron coins is found the character *li*, and these coins were minted by the Lizhou Shaoxing Inspectorate.

During Emperor Xiaozong's longxing period (1163-1164), the Longxing Original Treasure 2-cash coin was minted in sealscript and block script matching sets [Plate lii,1-2]. There was a 2-cash and also a 1-cash iron version.

During the qiandao period (1165-1173), the Qiandao Original Treasure was minted [Plate liii,3-4]. Of bronze versions, there was only a 2-cash coin in sealscript and block script matching sets. One-cash versions were made only in iron. On the reverse of some bronze versions there is a crescent above and a dot below, and also some with the character *zheng* and *song* above the hole. These represented mint names. The 2-cash iron versions have on their reverses the characters *zheng*, *song* and *qiong*.

During the chunxi period (1174-1189) the Chunxi Original Treasure was minted in 1-cash and 2-cash versions [Plate liii,5-9]. There is an iron 3-cash

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[13]Xu Jing, *Illustrated Classic of Gaoli [Koguryo]* (written in xuanhe 6 [1124]), 2, "Trade": "They have no custom of fixed markets. Their periodic markets last only a day. Male and female, old and young, officials and artisans, each bring what they have to exchange without benefit of coin, but only use sackcloth. Silver is weighed to determine its value. As for petty goods for daily use, those that do not come up to a bolt of cloth or an ounce [of silver] in value, are calculated in terms of fractions of an ounce of rice. Nevertheless, the people have long peacefully maintained their customs, and themselves consider them convenient. At the center, the court has been given treasure in coin, which is now all hoarded in the treasury. At times it is taken out to show to officials for their amusement."

[14]*Song History*, 487, "Account of Gaoli."

[15]This is based only on the evidence from Japanese excavations. In 1712, an excavation conducted at the Mito City Seisiji Temple turned up 188,116 Song coins, of which Northern Song coins comprised 96.6 percent, and Southern Song coins 3.4 percent. An excavation conducted in 1903 at the Zenshoji Temple yielded a total of 24,818 Song coins, of which Northern Song coins comprised 97.6 percent, and Southern Song coins 2.4 percent. An excavation the same year in Saitama prefecture yielded a similar ratio. In addition, of the ancient coins excavated in Hitachikuni, Yimura village, there were 293,026 Song coins. Northern Song coins comprised 99.3 percent, and Southern Song coins only 0.07 percent of these. In the 48 locations in Tsushima where ancient coins have been excavated, a total of 464,171 Song coins have been found, of which Northern Song coins comprise 98.3 percent and Southern Song coins 1.7 percent.

version. Those minted at the Qichun Inspectorate included 2-cash Circulating Treasures.

The Northern Song coinage fashions were only maintained up to chunxi 6 [179]. Matching coins were still minted at the beginning of chunxi, but from chunxi 7 [1180] on, a unified calligraphic style was employed right down to the end of Southern Song.

Also beginning that year, the year of minting was cast onto the coins' reverses. For example, on the reverse of coins minted in chunxi 7 is the long form of the character for "seven" [*qi*][a]; on those minted in chunxi 8 is the long form for "eight" [*ba*][b]. From chunxi 9 on until chunxi 16, the short forms of the numerals were used. This practice continued right down to the end of Song.

It is said that this practice was first adopted to combat illegal coining, but this explanation is implausible. How could minting of coins distinguished by year of minting have prevented illicit coining?

Some Chunxi coins also recorded mint names, as for example with the character *quan* to stand for the Shenquan mint in Yanzhou. However,

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this was limited to the 2-cash coin, and probably to those minted before chunxi 7. After that time, only iron coins bore mint names. These included *qiong* (the Huimin Inspectorate in Qiungzhou), *song* (for the Susong Inspectorate in Shuzhou), *tong* (for Shuzhou's Tong'an Inspectorate) and *chun* (for the Jichun Inspectorate in Jizhou. Sometimes a numeral was added to the mint name, as in "tong 14" or "chun 16."

During the shaoxi era (1190-1194), Emperor Guangzong minted the Shaoxi Original Treasure in 1-cash, 2-cash and 3-cash denominations [Plate liii,10-12]. Reverse inscriptions run from *yuan* (for "one") to the short form for the numeral five, but for the 3-cash coin I have only seen the numeral four. There is also a Shaoxi Circulating Treasure 3-cash coin, which also bears the numeral four on its reverse. Probably 3-cash coins were only minted during shaoxi 4, and came in Original Treasure and Circulating Treasure versions. Both are rare.

The iron coins come in both Original Treasure and Circulating Treasure versions. There is a 3-cash denomination which, in addition to the year, usually bears the mint name, including *tong*, *chun*, and *han* (for the Hanyang Inspectorate). On the reverse of the 3-cash iron version is a pregnant double dot or in addition to that, numerals on the left and right side, such as four and seven, four and eight, four and nine. The numeral four probably stands for the year shaoxi 4, but the meaning of the other numeral is not clear. Possibly it is a coin mold number. Some Shaoxi iron coins are in sealscript.

The Shaoxi Original Treasure small coins are unusually fine and handsome, particularly those of shaoxi 1 and 2, which have narrow rims and large characters which are regular and square shaped. These may be said to have been the common characteristics of the coins of this period. The Jin Dading Circulating Treasure and the Western Xia Qianyou Original Treasure are made almost identically.

During the qingyuan period (1195-1200), Emperor Ningzong minted the Qingyuan Circulating Treasure [Plate liv,1-3]. The bronze version comes in 1-cash, 2-cash and 3-cash denominations. The reverse inscriptions run from *yuan* (first) through the short form of the numeral six. The iron version also comes in 1-cash, 2-cash and 3-cash denominations. The 1-cash and 2-cash versions bear on their reverses, in addition to the year numeral, the mint name, including *tong*, *chun* and *han*.

Though the qingyuan period only lasted six years, the Jichun and Hanyang Inspectorates minted *chun* 7 and *han* 7 Qingyuan coins, and these were undoubtedly minted ahead of time at the end of qingyuan 6 before the decision to change the name of the year-period to jiatai.

The 3-cash coin constitutes a separate category, with circumferentially and straight line arranged inscription variants. Their reverses only bear pregnant dots and not characters.

There is another type of Qingyuan Original Treasure iron coin which is rather large. Some say it is a 5-cash coin. The character *chuan* appears above the hole on the reverse, and there are numbers on both sides of the hole. Combinations such as *chuan* 6 and *sa* 7 [meaning 30 and 7], or *chuan* 6 are found above the hole and *sa* 7 below the hole. There are quite a large number of permutations.

During the jiatai period (1201-1204), the Jiatai Circulating Treasure were minted [Plate liv,4-6]. The bronze version comes in 1-cash, 2-cash and 5-cash denominations. The reverses of the 1-cash and 2-cash coins bear numerals from *yuan* to four. The 5-cash coin has a blank reverse.

The iron coin closely resembles the Qingyuan coin. The reverses of the 1-cash and 2-cash denominations, in addition to year designations, also bear mint name abbreviations like *tong*, *chun* and *han*. The 3-cash version (some say it was a 5-cash) bears on its reverse characters like *chuan* 1, *chuan* 2, and *chuan* 3 above the hole, and below it

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sa 8, *sa* 9, 4 10 and 4 1.

Kaixi Circulating Treasures were minted during the kaixi period (1205-1207) [Plate liv,7-9]. The bronze version comes in 1-cash and 2-cash denominations, with reverse inscriptions running from *yuan* to numeral 3. The iron version also comes in a 3-

cash denomination, and its reverse inscriptions is patterned on those of the Qingyuan and Jiatai coins.

During the jiading period (1208-1224), the Jiading Circulating Treasure was minted [Plate liv,10-12]. The bronze version comes in 1-cash and 2-cash denominations. Although the jiading period lasted 17 years, year numerals on the coin reverses run only up to 14. The iron version has them up to 17. There is also a Jiading Original Treasure large coin, which bears atop and below its hole on the reverse the characters *zheshi*, meaning equivalent to ten.

The Jiading iron coins are the most complex set of coins in all Chinese monetary history, and even now no one knows how many variants there are. Based on collectors' records alone, the situation is already exceedingly complicated. The mints involved are Lizhou's Shaoxing Inspectorate, Qiongzhou's Huimin Inspectorate and Jiazhou's Fengyuan Inspectorate, all in western Sichuan. All the coins produced by these mints bear the mint names on their reverses.

There are four denominations: 1-cash, 2-cash, 3-cash and 5-cash. Each face value comes in various inscription names. The 1-cash is an Original Treasure. The 2-cash comes as Original Treasure, Treasure Of [*zhibao*], Eternal Treasure, Complete Treasure, Peaceful Treasure, Rectified Treasure, and Lofty Treasure, with various characters or lobed dots on their reverses. The 3-cash comes as Original Treasure, Treasure Of, Eternal Treasure, Complete Treasure, Peaceful Treasure, True Treasure, New Treasure, Rectified Treasure, Myriad Treasure, Vast Treasure, Lofty Treasure, Precious Treasure, Glorious Treasure and Spring Treasure. The 5-cash denomination comes as Original Treasure, Circulating Treasure, Heavy Treasure, Treasure Of, Utmost Treasure, Precious Treasure, Sealed Treasure and Prosperous Treasure.

Of these various Treasures, the Original Treasures often have their inscriptions arranged either in straight lines or circumferentially. The others are arranged one way or the other. There are sealscript versions of the 3-cash Original Treasure. The 5-cash Heavy Treasure comes in seal script, clerk script and block script.

Aside from the 1-cash linearly read inscription Original Treasure, which has a blank reverse, most of the other types bear reverse inscriptions. Some are mint names; some record the year of minting; some the value, some the mold numbers. These elements are also combined.[16]

[16]For the variant forms of the Jiading iron coins, cf. *Collected Investigations of Ancient Coins* and Luo Bozhao, "Analysis of Western Sichuan Iron Jiading Coins," *Coins*, no. 13.

The reverse of the Treasure Of Jiading minted in Lizhou bears the four characters "circulated in Lizhou" [*Lizhou xingyong*] read linearly, on both the bronze and iron versions. The bronze versions are exceedingly rare, and are probably the master coins for making iron coin negative molds, or were coins made to test the molds.

In addition, there are clerkscript Sagely Song Original Treasures and block script Sagely Song Heavy Treasures which some numismatists say were minted during jiading. The inscriptions and construction of these Sagely Song coins are clearly different from those of the Sagely Song coins of Emperor Huizong's time, and they were undoubtedly minted during Southern Song.

During the baoqing period (1225-1227) Emperor Lizong minted the Great Song Original Treasure [Plate lv,1]. The bronze version comes in 1-cash and 2-cash denominations. Its reverse inscriptions run from *yuan* to numeral three. There is also a Great Song Circulating Treasure large coin, which bears above and below the hole on its reverse the two characters meaning "equal to ten" [*dangshi*].

The iron version comes in 1-cash, 2-cash and 3-cash denominations, and reverses feature such characters as *ding*, *chun*, *han* and *quan*,

[411]

which are mint names. They also bear year designation numerals, and some bear the four characters meaning "circulated in Lizhou." This inscription, like the one on the obverse, is arranged circumferentially. There are also what are either bronze masters for iron coins or mold-testing coins, which are extremely rare.

There is a Baoqing Original Treasure iron coin.

During the shaoding period (1228-1233), the Shaoding Circulating Treasure was minted [Plate lv,2]. The bronze versions include 1-cash and 2-cash denominations. Reverse inscriptions run from *yuan* to numeral six. I have only seen 1-cash iron Circulating Treasures, the reverses of which bear the characters *chun* and *han*. There is also a 3-cash Original Treasure. Shaoding iron coins are rather scarce, and the 3-cash denomination is still more so.

The Duanping Original Treasure small coin was minted during the duanping era (1234-1236) [Plate lv,3-4]. Only the character *yuan* appears on the reverse of the copper versions. There are also Duanping Circulating Treasures and 5-cash Heavy Treasures with blank reverses.

Iron versions come in Circulating Treasure and Original Treasure versions. All are large coins with a very large number of different reverse inscriptions. Most came from the *qiung*, *ding* and *hui* mints. Mint names, the names of the four points of the compass, the characters for above and below and

numerals are combined in various ways. The largest of these coins bears above and below the hole on its reverse the two characters meaning "equivalent to ten" [*zhe shi*]. The right side bears the character *li*.

During the jiaxi period (1237-1240), the Jiaxi Circulating Treasure was minted [Plate lv,5-6]. The copper version comes in 1-cash and 2-cash denominations, with reverse inscriptions running from *yuan* through the numeral four. There is also a 3-cash (also taken as 5-cash) Jiaxi Heavy Treasure with a blank reverse. The iron coins come in Circulating Treasure 5-cash and 10-cash denominations. Their reverses bear their values and such mint marks as "east center" or "west one."

A Chunyou Original Treasure was minted during the chunyou period (1241-1252) [Plate lv,7-8]. The bronze version comes in 1-cash and 2-cash denominations, with reverse inscriptions running from *yuan* through the numeral twelve. There are also Chunyou Circulating Treasure 1-cash, 20-cash and 100-cash denominations.

The 1-cash has a blank reverse. The reverse of the 20-cash coin bears the character *qing* above the hole, and on the left and right side of the hole the four characters meaning "equal to twenty cash" [*dang ershi wen*]. The *qing* is probably an abbreviation for Chongqing. These coins come in bronze and iron versions.

The 100-cash coin bears vertically on its reverse the two characters meaning "equal to 100" [*dang bai*]. When first minted, they were thick and large, weighing 70 grams. Later, their weight was reduced, only reaching some 14 grams. The small ones have blank reverses.

The 100-cash coins were also made of iron, with both block script and sealscript inscriptions.

These 100-cash coins were minted during the invasion of Sichuan by the Mongol armies. Many have been unearthed in Chongqing. The historical accounts indicate that warfare was at its most violent in the Chongqing region at the end of the baoyou era [1253-59]. Mengke (Yuan Emperor Xianzong) participated in this campaign, and in kaiqing 1 [1259] was fatally wounded at Gouyushan. The Chunyou 100-cash coin was probably minted for a rather long period, as it is not only common, but also includes small examples.

During the baoyou era (1253-1258), the Imperial Song Original Treasure was minted [Plate lv,9]. There are 1-cash

[412]

and 2-cash denominations, with reverse inscriptions from *yuan* to six. There is a large kind bearing the character *yuan* which would appear to be a 3-cash. There are no iron Imperial Songs.

A Kaiqing Circulating Treasure was minted during the kaiqing era (1259) in 1-cash and 2-cash denominations [Plate lv,10]. Only the character *yuan* appears on the reverse, and there is no iron version.

During the jingding period (1260-1264), a Jingding Original Treasure was minted in 1-cash and 2-cash denominations, and with reverse inscriptions running from *yuan* to numeral five [Plate lv,11]. There are only bronze versions.

The Xianchun Original Treasure was minted during the xianchun era (1265-1274) by Emperor Duzong in 1-cash and 2-cash denominations, and with reverse inscriptions running from *yuan* to numeral eight [Plate lv,12]. There is a 2-cash iron version. Probably no coins were minted at all during xianchun 9 and 10.[17]

Later, under the last three emperors, no coins were minted. The histories state that in deyou 1 (1275) a Deyou Original Treasure was minted in 1-cash and 2-cash denominations, and with blank reverses, but these are extremely rare. Some say that a "Revive Zhao Heavy Treasure" was minted at the end of Song, but this requires further study.

Beginning with the chunxi era, and particularly involving the small 1-cash bronze coins, Southern Song suddenly adopted a distinctive style for its coins, which differed from the style of Northern and early Southern Song coins.

In addition to recording the year number on the reverse, what draws the greatest attention are the large, square, pleasing to the eye inscriptions, in what later ages came to call the Song style characters [*Song ti zi*]. Inscriptions on the Jianyan coins were still not formally in that calligraphic style, which first formally appeared on the Shaoxing Original Treasure, but right down to the chunxi era, various differing calligraphic styles continued to be used for coin inscriptions. On the Chunxi small coins, for example, in addition to Song style characters, sealscript and clerkscript are also found. It was not until after chunxi 7 that only Song style characters were used, with only a few exceptions for large coins or iron coins. There seem to be no exceptions among the small coins.

A second characteristic is the uniformity of Southern Song coins. Northern Song coins display wide variations in inscription, size, weight and fineness of metal, and lack any standard form. Southern Song coins have, however, a high degree of uniformity. This is a phenomenon rarely encountered in Chinese monetary history.

Basically, there are no variant forms among Southern Song coins. It is only for an extremely small

[17] Japanese collectors say that there is a master coin for

minority of coins that variations in the strokes of their inscriptions are found, and an equally small number which vary slightly in size. For a given type of coin, inscription, size and fineness of metal are uniform.

Not only is this so, but for all Southern Song coins after the chunxi period, inscription and size are completely uniform, except for a very small number of coins which are slightly lighter and thinner, as for example, those minted during chunyou 5 and 6, and the coins from the very end of xianchun,
[413]
which are lighter and thinner. Even then, however, the inscriptions' calligraphy is identical to the others, and they are up to the standard in construction and purity of alloy. They differ from the coins of late Tang as Heaven differs from Earth.

The Song Dynasty's monetary culture was undoubtedly the highest in all of Chinese history. After Song times, the artistic level of Chinese coins was rather lower. When we compare the coins of Southern Song with those of Northern Song, the uniform nature of the former is conspicuous. How can we account for this?

First, the small quantity of coins minted made it easier to seek uniformity. Bronze cash were the main money during Northern Song times, and they had a broad area of circulation. Internal and external trade were also well developed then. More coins were minted during Northern Song than during any other period in Chinese history. The same type of coin was minted simultaneously in various locations, making variant forms numerous.

By Southern Song times the circulation of bronze cash became very limited in scope. A number of places really did not use bronze cash, but rather focused on paper notes or iron coins. Only the southeast, which was the administrative center, used bronze coins, and even there bronze cash was not the only form of money used.

Notes were the main form of money, and among bronze coins, the 2-cash coin predominated. Hence, the amount of coins minted was certainly not great. They were probably minted in the same place, using the same sorts of master coins. Very few 1-cash Southern Song coins have survived into later ages.

Second, private coining was still going on during Northern Song, and this increased the variation within the coinage. Some rather ugly coins probably came from private coiners. The broadening circulation of paper money during Southern Song produced a monetary inflation, and the cost of producing bronze cash was very high, which made private coining unprofitable, so that only melting down of coins occurred.

In duanping 1 (1234), a ban was issued on destroying bronze cash. As a consequence, all Southern Song coins were from official mints, and could all be fine and handsome looking. Some small coins, like those minted in shaoxi 1, were not inferior to the coins of the time of Emperor Huizong.

Song coins weighed about the same as Tang coins, so evidently their weight standards were the same. There was, however, a tendency for the fineness of the metal to be reduced.

Bronze coins contained 83 percent copper during the first half of the eighth century. Based on the records, the best Song coin was the Taiping, but it only contained 65-66 percent copper.[18] Thereafter, purity continued to depreciate their value. The coins of tianxi 3 only contained 64-5 percent copper. After shaoxing times, copper content was only 54 percent. These are all official figures.

In actuality, there were Tang coins of very low purity. Some Inaugural coins, although very finely made, have turned grey, which indicates a very large admixture of tin. There are also Song coins of very high purity, such as the red copper Xuanhe coins. Southern Song coins, beginning with the Chunxi coins, seem to have all been made of red copper, and were of very high purity.

The 2-cash tin alloy coins circulated in Shaanxi by Cai Jing[19] weighed 14 catties per thousand, and used 8 catties of copper, constituting
[414]
57.14 percent of the total, 4 catties of black tin, constituting 28.57 percent, and 2 catties of white tin, constituting 14.29 percent.

There are no records on the fineness of the tin and iron alloy coins of the daguan era, but as the officials feared that the people would have gotten used to the color of bronze, it is likely that there was little tin and much iron in the alloy, so that it was virtually an iron coin. In form it was like the 10-cash coin.[20] Later generations find it hard to distinguish the two.

Alloying the iron with tin rendered the metal unsuitable for making utensils, and kept smiths from buying iron coins as the raw material for weapons. In this respect they resembled the iron cakes of

xianchun 9. Cf. *Kahei*, no. 29.

[18]This degree of fineness was very close to that of the fourth century B.C. *as signatum* of the Roman Republic. The fineness of the *as* ranged from 64 to 79 percent. Mommsen-Blacas, *Histoire de la monnaie romaine*, I, p. 198.

[19]*Song History*, "Treatise on Food and Money," latter part, 2.

[20]*Yongle Encyclopedia*.

ancient Sparta. When such iron cakes were cast, it is said that the red-hot iron was plunged into vinegar so as to cause it to lose strength, thereby keeping it from use for other purposes.

Southern Song produced several kinds of coin tokens [Plate lvi].[21] They came in bronze and in lead. The bronze coin tokens had squared off tops and rounded bottoms, rounded tops and square bottoms, and perfectly rectangular shapes. The obverse of the token bore the five characters for "Lin'an Prefecture Circulation Use" [*Lin'anfu xingyong*]. Hangzhou's name was changed to Lin'an in jianyan 3 [1129], and so we know that it was minted after that date.

On the tablet's reverse is an inscription recording its value. There are three of these: "Standard Two Hundred Cash Reduced," [*zhun erbai wen sheng*], "Standard Three Hundred Cash Reduced," [*zhun sanbai wen sheng*] and "Standard Five Hundred Cash Reduced" [*zhun wubai wen sheng*], using the long forms of the numerals, and with "reduced" referring to the reduced-hundred.

The lead coin token was smaller, and bears on its face the denominations 10-cash, 20-cash or 40-cash. I surmise there was also a 50-cash denomination. These token can only be reckoned as money substitutes or tokens.

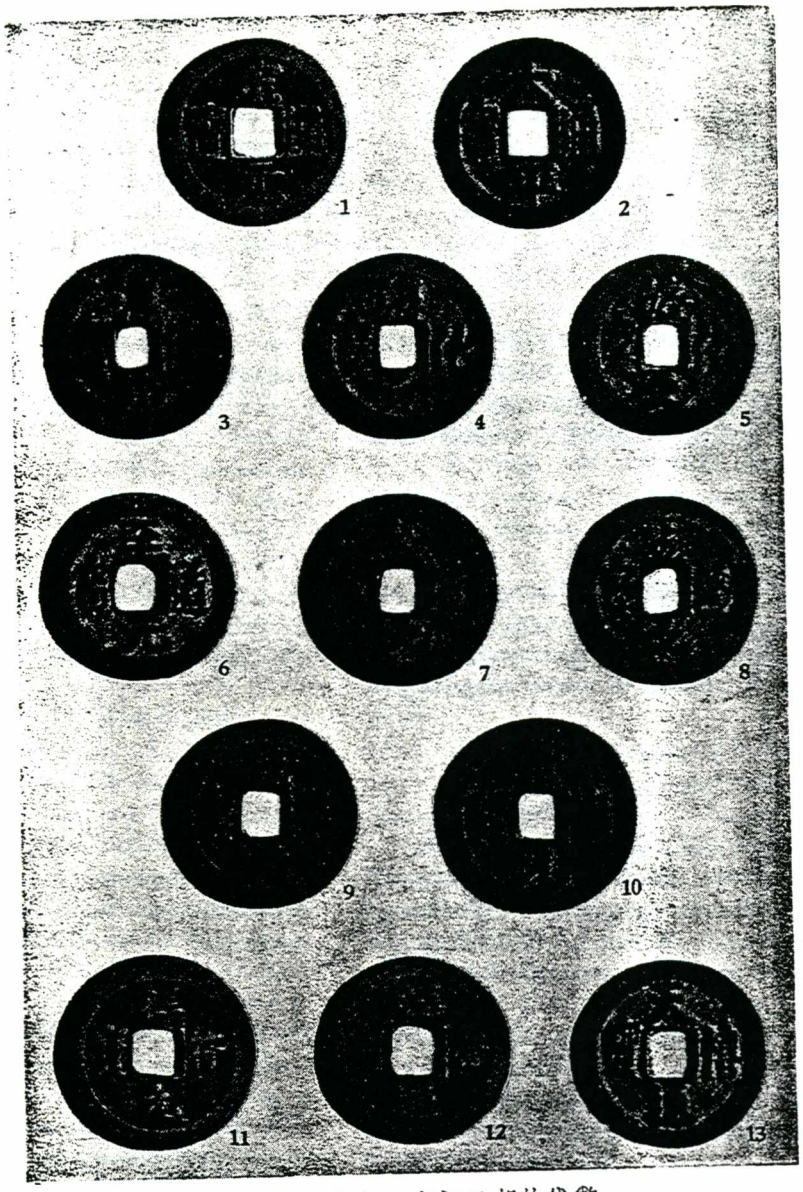
There survive some uninvestigated coins which, judging from their construction, would appear to date to Song. For example, the Inspection Plate Thousand Treasure could have been a token money substitute used in gambling. There is also an Inspection Throw Ten Plate which is similar in construction and inscription, though it is a little smaller. Perhaps it ought to be read as Inspection Plate Ten Throw.

The Song coinage constitutes a clear contrast with those of the Han and Tang. Han and Tang basically operated with a 1-cash coin unit. Except under special circumstances, over the long run they only used one kind of coin, which by law remained unchanged in size and weight.

Superficially, the Song coinage would seem to have fallen into chaos: A new coin was issued every few years. In fact, however, this disorder was not so serious even superficially, since what changed was the year period on the coins. Their substance, i.e. their sizes and weights, were not greatly changed. The year period may be viewed as a coin's date. After people had gotten used to such changes, they could not have hindered the coins' circulation. As for the coins' several denominations, given the development of commerce, there could not but be a need for these.

a 柒 b 捌

[21] I have seen few records on the issue of money tablets, but Wu Zimu, *Record of a Dream of Liang*, 13, "Coins and Notes of the Capital City," has the following: "The court ministries produced tin tablets for convenience of use in Hangzhou city because coins were not circulating." This probably means the kind made of lead. Also, *Investigation of Literary Remains Continued*, "Investigation of Coins," quotes Kong Xingsu, *Straight Record of the Zhizheng Era*: "The Song quarterly coin token was 3 *cun* long and a bit more, 2 *cun* wide, but varied in size. On its reverse were cast the words 'Linan Prefecture Circulation' [*Lin'anfu xingyong*]. On its obverse were cast inscriptions like 'String of Cash One Hundred.' The aperture in the character for the amount was small, and the character for string pushed away." This refers to a bronze coin token.

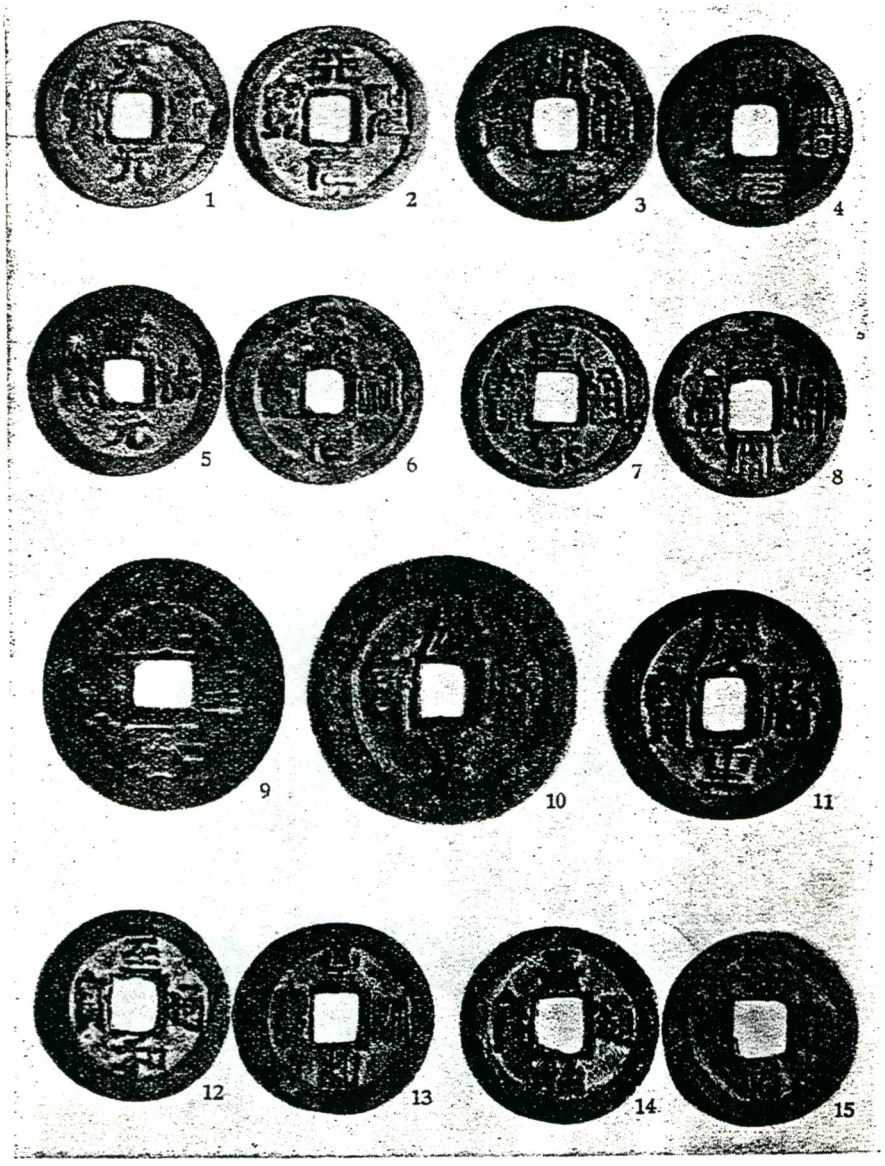


圖版四十六　宋初三朝的錢幣

1.太祖的宋元通寶。 2.太宗的太平通寶。 3—5.淳化元寶三體書。 6—8.至道元寶三體書。 9.眞宗的咸平元寶。 10.景德元寶。 11.祥符元寶。 12.祥符通寶。 13.天禧通寶。

PLATE XLVI. COINS OF SONG'S FIRST THREE REIGNS

1. Emperor Taizu's Song Original Circulating Treasure. 2. Emperor Taizong's Taiping Circulating Treasure. 3-5. The three calligraphic styles of the Chunhua Original Treasure. 6-8. The three calligraphic styles of the Zhidao Original Treasure. 9. Emperor Zhenzong's Xianping Original Treasure. 10. Jingde Original Treasure. 11. Xiangfu Original Treasure. 12. Xiangfu Circulating Treasure. 13. Tianxi Circulating Treasure.

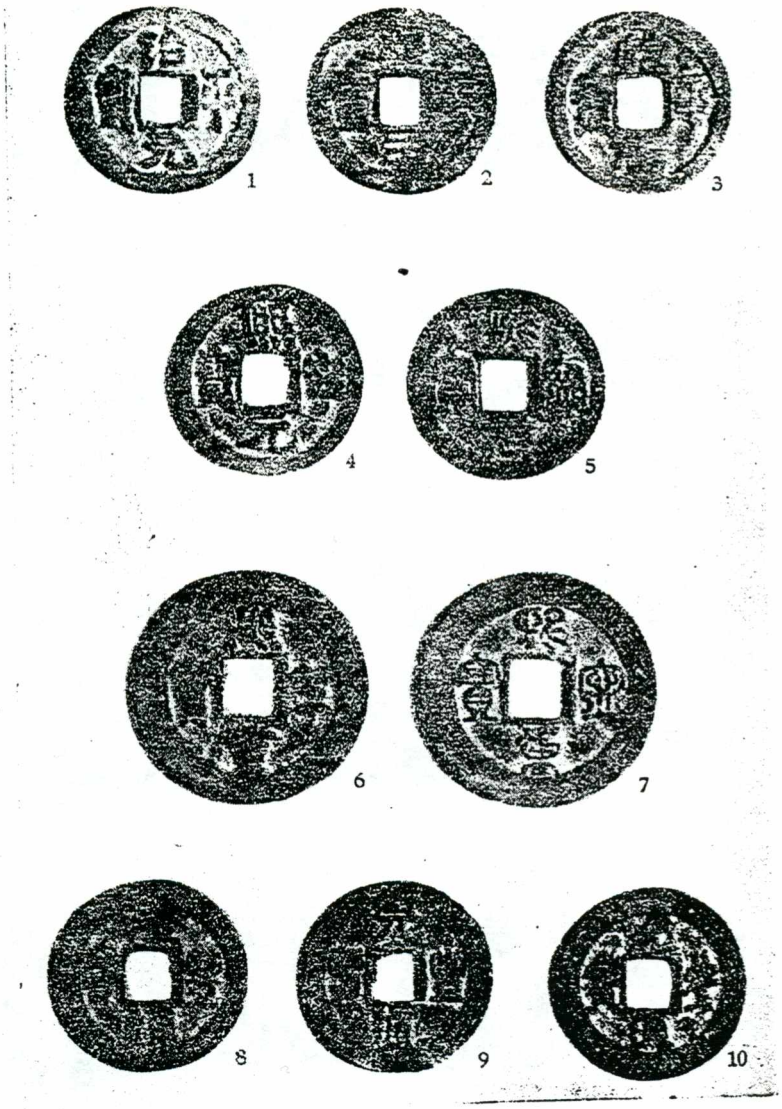


圖版四十七　仁宗朝的錢幣

1—2.天聖元寶對錢。 3—4.明道元寶對錢。 5—6.景祐元寶對錢。 7—8.皇宋通寶對錢。 9.慶曆重寶(直讀)當十錢。 10.慶曆重寶鐵錢。 11.慶曆重寶(環讀)當十錢。 12—13.至和通寶對錢。 14—15.嘉祐通寶對錢。

PLATE XLVII. COINS OF EMPEROR RENZONG'S REIGN

1-2. Tiansheng Original Treasure matching set. 3-4. Mingdao Original Treasure matching set. 5-6. Jingyou Original Treasure matching set. 7-8. Imperial Song Circulating Treasure matching set. 9. Qingli Heavy Treasure (inscription read in straight lines) 10-cash coin. 10. Qingli Heavy Treasure iron coin. 11. Qingli Heavy Treasure (inscription read circumferentially) 10-cash coin. 12-13. Zhihe Circulating Treasure matching set. 14-15. Jiayou Circulating Treasure matching set.

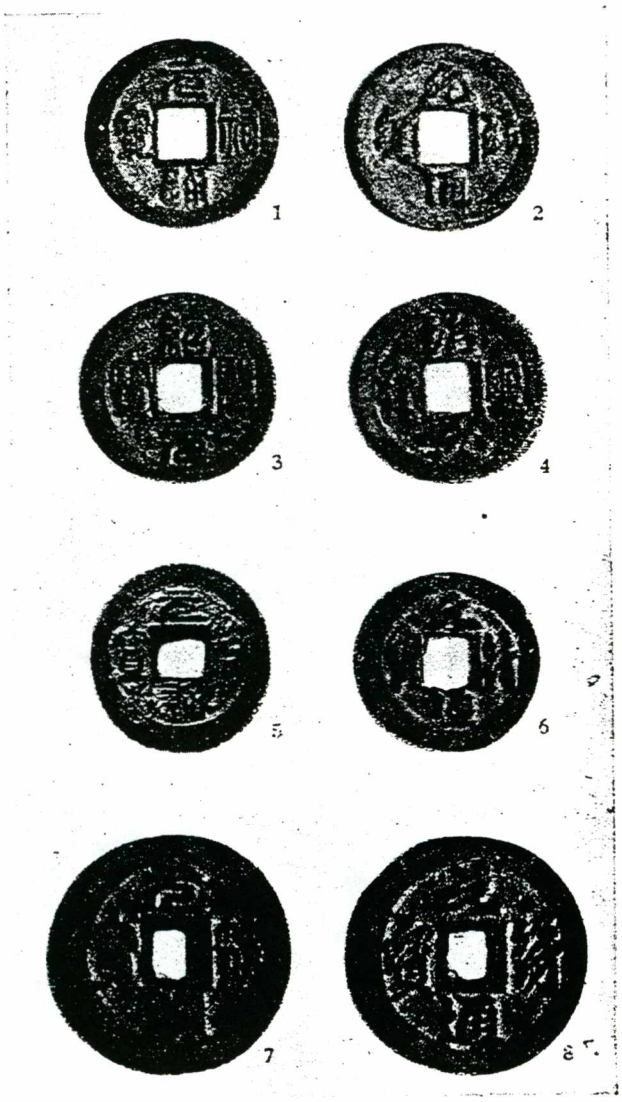


圖版四十八　英宗、神宗朝的錢幣

1—3.英宗的治平元寶三體書。　4—5.神宗的熙寧元寶對錢。　6—7.熙寧重寶折二錢對錢。　8—10.元豐通寶三體書。相傳隸書是蘇軾的筆跡，號稱東坡元豐。

PLATE XLVIII. COINS OF THE YINGZONG AND SHENZONG REIGNS

1-3. Emperor Yingzong's Zhiping Original Treasure in three calligraphic styles. 4-5. Emperor Shenzong's Xining Original Treasure matching set. 6-7. Xining Heavy Treasure 2-cash denomination matching set. 8-10. Yuanfeng Circulating treasure in three calligraphic styles. According to tradition, the clerk script variant used Su Shi's calligraphy, and so is called the Dongpo Yuanfeng, Dongpo being Su Shi's alternate name.



圖版四十九　哲宗朝的錢幣

1—2.元祐通寶對錢。 3—4.紹聖元寶對錢。 5—6.元符通寶對錢。
7—8.元符通寶折二錢對錢。傳說元祐錢的錢文，是司馬光和蘇軾等人所寫的。

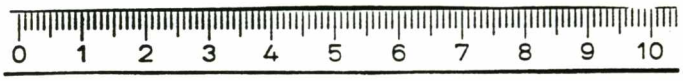
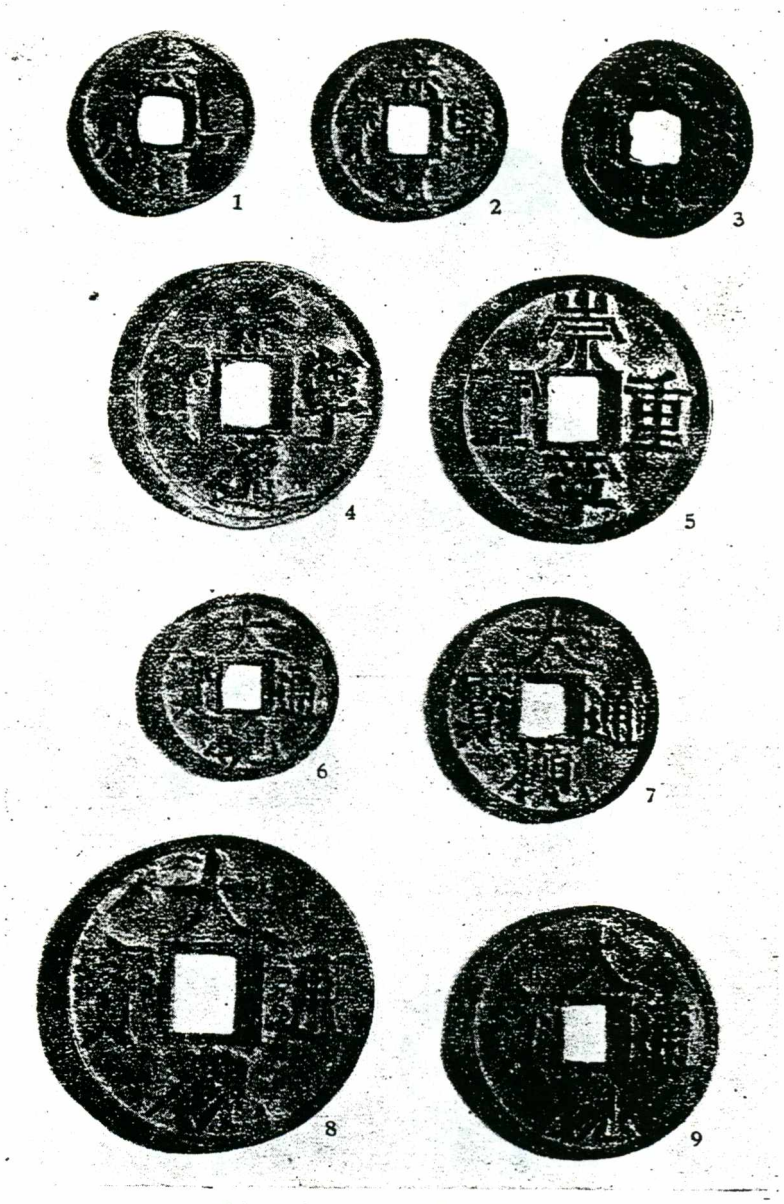


PLATE XLIX. COINS OF ZHEZONG'S REIGN

1-2. Yuanyou Circulating Treasure matching set. 3-4. Shaosheng Circulating Treasure matching set. 5-6. Yuanfu Circulating Treasure matching set. 7-8. Yuanfu Circulating Treasure 2-cash coin matching set. Tradition says that the inscriptions on Yuanyou coins were written by Sima Guang and Su Shi.



圖版五十　徽宗朝的錢幣(一)

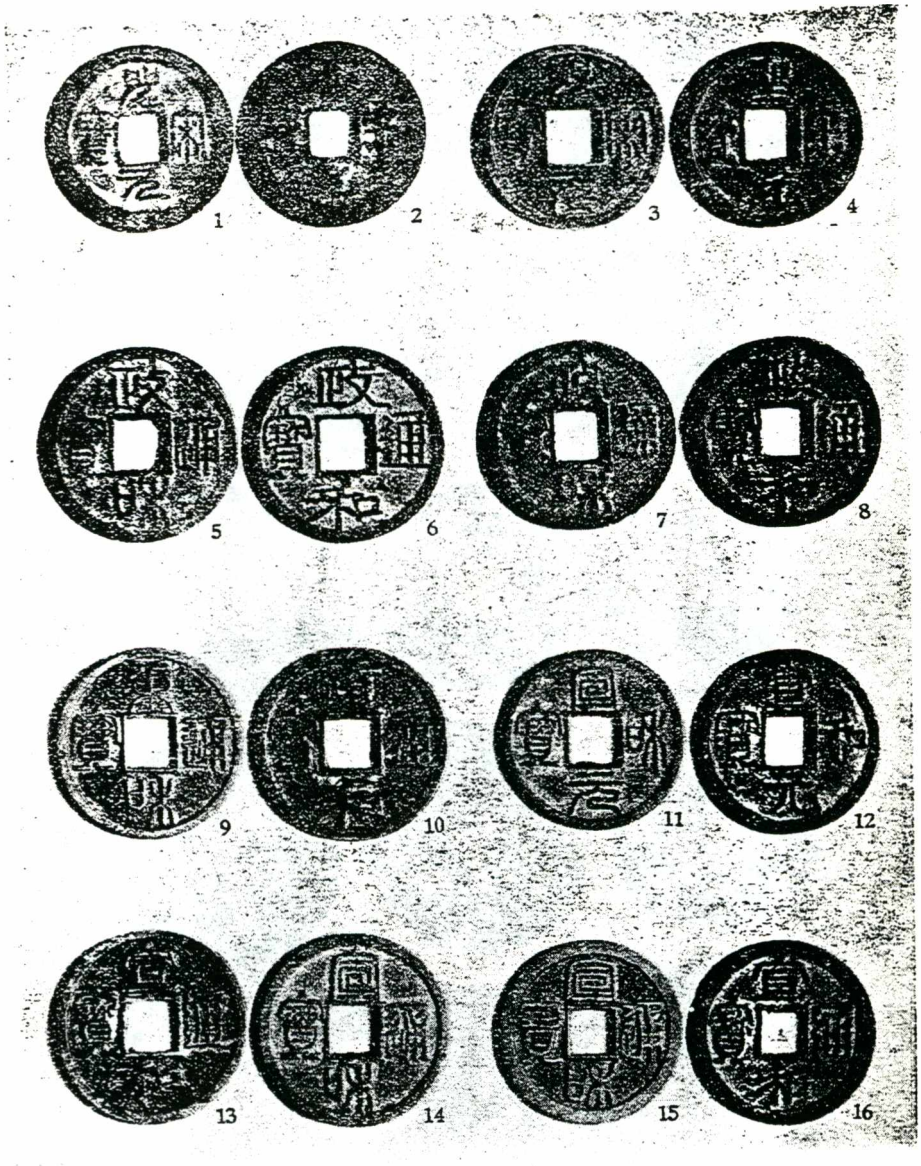
1—3.崇寧通寶。 4.崇寧通寶當十錢。 5.崇寧重寶當十錢。 6.大觀通寶。 7.大觀通寶折二錢。 8.大觀通寶當十錢。 9.大觀通寶折三錢。

徽宗朝的錢幣是中國方孔錢中製作最精美的，錢文傳出于徽宗的親筆，說瘦金體或鐵線書，在中國的書法上自成一家。

PLATE L. COINS OF HUIZONG'S REIGN (1)

1-3. Chongning Circulating Treasure. 4. Chongning Circulating Treasure 10-cash coin. 5. Chongning Heavy Treasure 10-cash coin. 6. Daguan Circulating Treasure. 7. Daguan Circulating Treasure 2-cash coin. 8. Daguan Circulating Treasure 10-cash coin. 9. Daguan Circulating Treasure 3-cash coin.

Coins of Huizong's reign are the finest and most beautiful of all Chinese square-holed round coins. Coin inscriptions coming from the hand of Huizong himself are called the thin-gold style or iron-thread style, and constitute a class by themselves within Chinese calligraphy.

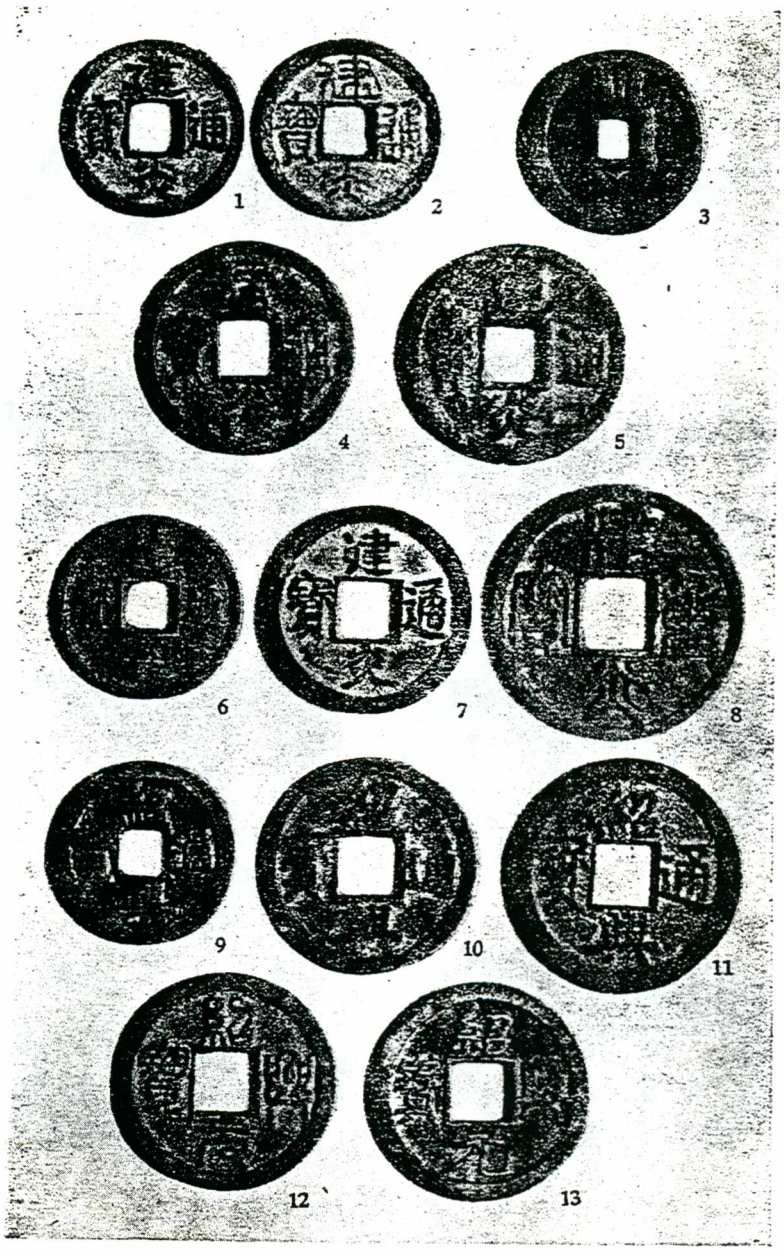


圖版五十一　徽宗朝的錢幣(二)

1—2.聖宋元寶對錢(細字)。3—4.聖宋元寶對錢(美制小字)。5—6.政和通寶對錢(細筆大字)。7—8.政和通寶對錢(廣和背四決)。 9—10.重和通寶對錢。 11—12.宣和元寶對錢。 13—14.宣和通寶對錢(白銅淡用背四決)。 15—16.宣和通寶對錢(道勁)。

PLATE LI. COINS OF HUIZONG'S REIGN (2)

1-2. Sagely Song Original Treasure matched set (delicate characters). 3-4. Sagely Song Original Treasure matched set (well-made small characters). 5-6. Zhenghe Circulating Treasure matching set (delicate stroke large characters). 7-8. Zhenghe Circulating Treasure (broad, and with reverse radius lines). 9-10. Zhonghe Circulating Treasure matched set. 11-12. Xuanhe Original Treasure matched set. 13-14. Xuanhe Circulating Treasure matched set (tutenag alloy, and with reverse radius lines). 15-16. Xuanhe Circulating Treasure matched set (forceful calligraphy).



圖版五十二　南宋高宗朝的錢幣

1—2.建炎通寶對錢。 3.四川所鑄建炎通寶之背。 4—5.建炎通寶折二錢對錢。 6.小字點建建炎通寶。 7.點建建炎通寶折二錢。 8.建炎重寶折三錢。 9.紹興通寶。 10.紹興通寶折二錢。 11.紹興通寶折三錢。 12—13.紹興元寶折二錢對錢。

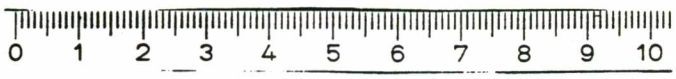
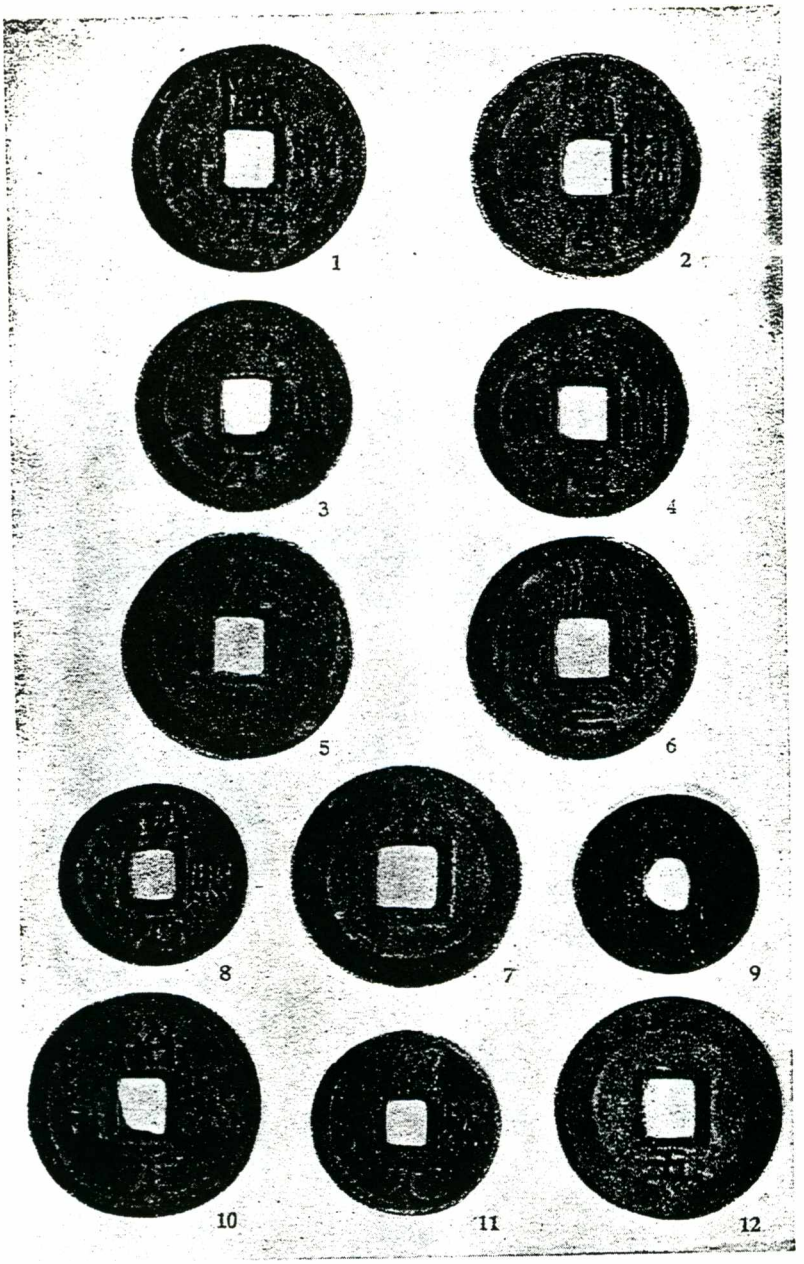


PLATE LII. COINS OF THE REIGN OF SOUTHERN SONG'S GAOZONG

1-2. Jianyan Circulating Treasure matched set. 3. Reverse of Jianyan Circulating Treasure minted in Sichuan. 4-5. Jianyan Circulating Treasure 2-cash denomination matching set. 6. Small character pointed *jian* Jianyan Circulating Treasure. 7. Pointed *jian* Jianyan Circulating Treasure 2-cash coin. 8. Jianyan Heavy Treasure 3-cash coin. 9. Shaoxing Circulating Treasure. 10. Shaoxing Circulating Treasure 2-cash coin. 11. Shaoxing Circulating Treasure 3-cash coin. 12-13. Shaoxing Original Treasure 2-cash coin matching set.

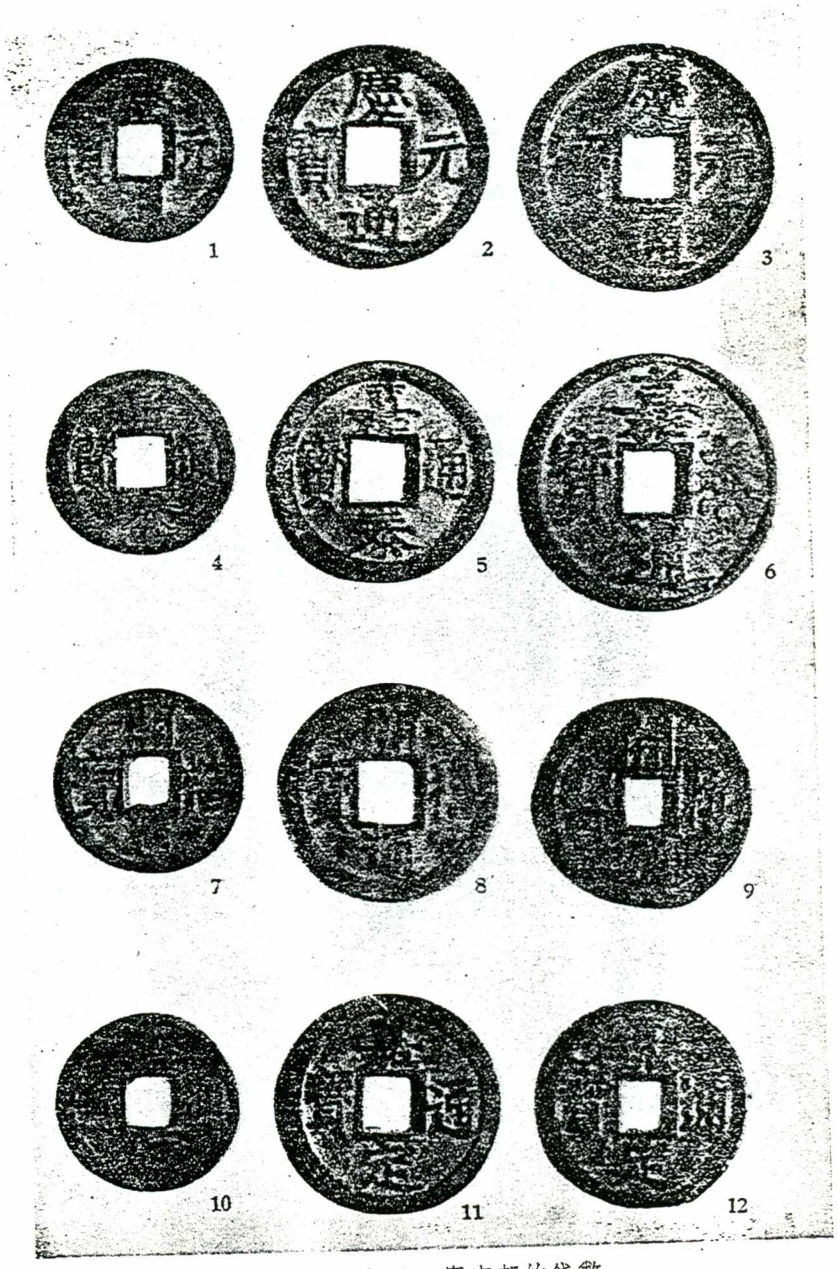


圖版五十三　孝宗、光宗朝的錢幣

1—2.孝宗的隆興元寶折二錢對錢。 3—4.乾道元寶折二錢對錢。 5—6.淳熙元寶折二錢對錢。 7.嚴州神泉監所鑄淳熙元寶折二錢之背。 8.淳熙元寶。 9.淳熙七年鑄淳熙元寶之背。 10.光宗的紹熙元寶折二錢。 11.紹熙元寶小平錢。 12.紹熙五年鑄紹熙元寶折二錢之背。

PLATE LIII. COINS OF THE REIGNS OF XIAOZONG AND GUANGZONG

1-2. Xiaozong's Longxing Original Treasure 2-cash matching set. 3-4. Qiandao Original Treasure 2-cash matching set. 5-6. Chunxi Original Treasure 2-cash matching set. 7. Reverse of the 2-cash Chunxi Original Treasure minted in Yanzhou's Shenquan Inspectorate. 8. Chunxi Original Treasure. 9. Reverse of Chunxi Original Treasure minted in chunxi 7. 10. Guangzong's Shaoxi Original Treasure 2-cash coin. 11. Shaoxi Original Treasure small coin. 12. Reverse of Shaoxi Original Treasure 2-cash coin minted in shaoxi 5.



圖版五十四　寧宗朝的錢幣

1.慶元通寶。 2.慶元通寶折二錢。 3.慶元通寶折三錢。 4.嘉泰通寶。 5.嘉泰通寶折二錢。 6.嘉泰通寶折三錢。 7.開禧通寶。 8.開禧通寶折二錢。 9.開禧通寶折二鐵錢。 10.嘉定通寶。 11.嘉定通寶折二錢。 12.嘉定通寶折二鐵錢。

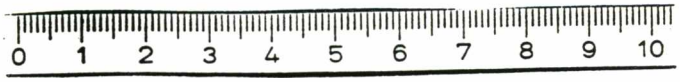
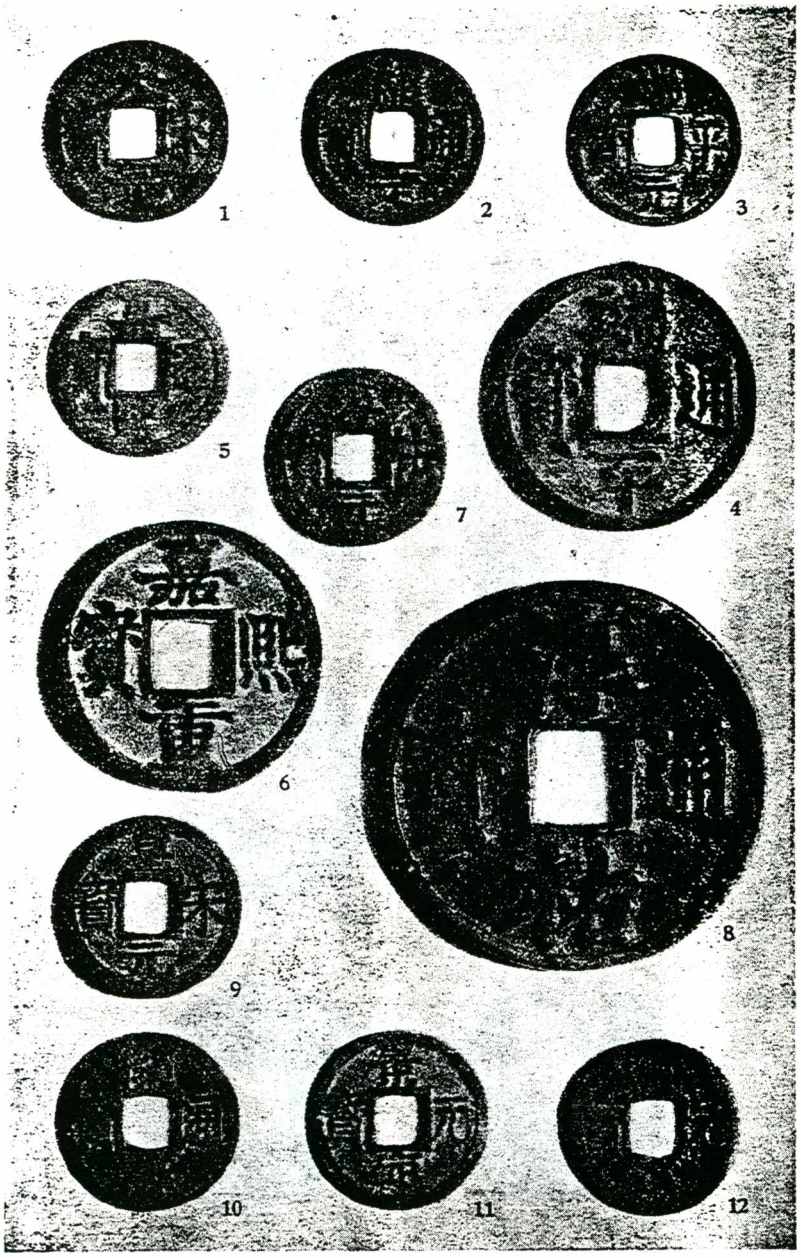


PLATE LIV. COINS OF NINGZONG'S REIGN

1. Qingyuan Circulating Treasure. 2. Qingyuan Circulating Treasure 2-cash coin. 3. Qingyuan Circulating Treasure 3-cash coin. 4. Jiatai Circulating Treasure. 5. Jiatai Circulating Treasure 2-cash coin. 6. Jiatai Circulating Treasure 3-cash coin. 7. Kaixi Circulating Treasure. 8. Kaixi Circulating Treasure 2-cash coin. 9. Kaixi Circulating Treasure 2-cash iron coin. 10. Jiading Circulating Treasure. 11. Jiading Circulating Treasure 2-cash coin. 12. Jiading Circulating Treasure 2-cash iron coin.



圖版五十五　理宗、度宗朝的錢幣

1.理宗的大宋元寶。 2.紹定通寶。 3.端平元寶。 4.端平通寶折三錢。 5.嘉熙通寶。 6.嘉熙重寶折三錢。 7.淳祐元寶。 8.淳祐通寶當百錢。 9.皇宋元寶。 10.開慶通寶。 11.景定元寶。 12.度宗的咸淳元寶。

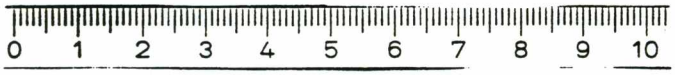
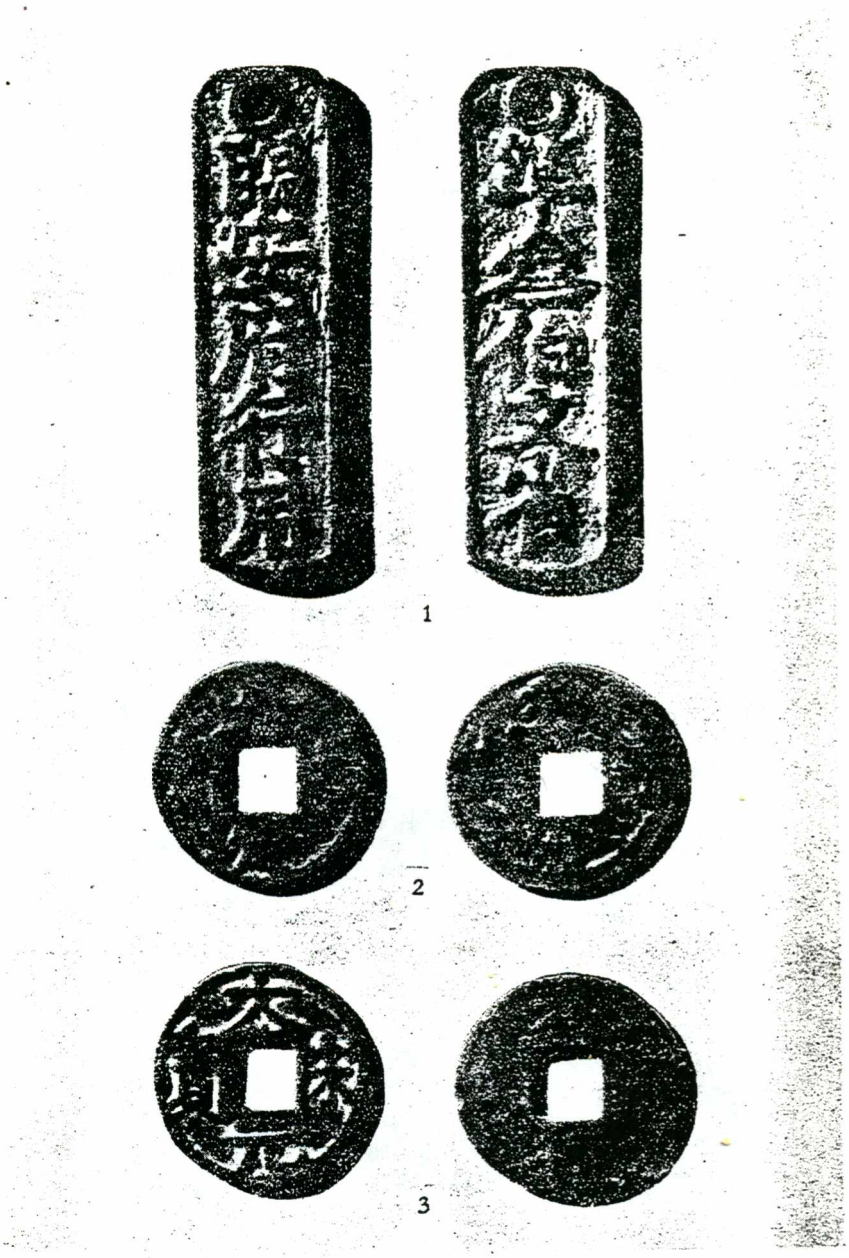


PLATE LV. COINS OF EMPERORS LIZONG AND DUZONG

1. Lizong's Great Song Original Treasure. 2. Shaoding Circulating Treasure. 3. Duanping Original Treasure. 4. Duanping Circulating Treasure 3-cash coin. 5. Jiaxi Circulating Treasure. 6. Jiaxi Heavy Treasure 3-cash coin. 7. Chunyou Original Treasure. 8. Chunyou Circulating Treasure 100-cash coin. 9. Imperial Song Original Treasure. 10. Kaiqing Circulating Treasure. 11. Jingding Original Treasure. 12. Duzong's Xianchun Original Treasure.



圖版五十六　錢牌和鐵母

1.臨安府行用準三百文錢牌。2.利州行用的嘉定元寶鐵母。3.利州行用的大宋元寶鐵母。
所謂鐵母是說用作鐵錢的母錢，但兩枚的文字漫漶，似乎流通過。

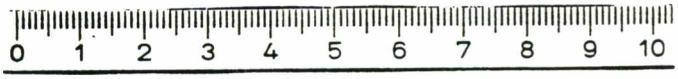


PLATE LVI. COIN TOKENS AND IRON MASTER COINS

1. Lin'an Prefecuture Circulation Use, Standard Three Hundred Cash coin token. 2. Jiading Original Treasure iron master coin circulated in Lizhou. 3. Great Song Original Treasure iron master coin circulated in Lizhou. An iron master coin is a coin used as the "mother" mold from which clay "child" molds are thrown in which to cast iron coins. However, the inscriptions on the two coins are worn, and so they seem to have been circulated.

2. Gold and Silver, and Gold and Silver Coins

The monetary functions assumed by gold during Song were basically nearly the same as during Tang. In Emperor Taizu's kaibao 4 (971), a prohibition on the production of false gold was issued.[1] This was the first time that had been done since Western Han. **[418]**

It would appear from this as though gold was being formally treated as money, but that was not quite the case. We can only say that the Song government viewed gold as an important instrument for making payments. From the point of view of the ruling class, especially of the monarchs, serving as a means of payment was money's most important function. Actually, from the perspective of the entire economy as well, serving as a means of payment was the main monetary function of gold.

This included the monarchs' gifts,[2] government expenditures,[3] tax payments by the people to the government,[4] and other payments,[5] as well as bribes to officials.[6]

Its next most important function was to serve as a store of value.[7] Sometimes it even served as a measure of value.[8]

It did not, however, serve as an instrument in circulation and for purchases in general. There are instances in the written record for such use of gold,[9] but it cannot be considered a general intermediary in exchange. It was precisely because it did not fulfill this last and most fundamental of money's functions, that gold cannot be considered to have been a genuine money during Song.

Silver was more important than gold during Song. It not only served the same functions as did gold, it was more widely used for each of these purposes than was gold. Both gold and silver were used as means of payment and for imperial gifts, but sil-

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[1] *Song History*, 3, "Annals of Emperor Taizu."

[2] *Song History*, 324, "Biography of Shi Pu": "transferred to be militia trainer in Yizhou, and given a reward of 300 ounces of gold and 3,000 ounces of silver."

[3] *Comprehensive Mirror for Illumination of the Prince, Long Draft, Continued*, 78, dazhong/xiangfu 5, 6th month, dayh jihai: "The Three offices borrowed 2,000 ounces of gold from the Inner Treasury. Assented to." *Essential Record of the Years Since Jianyan*, 36, jianyan 4, 8th month, day xinsi: "There was an edict to the Ministry of Finance to continue to advance 100 ounces of gold, 4,000 ounces of silver, and 10,000 strings of cash for use in acquiring the Princess Chang's bridal trousseau." *Miscellaneous Record In and Outside Court Since Jianyan*, collection A, 17, Left Treasury, Fengchun Treasury: "There was disbursed 2,500 ounces of gold and 20,000 ounces of silver for the use of the Mingtang."

[4] *Song History*, 174, "Treatise on Food and Money," first part, 2, "Taxes," edict of Emperor Taizong's yongxi 9: "In all annual taxes, grain is to be reckoned by the picul, cash by the string, and gold, silver silk and ordinary cloth by the ounce." *Comprehensive Mirror for Illumination of the Prince, Long Draft, Continued*, 63, edict of Emperor Zhenzong's jingde 3, 6th month, day wuyin: "The 10 percent tax in gold on commerce and on salt and alcohol in Western and Eastern Sichuan ought to be abolished. Previous to this, the Accounting Office had requested that, aside from paying the taxes half in cloth and silver, that 20 percent be paid in gold. When the Ruler heard that this area might not be able to produce this good, he gave this order."

[5] *Song History*, 181, "Treatise on Food and Money," latter part, 3, "Salt," first part, tiansheng 8, 10th month: "An edict abolished the military toll levies in the three capitals' eighteen prefectures. Merchants who paid in gold or silver to the Capital Toll Goods Authority would receive two salt ponds." *Investigation of Literary Remains*, 22, "Tribute of the Gentry," 1: In the time of Emperor Shenzong "the circuits received gold, silver, cash and cloth for a total of 273,680 strings, bolts and ounces. Of gold there was 2,100 ounces; of silver, 165,450."

[6] *Comprehensive Mirror Long Draft Continued*, 82, dazhong/xiangfu 7, 6th month, day bingchen: "The District Defense Chief of Meishan county, Gao Yong, paid in 70,000 for extension of generation cash in exchange for a certificate lowering his capitation tax. Ying then took 30 ounces of gold. When the case was complete, the magistrate of Shaanjiang, Li Han, reviewed it, and he took another 4 ounces of gold. Gradually, all of his property was paid in to extend the generation."

[7] Ding Teqi, *Annals of Things Heard During Jingkang*, jingkang 1, 12th month, 12th day: "A placard was issued in Kaifeng prefecture saying that an imperial order had been received to collect wealth from the families living in the village reserved for imperial relatives so as to aid the army. It has now been many days since then, and I have seen no families paying the full amounts. Fearing punishment, they instead have been hoarding up gold and silver."

[8] Ouyang Xiu, *Record of a Return to the Fields*, 2: "During the qingli era, Lord Cai was scheming to become Transport Commissioner of Fujian Circuit. He made a small strip of Dragon Tea of exceptionally fine quality, and called it small round. Twenty cakes weighed 1 catty, and its value was 2 ounces of gold." *Essential Record of the Years Since Jianyan*, 188, shaoxing 31, 2nd month, day yichou: "For provision transport a tablet of measures was made fixing prices. . . For each route, the price was 500 thousands, . . . reckoned in either gold or silver."

[9] *Comprehensive Mirror, Long Draft, Continued*, 120, Emperor Renzong's jingyou 4, 3rd month, day bingshen: "Over 1,000 ounces of gold were taken in and disbursed by the household of the Zhanghui Dowager Empress for a residence at her estate." Sun Sheng, *Lord Sun's Sun Garden*, first chapter: "Later, there was a Daoist monk who contributed a plate of purple gold. Yuedao would not accept it. The monk sought 3 ounces of gold in exchange for it."

ver was more frequently employed for these purposes. This was also the case for government expenditures, tax and other payments by the people, and for payments of bribes to officials.[10]

Because of a shortage of bronze coins at the beginning of Song, the Transport Commissioner, Zhang E, in taiping/xingguo 5 [980] advised temporarily permitting people to pay taxes in silver and silk instead of bronze cash.[11] This gave a kind of legal status to silver. There are also examples of use of silver for official salaries and military provisions.[12] Gold was never used for such purposes.

Gold and silver had roughly similar importance as stores of value and as international currencies. There may have been somewhat more demand for gold as a store of value, since it was more suitable for that function, but silver was used more frequently as an international currency, since most countries with which China then had economic relations used silver.

While as measures of value, gold and silver were used equally often, silver was rather more commonly used than gold as an instrument for making purchases. There are instances of use of silver to purchase horses,[13] grain,[14] and other items.[15]

These examples cannot prove that silver had become a genuine medium of circulation, but they do show that it had advanced a step beyond gold.

The account notes of Southern Song were occasionally redeemed for gold and silver, but mainly for silver, so that silver became the reserve metal for paper money.[16] In shaoxing 7 [1137], Wu Jie issued silver account notes in Hechi, and these circulated for a long time. This may be deemed a kind of silver standard. At the end of Song, Jia Sidao issued

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what was called gold and silver communicating medium. We know nothing of the detailed circumstances of this issue.

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[10]Wu Ceng, *Loose Record of the Ability to Change Studio*, 13: "Chen Hong came in to request a posthumous title for his father from the court. Hu Dan spoke in his support, saying that the posthumous title ought to be Loyal and Pure. Loyal and Pure was a lower military

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title. The son was mortified, and bribed him with several *yi* of silver, so that it was changed."

[11]*Song History*, 180, "Treatise on Food and Money," latter part, 2.

[12]*Essential Record of the Years Since Jianyan*, 189, shaoxing 31, 3rd month, day jiawu: "A Ministry of Finance memorial states that because there was little ready cash in the Left Treasury Western Treasury, it was desired to use silver, account notes and goods to meet monthly payments and provisioning. Various offices are to discount amounts owed to 60 percent if paid in silver, and 40 percent if paid in account notes. For the army, payments in silver are to be discounted by 50 percent, 30 percent if paid in strings of coin, and 20 percent if paid in account notes. This was accepted." Zhou Mi, *Old Times in Wulin*, 4, "Joys of Teaching During Qian-Chun": "There was paid in to the middle and upper teaching doctors Wang Xi . . . and Hu Yongnian 10 ounces of silver per month to teach." *Song History*, 46, "Annals of Emperor Duzong," xianchun 9, 6th month, day wuzi: "The Regulator of Sichuan, Zhu Yisun, said he wanted to use his monthly salary of 10,000 ounces of silver to reward the army."

[13]*Song History*, 198, "Treatise on Soldiers," 12, "Horse Administration": "There are those which are valued at 40 ounces of silver, with an additional 10 ounces of silver for each additional *cun* of height. Some sold for as much as 60-70 ounces."

[14]*Comprehensive Mirror Long Draft Continued*, 120, Emperor Renzong, jingyou 4, 7th month, day xinyou: "The Finance Office paid out 150,000 ounces of silver to the Hebei Circuit, and 100,000 in heavy silk to the Hedong Circuit to aid in the purchase of military provisions." *Song History*, 366, "Biography of Wu Jie": "When Jie was in Yuanshang, the people of Fengxiang were grateful for his former benevolence, and by night transported hay and grain to help him. Jie priced it in silver and cloth. The people were still more pleased, and transported still more." *Miscellaneous Knowledge of the Year Guixin*, latter collection: "By the 2nd month of year jimao, the northern army had arrived in force, and was fighting at Yaishan. At first they lacked provisions. They sent Fuxin ashore to buy rice for silver."

[15]Cao Xun, *Record of Things Seen and Heard On a Hunt to the North*: "When the court of Hui hunted to the north [i.e. when Emperor Huizong was carried north as a prisoner by the Ruzhen] . . . I myself crossed the river and went past the wall of Junzhou. The enemy cavalry must have captured the commoners, for they were not to be seen, except for a food vendor who came before us. I exchanged 2 ounces of silver for meager food and drink." *The Old Man of West Lake's Record of Many Victories*: "The countryfolk were contending in crowds to enter the city to sell goods. It took 3 ounces to sell off 1 ounce's worth of string cash. Zhao produced a large one, and had to struggle even more to sell it for 1 ounce of silver." Guo Ruoxiu, *Record of Pictures Seen and heard Of*, 3, "Wang Qihan": "At the end of kaibao the town of Jinling fell. There was a foot soldier named Li Gui who entered a Buddhist temple and got hold of the sixteen paintings of lohan done by Qihan. He subsequently obtained 200 stars of silver from the merchant Liu Yuance for them. . ."

[16]*Song History*, 32, "Annals of Emperor Xiaozong," qiandao 2, 11th month, day jiyou: "All the silver in the Inner Treasury and Southern Treasury was paid out in exchange for account notes." Sometimes gold and silver were used together. *Song History*, "Treatise on Food and Money," latter part, 3, "Account Notes," chunxi 3: "At that time, the Ministry of Finance annually took in 12 million, half in account notes, and

At the end of Song agricultural land beyond a set amount was bought up by the government. For estates bigger than a thousand *mu*, half was to be paid for in silver.[17]

Therefore, not only was silver circulating more extensively during Song than it had during Tang, it filled more of the functions of money than gold had during Tang. Southern Song made still greater use of it than did Northern Song.

Increased use of silver can be explained in two ways. Because of extortions by neighboring peoples then, Song incurred annual obligations in money to these peoples, and so silver had to be substituted for copper cash in annual tax collections. Why, however, should the Khitan, Ruzhen and Mongols have wanted silver? It was certainly not because their economic level was above that of the Song.

Rather it was because they had trade relations with the western frontier regions where silver was in circulation. The Uighurs frequently entered Song-controlled territory buying gold and silver to send to the west.[18] Therefore, in the final analysis, Song's circulation of silver remained under the influence of Central Asia, for otherwise why would it not have used gold? Prior to Song, gold had been more important than silver in China.

There is another reason why a foundation existed for the use of silver. Ever since the Five Dynasties, local coinages had been disunified. Song not only did not improve this situation, it may even be said to have worsened it: Not only were there iron coin and copper coin-using regions, a variety of mutually exclusive different paper moneys were circulating in various localities.

Only silver and heavy silk were not localized, and circulated throughout the country.[19] In this respect, silver served as an instrument for the movement of wealth. Of course gold could also have served this function, but because of the abovementioned foreign connections, the government had conceded legal status to silver, and so this domestic aspect of demand was also satisfied by silver.

Some say that Song employed silver because of the development of commerce and an insufficient quantity of copper cash.[20] This is not entirely correct. Song commerce was indeed more developed than that of previous dynasties, but the quantity of commodity money and coins was also greater than during earlier dynasties.

It is hard to calculate the extent of the increased scale of commerce during Song, but in any event, that increased scale could hardly have matched the increase in the size of the money supply, since the quantity of bronze cash manufactured during Northern Song was between ten and thirty times the quantity made during Tang. In fact a large quantity of bronze coins flowed into foreign countries or was sequestered in the national treasury.

Southern Song reduced production of coins, but these coins' sphere of circulation was also greatly constricted during Southern Song times, and paper money was also in circulation.

On several occasions during Song there were so-called monetary panics. These were peculiar to certain times and were caused by special circumstances. They were short-term and in no way could have served as causes for the use of silver.

This attitude toward copper cash, needless to
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say, has as its fundamental flaw the treatment of silver as a full money, when in fact that was still not the case during Song.[21]

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the Southern Treasury exchanged gold and silver for 4 million."

[17] *Song History*, 173, "Treatise on Food and Money," first part, 1.

[18] *Searches into a Multitude of Books*, latter collection, 62, "Mines and Smelters": "In xiangfu 1, the Emperor asked the Finance Commisssioners about the value of the gold and silver of the capital city. Ding Wei said that most of it had been bought off by the Rong barbarian Huigu [i.e. Uighurs] to carry off to the frontiers. An edict ordered that this be limited."

[19] *Miscellaneous Record In and Outside Court Since Jianyan*, 16, "Finances and Taxation," 3, "Gold, Silver, Mines and Smelters": "In fact, the coins of Wu and Shu cannot circulate in each other's territories. Nothing but silver and cloth can penetrate to a distance."

[20] Katō Shigashi supposes that gold and silver were more widely distributed within society during Song than during Tang. He gives six reasons for this belief: 1) Development of commerce in the capital. 2) Increased numbers of guest merchants. 3) Wasteful expenditures. 4) Prevalence of gold and silver utensils and jewelry. 5) Rise in the level of life of the masses. 6) Insufficiency of copper coinage and lack of confidence in paper money. Cf. his *Studies of Gold and Silver During the Tang and Song Periods*.

[21] Li Qiannong says: "During late Tang, silver entered into the ranks of the media of circulation." After the beginning of Song, "gold, silver and cloth were often placed alongside strings of cash for making payments both public and private." He cites as evidence the annual money payment sent to the Khitan and Jin, and also cites the statement that during Emperor Zhenzong's xianping era, "disbursements from the treasury of fine silk and gauze . . . were valued at 18 million strings of cash, and 300,000 ounces of silver were paid to the Hebei Transport Commissioner to buy grain for the frontiers." Cf. *Draft Economic History of Song, Yuan and Ming*, p. 80.

This is incorrect. The annual payment was in heavy silk and silver because that was what was demanded by the northern peo-

It was not a medium of circulation then. There are only a few examples of its use as a measure of value, and so it was not a universal measure of value. It was one of the stores of value, and was an important means of payment, but it was not the only one. When used to exchange for paper money, it was only a kind of reserve fund. It could by no means substitute for genuine money, and so if the quantity of money was insufficient to meet demand, there was no alternative to increased issue of paper money or increased minting of bronze and iron coins. They could not rely upon increasing the amount of silver to meet the deficiency.

Anyway, the steady rise in prices during Song would seem to prove that the supply of money was excessive, not that it was inadequate.

Nevertheless, in the final analysis silver did partially play a role as money, and so in part did substitute for other moneys. It was for just that reason that there arose the dream of transmuting base metal into silver.[22]

Gold and silver came in various shapes. Most common was the ingot.[23] The character for ingot could also have the phonetic which means "definite" or "must" [],[a] and this version was already in use by late Tang and Five Dynasties times. Some say this was a mistake for the original form,[24] probably because the two were homonyms. After Song the earlier form was rarely used.

The large silver ingot of Song times weighed 50 ounces.[25] Small ingots came in various weights.[26] There was no fixed standard. A large ingot was also called a tablet [*hu*][27] or a board [*ban*].[28] When the

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ples, and not because China used heavy silk and silver as money. As for his xianping era example of linking silver to fine silk and gauze, surely he would not claim that fine silk, gauze and silver were all

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money? He supposes that during late Northern Song and Southern Song the government's income in silver not only exceeded that in cloth, but also exceeded its income in "legal tender strings of cash." (p. 82.) This is an exceedingly muddled statement. Serving as the medium for the government's income was merely one aspect of an instrument of monetary payment, and money's more basic function is to serve as a measure of value and medium of circulation. During Song, silver never took on these two functions.

[22]*Yongle Palace Illustrated Topics Record*, "The Negation of the Rectified Lord's Heart": "In Emperor Huizong's zhenghe 2, the court was riding on a visit to the Baolu Palace. After finishing a maigre feast, the Ruler inquired of the assembled Daoists if they had any unusual techniques? Could they transform mercury into silver? None of them replied. Finally, there was one Daoist who repeatedly said, 'To transform mercury into silver, there are ways, but they may not be discussed. Poor Daoists use only earth to do it.' The Ruler marvelled at this, and ordered that it be done. Thereupon mud was shaped into the form of a silver ingot, put into the furnace, and fire was used to forge it. In an instant rose-colored rays of light shot out in all directions, and the ingot then turned into genuine silver. The Ruler composed a regulated verse ode to commemorate the occasion. It goes as follows:

"In the world disorderly mercury's forged into silver,
The great capital must be false and not be true;
The Great Peace Chief Minister Zhang Tianjue,
The man famous everywhere within the Four Seas, Lü Dongbin."

Cultural Relics, 8 (1963), p. 70.

[23]*Record of Barbarian Strength*, "Ye Defu": This occurred during jianyan 3. "A man of Jian'an, Ye Defu, had lost both his parents as a youth. . . His grandmother was aged seventy, and could not take care of herself. He took all the gold and silver he had accumulated, 50 ounces of gold and 30 ingots of silver, and gave it to her." Cf. *Old Stories*, part D, collection 4.

Record of Things Heard of Old of the Gentry of Luoyang, "Bo Wanzhou Meets a Swordsman": "'In a little over a month,' Huang Hu said to Tingrang, 'from your younger brother's place I have borrowed 10 ingots of silver, one leather chest, a good horse and two servants to be temporarily taken to Huayang. On the day of return, the silver and horse will be returned.'" *Old Stories*, part D, collection 1.

[24]Cui Hao (a Qing Dynasty writer), *Compendium of Customs*, "Money and Wealth": "For generations it has been the custom to reckon gold and silver by the ingot. This form of the character for ingot is an error for the earlier form. The pronunciation of the two is close, and so they were mistaken for each other."

[25]*Ruzhen-Jin History*, 48, "Treatise on Food and Money," 3: "By the old standard, each ingot of silver was 50 ounces." Though the situation in Jin was being discussed here, the ingot was a Chinese device, and the Jin must have imitated the Chinese form.

[26]*Record of Barbarian Strength*, A, first part, "Qiang Yanrong": "There was a physician of Poyang named Qiang Yanrong who, in chunxi 12, moved his residence inside the Fengtai Gate . . . Chi Ming dug two feet into the earth and came up with a small ingot of silver weighing some 12 ounces."

[27]Luo Dajing, *Crane Grove Jade Dew*, "Feng Jing": "Feng Jing's alternate name was Dangshi. He was from Xianning in Ezhou. His father was a merchant. Of ripe years, he was without sons. When about to go to the capital, his wife gave him several tablets of silver." Cf. *Old Stories*, D, 2.

New Collection By Categories of Ancient and Modern Events, 4, "Li Sheng's Silver": "The provincial graduate Li was a native of Liangzhou. Because his family was poor, he set up a primary school to teach youths. He had only ten of them each

written sources refer to a certain number of ingots or tablets, they likely always mean 50 ounce large ingots.[29] Gold came only in small ingots.[30] This was about the same as during Tang.

I have seen a large ingot, in the shape of a steelyard weight, with an inset inscription reading "Huaianjun, Jintangxian, labor avoidance cash discounted into silver, earch ingot weighing fifty ounces" [*Huaianjun, Jintangxian, mianfuqian zhe na yin mei ding zhong wushi liang*[b]].[31] This is a Sichuan silver ingot. Huai'anjun was established in qiande 5 [967]. The term *mianfuqian* was probably synonymous with *mianyiqian* --labor-service avoidance cash. Under various labels, this practice flourished during the years 1068-78 and thereafter. It could be paid in ready cash, provisions, or, as here, discounted into silver.

This ingot actually weighs 2,060.6 grams, or 55.2 treasury ounces. Evidently the official weights were set high so as to exploit the taxpayers.

Sichuan did not produce silver. During the first quarter of the eleventh century, merchants carried the cloth of Sichuan to other places for sale, and brought ingots of silver back to Sichuan.[32]

The "Transportation" regulations during the qingyuan period of Southern Song state that when giving gold and silver to superiors, high level purity metal must be used. Silver must be cast into ingots, large ones of 50 ounces, and small ones of 20 ounces. The hallmark *ming* ("bright") had to be stamped on each one, along with the officials' titles and names.[33] This was official silver.

There is a surviving Southern Song silver ingot excavated in Xiuning, which bears the inscription "Dazhou, Now issued in baoqing 3, in shaoding 1 contributed to the Great Ceremonial, silver weighing fifty ounces." Another was dug up in Quxiang, Hunan, with the inscription "Danzhou, Shanhuaxian, Harmonious Purchase, to Great Ceremonial, silver fifty ounces."[34] Both

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bear the full name and rank of the issuer.

There is another silver ingot from the jingyan period, which weighs 4.8 treasury ounces, and is also shaped like a steelyard weight. It has fine wavy lines inscribed on its surface, and the two characters meaning "100 percent" [*shifen*] stamped on its center. The seal mark is gourd shaped, and below it are the four characters meaning "manufactured jingyan period." The reverse is raised, as on an Original Treasure coin.[35] The object generally resembles the Han Dynasty zhongyuan 2 boat-shaped silver ingot. One might boldly conjecture that the zhongyuan silver ingot itself is also possibly a Song object, with its inscription added well after the fact. At present, however, we cannot form a judgment on that point.

Song gold and silver also occur in the forms of cakes and wafers. The cake[36] was an ancient shape,

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day. What he got from them was often not enough to get through the day. One day he died of a fever. The next day he came back to life, and said to his spouse, 'When I died, in the underworld I saw the top examination candidate Yao, who was in charge of judging food and clothing among the people. Formerly, the two of us got along well as colleagues. He said to me, "Your poverty is extreme. You should return to the living soon. Your food and clothing will be appropriate for your station in life. Do not dare to act selfishly. I will add ten more students for you, and also a tablet of silver, to make up for what you lack in your private resources.'" Thereafter, people suddenly began to send their children to study with him, and indeed there were ten more students than before. He repaired his house, and indeed found an ingot of silver." (From *Blue Jade High Righteousness*.)

[28]Wu Ceng, *Loose Record of the Ability to Change Studio*, 1, "Silver Boards": "Silver tablets can also be called silver boards. Han Huang of Tang times sent messengers to offer gauze. Each bearer was given one board of silver." In fact, however, only large ingots were called tablets, and most silver boards were small.

[29]Zhang Zhifu, *Book of Can*: "Mi Yuanzhang was an Executive in the Ministry of Personnel. Emperor Huizong summoned him to the palace, and ordered him to paint a four panel screen. A few days later a secretary was sent to pay him 18 tablets of silver. . . . These 18 tablets amounted to 900 ounces."

[30]*Words of the Grass Smooth Guest*, 6, "Gold Treasure Transformed into Wine": "A man named Wang Sheng, from a village in Jiangyuanxian, Shuzhou, was cruel and violent. . . . In the year jiawu Yizhou was occupied. . . As a consequence, an ancient treasure was dug up, with silver all in tablets and ingots, gold in a certain number of blackened ingots, and pearls and jade encrusted utensils. All were of antique design." *Xiyang Miscellaneous Trays*, continued record, 3: "Zhao Zhenhuai, a commoner of Bianzhou, slept on a stone pillow at night. After more than a month, he sickened and died. His wife had the pillow broken open and examined it. Inside were one gold

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and one silver ingot, which appeared as though cast in a mold. Each ingot was 3 *cun* long, and as wide as a thumb."

[31]Phares O. Sigler, *Sycee Silver* (Museum of the American Numismatic Society, publication number 99) has an illustration of this ingot.

[32]*Song Collected Statutes Compiled Draft*, "Food and Money: Market Exchanges," 37.1.

[33]*Laws of Qingyuan* (Yanjing University Library Edition), 30, "Outlets for Wealth, Transport Regulations."

[34]Okudaira Masahiro, *Record of East Asian Coins*, 10, pp. 89-91, quotes Luo Zhenyu, *Collected Ancient Writings Handed Down From the Virtuous Pine Hall*.

[35]*Kahei* magazine, no. 210, p. 31.

and was not much used during Song. Wafers[37] were relatively small rectangles. There was also horse-hoof gold and melon-seed gold. At the beginning of jiading, included within the household property of Su Shidan which was not confiscated were 15,720 ounces of horse-hoof gold and 5 *dou* of melon-seed gold.[38]

Large gold and silver coins were minted during Song, and Song may be said to have been the dynasty during which gold and silver coins were most frequently used. They were numerous not only at court, but also among the people. During the xuanhe period Jin attack on the capital, Bianjing, the Jin conquerors found 71 strings of gold coins and 142 strings of silver coins in the palace.[39]

When, in chunxi 2 [1175], a Suzhou law clerk was sentenced to death for accepting bribes, and his property was confiscated, he was found to have had 15,720 ounces of gold Original Treasure coins, 6,730 ounces of gold cups, 5 *dou* of pieces of gold, and 60 strings of gold coins.[40] At the beginning of jiading [1208], among the family property of Su Shidan not confiscated were 60 braids of gold coins.[41] A "braid" [*bian*] was probably the same thing as a string of cash.

The gold and silver coins found in the palace were mainly used as gifts for princes, aristocrats, high officials and important eunuchs.[42] Sometimes, at the death of a monarch, these would be buried with him. During Southern Song, the tombs of Emperors Hui, Qin, Gao, Xiao and Guang were dug up, as were those of Empresses Meng, Wei, Wu and Xie, and tens of thousands of gold cash were found.[43] But just because they were used as burial furniture, does not mean these were merely charms or funerary coins, since ordinary bronze coins were also used as burial furniture.

Because they were used as gifts, gold and silver coins also found their way down to the people.[44]

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[36]Zhang Lai, *Bright Path Miscellaneous Record Continued*: "On the day Zhang Wending was made Duanming Palace Scholar and Prefect of Chengdu . . . in the prefecture he set up a small pavilion, placed some quicksilver in the fire, threw in a pinch of some medicine, and boiled it. . . When the fire diminished, they saw glittering in the tripod a cake of gold."

[37]Lu Yinglong, *Unusual Record of the Guarded Window*: "Li Yuan was a gardener by trade, and at first was extremely poor. One day, while hoeing, he was startled by a sound, and dug up a pot full of small gold wafers." Zhou Bida, *Jade Hall Miscellaneous Record*, latter part, describes the rewards given to officials during Southern Song: "From qiandao on, it was merely ink slabs. Upon withdrawal, there was an order that when construction was not up to standard, the reward would be 100 ounces in gold wafers." Zheng Yuanyou, *Zhuchang Mountain Bridge Miscellaneous Record*: "There was a Song National University student, Lin Jingxi, from Dongjia, and whose alternate name was Qishan. When President Yang was putting forth the various tombs, Lin went to Hangzhou carrying a bamboo basket on his back, and holding bamboo pincers in his hand. Whenever he encountered something, he would use the pincers to throw it into the basket. He had silver cast into a number of small 1 ounce wafers, which he secreted around his waist. . ." *Cloud Immortal Miscellaneous Record*, 5, "Gold Wafers Fill the Seat": "The Prince of Hejian spent the night drinking. Whenever a singing girl sang a song, he would throw down a gold wafer. When the feast was over, gold wafers filled the seat."

[38]Ye Shaoweng, *Record of Things Seen and Heard During Four Reigns*, E, "The Complete Story of Tozhou, Shidan and Zhoujun."

[39]*Xuanhe Record*: "When the Jin entered the Inner Palace, they took out of the various treasuries 423 catties of gems and pearls, 623 catties of jade and 600 catties of coral. . . . In the Retired Emperor's palace were scattered 40 strings of gold coins and 80 strings of silver coins. In the Emperor's pavilion were 20 strings of gold coins and 40 strings of silver coins. In the Empress's pavilion were 11 strings of gold coins and 22 strings of silver coins." (Quoted in the notes to *Essential Record of the Years Since Jianyan*, 2.)

[40]*Suzhou Gazetteer*, 145.

[41]*Record of Things Seen and Heard During Four Reigns*, Collection E.

[42]*Old Times in Wulin*, 3, "Annual Appointments": "It was 120 gold cash per year. Subsequently these were also given as gifts to princes, aristocrats, high officials and important eunuchs." *Old Times in Wulin*, 8: "When the Empress returned to visit her family temple, she made contributions to relatives, dependents, clerks and officials of her native prefecture," including "gold cash" (to a total of 500 ounces of gold) and "silver cash."

[43]Zhou Mi, *Miscellaneous Knowledge of the Year Guixin*, additional collection, first part: "By the 11th month, the tombs of the five emperors Hui, Qin, Gao, Xiao and Guang had been dug up, as well as those of the four empresses Meng, Wei, Wu and Xie. . . . There were coins by the tens of thousands, corroded by the decay of the corpses, so that they resembled bronze or iron. For this reason, the villains left them behind, and they were frequently come upon by the villagers. . . . As for the rest, all those families who obtained the gold coins died without any signs of illness."

[44]*Things Handed Down from Xuanhe Times*, heng collection, xuanhe 6 [1124]: "These four obtained the Sagely Order to distribute gold and silver coins, and gold coins were given to the masses. The Teaching Commissioner, Yuan Tao, had written a lyric called 'Distributing Gold Coins.' . . . That night, after the gold coins had been distributed, the masses wandered through the marketplace. One might say that lantern lights were so brilliant that the heavens were not dark, and the music of the flutes sounded everywhere in an eternal Spring."

When ordinary people obtained such gold and silver coins, they probably treated them as precious commemorative objects. Rich families might use them to make gifts in their turn, especially to give to women as good luck symbols upon the birth of children,[45] or as "distribution at the canopy" at the time of marriage.[46]

The gold and silver coins used on such occasions may not, however, have been ordinary ones, but rather have been coins the people themselves commissioned gold and silversmiths to manufacture. The inscriptions on them would not have been year-periods, but rather auspicious words.

Gold and silver coins may sometimes have served as general means of payment. It is said that Su Dongpo used gold coins when building the Lord Su Dike at Lake Feng in Huizhou, in the Lingnan region.[47]

Judging from the objects which have survived, Song Dynasty gold and silver coins of from late Northern Song to early Southern Song were
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the most numerous ones. It was during Emperor Huizong's reign in particular that the largest number were minted, since silver coins have survived from his daguan and xuanhe year periods.

There are two kinds of Daguan Circulating Treasures, one in sealscript and one in clerkscript, forming a matched set. For the Xuanhe coin, I have only seen a block script version, but there are sealscript gold Xuanhe coins. There is also a silver Jingkang coin.

During Southern Song there were Qiandao Original Treasure gold coins with Song-style inscriptions which are like the iron Qiandao coins. In addition there are several kinds of Taiping Circulating Treasure gold and silver coins, but these cannot be considered year-period coins since they were not minted during Northern Song's taiping/xingguo year-period [Cf. Plate lvii at end of this subsection].

There are two types of gold Taipings. One in clerkscript, weighs 4 grams. Judging from the calligraphy of its inscription, it would seem to be a Northern Song coin, and yet it is different from the bronze Taiping Circulating Treasure. The two characters for Circulating Treasure resemble those of Emperor Huizong's coins. The bottom of the character for Treasure is somewhat squared off, very much like on the coins of the zhenghe era. Such calligraphy is not normally found on Southern Song coins. Hence it may more likely be seen as a product of Huizong's reign. The other type of gold Taiping is in block script. There are two of them extant, one rather fine, and also weighing 4 grams. It is hard to judge when it was minted, since Song coins do not normally bear this sort of calligraphy.

There are also several kinds of silver Taipings [Plate lvii,2-4]. One is in clerkscript, which is similar to the first type of gold Taiping, except that the strokes are somewhat thicker, and it is not as as beautifully made. On its reverse is an upward facing crescent. It weighs 4.2 grams. It too could have been minted during Huizong's reign.

The other type of silver Taiping is in thin-gold calligraphy, weighs around 3.5 grams, has a wide hole and narrow rim, and is very fine. Detailed examination of its inscription's calligraphy shows that it is exactly like the Xuanhe coin bearing the character *shan*, and is the same size as the iron Xuanhe and small Jingkang coin. We can tell from this that its date must not differ much from that of the character *shan* Xuanhe. That coin was minted before the second ministry of Cai Jing. The one of Cai Jing's two ministries which occurred during xuanhe was in xhuanhe 6 [1124], 12th month, so the character *shan* Xuanhe must have been minted in xuanhe 5 or 6, and that must be true of the silver Taiping as well. Furthermore, it must have been minted in Shaanxi, because during Northern Song Shaanxi's minting techniques were the most highly developed.

That surviving Chongning and Daguan coins

West Lake Second Compendium (a work written during Ming, but concerned with the Song Dynasty): "Subsequently it was ordered that Song Five's wife put forward her fish broth. The Retired Emperor ate and praised it, and subsequently rewarded her with 10 gold coins, 100 silver coins and 10 bolts of heavy silk."

Nai Deweng, *Capital City Record of Victory*, "Markets": "During longxing [1163-1165], the High Temple and the Six Palaces were facing each other in the middle. Now the ones repairing the Inner Office saw their place. After visiting the temple to Emperor Xiaozong, Empresses Meng and Chun returned, and the temple lamp bought in the market was placed before the curtain. The Inner Attendants wrapped up a heap of coins, and pawned them in the market for food. Gifts were made in coins and goods, and there were some who obtained gold and silver coins."

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[45]Wu Zimu, *Record of a Dream of Liang*, 201, "The Birth of Sons": "If a pregnant woman . . . reaches her normal term, then outside families send to her family varicolored painted coins, gold and silver coins, various fruits and varicolored cloth. . . Relatives and friends also put gold coins and silver pins in a pan, and call this 'inserting in the pan.'"

[46]*Flowery Dreams of the Eastern Capital*, 5, "Taking a Wife": "When they have finished bowing, they go to the bed. The woman faces to the left, the man to the right. They sit. The woman distributes gold coins and varicolored fruits. This is called the distribution at the canopy."

[47]*Lingnan Miscellaneous Record.*

bear Emperor Huizong's own calligraphy there is no reason to doubt, but the histories only mention the Daguan 10-cash coin as having its inscription written in Zhao Ji's own hand. That the character *shan* Xuanhe also bore Huizong's own calligraphy is attested by the various standard histories.[48]

We can trace the development of Zhao Ji's thin-gold calligraphy just from the Chongning, Daguan, character *shan* Xuanhe and the silver Taiping coins. The calligraphy on the silver Taipings proves that they were inscribed during the last years of Huizong, which would date them to the end of xuanhe.

Why, then, was that year-period name not employed instead of the two characters *taiping*? This could have been to fulfill either the desires of Zhao Ji himself or of the dynasty, since the Song minted Taiping coins on several occasions, notably during xuanhe 5 and 6, when just as the Jin were about to put them to the test, Zhao Ji and his favorites
[423]
were still congratulating themselves for their supposed achievement of peace. When we read the *Things Handed Down from Xuanhe Times*, we can detect between the lines an ardent desire for peace, i.e. *taiping*.

There are several other silver Taipings in Song-style calligraphy, one small and one 2-cash denomination. The former has a narrow hole and fine edge, has oblique Song-style characters, and is absolutely fine. It weighs 3.75 grams. It resembles in form and inscription the Shaoxi Original Treasure, and the two are the same size, the two differing only slightly in the forms of the characters (the Shaoxi coin's standing upright, the Taiping coin's being somewhat oblique, like the *juzhenti* style used in modern printing). They must date to the last half of the twelfth century, since the Western Xia Qianyou coins, and the Jin Dading coins had such forms and inscriptions. The large and small 2-cash Taiping coins are not very finely made. It is said that several have been dug up in Hengyang, but I have not seen them. Some say they were minted by Li Pobei, but this awaits verification.

Gold and silver coins were also made for use in the Imperial Palaces. I have seen notations in the records of silver coins with inscriptions wishing good luck and long life, or inscribed Shaoding Long Live, etc. Their calligraphy varies. The inscription *shouci wanshou* is in seal script, and *Shaoding wansui* is in Song-style. Some used the current year period; others used the honorific name of the one receiving the blessing. Most of them date to Southern Song.

The Calling-in Trust Treasure minted by Liu Guangshi differs in nature from the gold and silver coins mentioned above. Liu Guangshi knew that the ethnic Chinese serving in Jin ranks were homesick, and so minted this coin in gold, silver and bronze versions to have prisoners carry back with them to show to others. Those who wanted to come back could carry these coins as tokens of trust.[49] Therefore these were credentials for surrender or safe-conduct passes. All surviving versions of these coins are gold or silver plated. There are no solid gold or silver ones.

Song Dynasty gold and silver coins have one peculiarity in their construction in which they differ from Tang gold and silver coins. The Tang Dynasty silver Inaugural is exactly the same in size and in inscription as the bronze Inaugural, but all Song Dynasty gold and silver coins are smaller than their copper equivalents, and their inscriptions also differ.

The only exceptions are several Song-style Taiping Circulating Treasures. For example, the inscription on the silver Daguan is in seal script or block script, while the bronze version is in thin-gold style. The silver Xuanhe is in block script, whereas there are no block script copper Xuanhe. At most one character appears in block script, usually either "circulating" or "xuan." None have all four characters in block script. Only on the Xuanhe Original Treasure and Qiandao Original Treasure gold coins are the inscriptions the same style as on the copper coins in general circulation, but the Xuanhe gold coins are much smaller than the bronze ones, and there is no small Qiandao bronze coin, only an iron one.

The written sources mention horse-hoof gold, gold dust, olive gold, melon-seed gold, bran gold, groin gold, leaf
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gold, etc.[50] Naturally, horse-hoof gold was shaped like a horse's hoof and gold dust resembled fine

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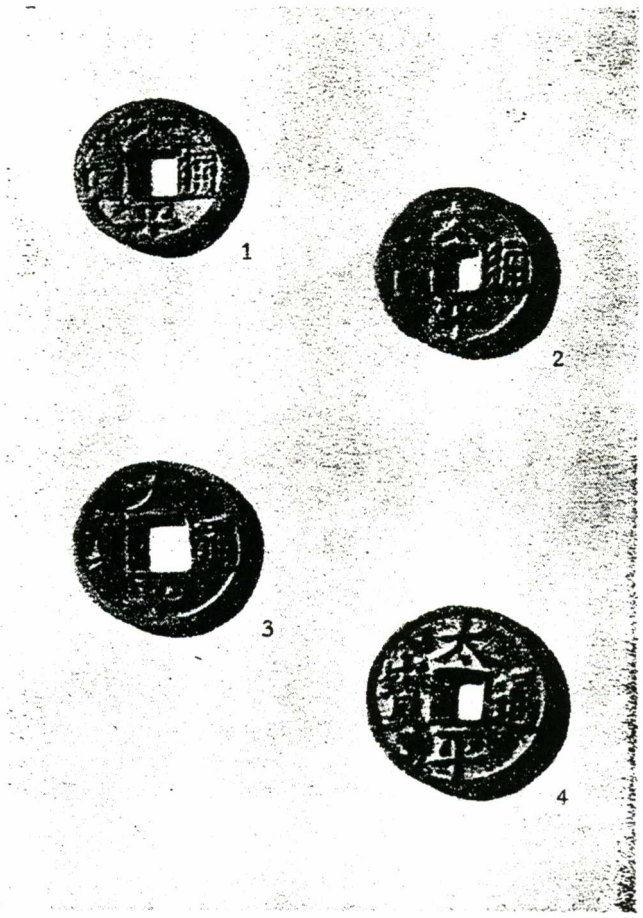
[48] *Song History*, 247, "Biography of Zhi, The Fourth Son of the Imperial House": "At first, when Cai Jing minted the coins adulterated with lead, the people were harmed, and they were blocked up. Prince Zhi requested the minting of a small iron coin in order to control it, and brought in a model. Huizong was greatly pleased, and with his own brush inscribed the four-character inscription Xuanhe Circulating Treasure." For the matter of Huizong personally inscribing the Daguan 10-cash coin, cf. *Yongle Encyclopedia*, quoting Cai Tiao, *State History Supplement*: The Duke of Lu took over the administration . . . and so made a large coin, with one equivalent to ten. In daguan, the Ruler wrote the coin's inscription in his own hand."

[49] *Song History*, 369, "Biography of Liu Guangshi."

[50] *Complete Collection of Household Necessities*, Collection E, "Distinguishing Precious Goods."

sand. Olive gold and melon-seed gold are self-explanatory. Bran gold refers to gold in broken particles resembling bran. It was coarser than gold dust. Groin gold is said to have resembled a kind of tea leaf which looked like the groin. Leaf gold must have been leaves made of gold.

[a]錠 [b]懷安軍金堂縣免夫錢夫
錠折納銀每錠重伍拾兩



圖版五十七　宋代的金銀錢

1.太平通寶金錢。 2.隸書太平通寶銀錢。 3.複金體太平通寶銀錢。4.宋體太平通寶銀錢。

PLATE LVII. SONG DYNASTY GOLD AND SILVER COINS

1. Taiping Circulating Treasure gold coin. 2. Clerkscript Taiping Circulating Treasure silver coin. 3. Thin-gold style Taiping Circulating Treasure silver coin. 4. Song-style Taiping Circulating Treasure silver coin.

3. The Birth of Paper Money

Exchange certificates and paper money were invented in China. Even before China began formally to use paper money, it had employed the principle of paper money on several occasions.

The White Deerskin Hide Money of Western Han and the Tang Dynasty's Flying Cash both had some of the characteristics of paper money. Hide Money could not be considered a commodity money, since a square foot of deer hide had no use value, or at least its commodity price was far inferior to its nominal price, which puts it close to the nature of paper money.

Although Flying Cash was a kind of draft or money order, and we cannot prove that it was turned over in circulation, nevertheless down through the ages most of those who have discussed paper money have said it evolved out of Flying Cash.[1] Paper money and Flying Cash are in fact similar. Flying Cash were certificates to be exchanged for hard money at a different location. Paper notes were certificates to be exchanged for hard money at another time. Later on, true exchange certificates often retained some of the characteristics of Flying Cash. Hence it would be accurate to say that exchange certificates evolved from Flying Cash.

The birth and development of Chinese paper money was stimulated by several economic factors.

The first was the well developed state of commerce during the Song Dynasty, which not only demanded much more money in circulation, but also a lighter and more convenient medium of circulation.

The second was that since the Five Dynasties period China had become divided into a number of monetary regions, within which not only were different currencies used, but from out of which it was not permitted to transport coins. Sometimes the aim of using paper money was to prevent the outflow of bronze coins.

The third factor was the use in a number of regions of large-sized but small-value iron coins, which were extremely inconvenient to carry about.

The fourth factor was that Song's government endured foreign military pressure and aggression, and was obliged to keep up military preparedness. With military expenses large and government finances in extraordinary difficulties,

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it was often necessary to rely on issue of paper money to supplement expenditures.

There was likely already a medium of circulation with the characteristics of paper money by Five Dynasties and Ten Kingdoms times. For example, under Chu's Ma Yin (907-930), the Qianfeng Spring-treasure large iron coin was minted in Changsha. Because it was both large and heavy, it was exchanged in the market in heaps by means of deeds.[2] Was this not the same as paper money? There were quite a few places using iron coins then. They were used much more in Sichuan than in Hunan, and it was in Sichuan that exchange certificates were first used.

The monetary systems of Sichuan had tended to be isolated from the outside almost since the time Gongsun Shu first minted iron coins and Liu Bei minted the Value-hundred coin. This had been particularly evident since the Northern and Southern Dynasties. Trade with the outside was regulated, and prices were not at the same levels as those of outside provinces.[3]

The situation became exacerbated during Five Dynasties times and after. First, there was an Inaugural Circulating Treasure iron coin. Then, Meng Chang minted the Guangzheng Circulating Treasure iron cash. By Song times, Sichuan was mainly using iron coins. Large ones weighed 25 catties per thousand, medium sized ones (which must have been 2-

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[1] *Song History*, 181, "Treatise on Food and Money," latter part, 3: "The Account Notes and Exchange Notes were derived from Tang's Flying Cash." There were Qing Dynasty coin catalogs which reproduced so-called Great Tang Treasure Notes and a number of other spurious paper moneys. The Westerner Edward Kann, in his *Chinese Paper Currency*, reproduced some of these. There are even some contemporary Chinese who believe these to be genuine, as does Wang Xiaotong in his *History of Chinese Commerce*, where he asserts that the Great Tang Treasure Note represents the beginning of Chinese paper money. One may spot these certificates as purely specious simply by looking at the warnings they bear. These state that "forgers are to be beheaded. Those who inform on or apprehend forgers will be rewarded with 750 ounces of silver." Tang did not use silver as money, and the term Treasure Note was not even yet in use by Song times. These fabrications were probably made by old-time merchants.

[2] *Annals of the Ten Kingdoms*, "Chu History."

[3] *Liu-Song History*, 45, "Biography of Liu Zui," noting an event of yuanjia 1 [424]: "Many merchants come to Shu from afar, with goods to the value of several million. The Conservator [Overseer of Expenses Conservator] limited them to no more than 50 catties each for plain cloth, silk floss and heavy silk, and 20,000 Shu cash per horse, regardless of its quality. The prefectural office also set up a smelter, so as to preempt private minting, and forestall the selling of iron utensils at high prices. The merchants departed with sighs of relief, and the masses made disorder so as to gain their desires." The Ming writer Cao Xuequan, in his *Shu Broad Record*, 67, provides a detailed account of the Sichuan monetary systems.

cash coins) ran 13 catties per thousand.[4] This was a very large obstacle to trade.

Iron coins were inconvenient not just because of their large size and weight, but also because the purchasing power of each coin was small. For example, the iron coins circulating in Sichuan at the beginning of Song included small coins weighing 0.1 ounces each. However the purchasing power of such a coin was so low, that a bolt of silk gauze sold for up to 20,000 of them,[5] and that number of coins weighed 130 catties. So it was no accident that paper money was born in Sichuan.

China's earliest exchange certificate was the *jiaozi*, or Exchange Note. There is as yet no way to trace the origins of the Exchange Note through written evidence. Some scholars[6] connect them with the Tang Dynasty counting houses, and say that the counting houses later issued receipts for deposits, and that these receipts circulated in the market, becoming a kind of paper money. This explanation is entirely suppositious, and no evidence is brought forth in its suppoort, so there is no need to comment on it.

Some Chinese history books make the claim that Exchange Notes were put into use during the reign of Zhenzong [998-1023] by a man named Zhang Yong.[7] Others claim that it was in dazhong/xiangfu

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[4]*Investigation of Literary Remains*, "Investigation of Coins," 2, quoting Lü Zuqian: "Of the iron coins used in Shu, the larger weigh 25 catties per thousand, and the middling ones weigh 13 catties per thousand. Carrying them on a journey is inconvenient. Therefore, the certificate of account of those times arose from the inconvenience of iron coins, because their weight kept them from being carried along with one. The exchange note system arose from the initiatives of the people, and was entrusted to the officials so that it could be maintained. Iron coins were inconvenient, but exchange notes were convenient."

True Account of the Song Court, 15, Zhang Ruogu and Xue Tian memorialized: "Within the borders of Sichuan iron coins are used. Ten strings of the small coins weigh 65 catties. A string of the large coins weighs 12 catties. For buying and selling in the streets and markets, when the price gets as high as 3-5 strings of cash, that amount becomes hard to carry."

Wang Yong, *Swallow Wing Bequeathed Plans Record*, ". . . but Sichuan and Shaanxi continued to use what they had before. In Sichuan a string of iron coins weighed 25 catties. It took 13 iron coins to equal 1 bronze cash. The common people melted them down to make utensils, and sold coins for 2,000. And so the official coins were all illicitly melted down by the common people, and there was no way to forbid this.

"In dazhong/xiangfu 7 [1014], the magistrate of Yizhou, Ling Di, requested a reminting, with each string to weigh 12 catties, and 1 copper coin to equal 10 iron ones. Since there was no longer any profit for the people in melting down coins, they no longer did so.

"At the beginning of qingli [1041], the magistrate of Shangzhou, Pi Zhongrong, advised using the copper of the Qing River to set up the Fumin and Zhuyang smelters at Luonan's Hongyai in Huzhou to mint large coins, each equal to three small coins. When made equal to 10 coins, the people hurried to profit from this, and illicit coining did not cease. By qingli 8, when Zhang Fang pacified Song Qi, and advised increasing the coin's face value, the court responded with an edict equating 1 copper cash with 10 iron ones. Prior to this, in qingli 1, 11th month, an edict ordered Jiangzhou, Raozhou and Chizhou to mint 1 million strings of iron coins to aid Shaanxi in meeting its expenses. An especially large amount was accumulated. Coins had been heavily demanded, and the people had suffered from this. Now, with the end of minting of iron coins, their sufferings were ameliorated."

[5]*Song History*, 180, "Treatise on Food and Money," latter part, 2, quoting the statment made in chunhua 2 [991] by Zhao Anyi.

[6]The Japanese scholars Katō Shigashi and Hino Kaisaburō have both published work on the Exchange Note. Katō Shigashi has written "The Origins of the Exchange Note," in *Shigakku*, no. 9.2. Hino Kaisaburō has written "The Development of the Exchange Note," in *Shigakku*,

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no. 45.2 & 3.

Hino divides the development of the Exchange Note into three stages. The first stage is that of the Tang Dynasty negotiable instrument [*piaoju*]. He supposes that the counting houses of that time issued negotiable instruments for circulation in the markets. Because merchants felt that exchange via ready cash was inconvenient, they deposited most of their hard money in the counting houses in exchange for these negotiable instruments. The second stage was that of the Song Dynasty Exchange Note shops which he believes to have evolved out of the counting houses and to have formed into collective guilds. The third stage was when the right of issue was taken over by the government.

The article on "Exchange Notes" in the *Tōyō rekkishi daijiten* puts forth a similar explanation. This theory is entirely based on surmise of what was plausible and on analogy with stories about the English goldsmith shop certificates.

[7]*Song History*, "Treatise on Food and Money," latter part, 3: "At the time of Emperor Zhenzong [r. 998-1023], Zhang Yong was garrisoning Shu, and since the people of Shu were suffering from the inconvenience of using the heavy iron coins in trade, he set up methods for matching one exchange note per string, with the exchange to be completed in three years. In 65 years there were 22 maturation dates. These were called Exchange Notes. Eighteen houses of rich commoners were in charge of them. . ."

Long Draft of the Comprehensive Mirror Continued, 101: "In Emperor Renzong's tiansheng 1 [1023], Exchange Note regulations were set up in Yizhou. At first, Zhang Yong was magistrate of Yizhou, and because the people of Shu were suffering

4 (1011) that this occurred.[8] This theory is also unreliable. The *Song History*, "Biography of Zhang Yong" does not mention this matter. Though Zhang Yong mentioned iron coins, he merely reported that the market prices of iron coins varied by locality, and he did not recommend setting up an iron coin guild market.[9] The earliest work to state that Zhang Yong made Exchange Notes is Shi Wenying's *Xiang Mountain Wilderness Record* of the xining era [1068-1078], but the works which provide the most detailed accounts of the Exchange Notes, *True Account of the Song Court* and Fei Zhu's *Mulberry Money Catalog*[10] do not mention this matter.

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Others say that after the Li Shun uprising, when minting was halted and coins in circulation were scarce, Exchange Notes were put on the market privately. Soon bad notes proliferated, and law suits became very numerous. As a consequence, an edict ordered the magistrate of Yizhou, Zhang Yong, and the Transport Commissioner, Huang Guan, to mint Jingde large iron cash in Jiazhou and Qiongzhou.[11]

This theory pushes the origins of Exchange Notes back to a somewhat earlier date, since Li Shun's uprising and defeat both occurred during chunhua 5 (994). Hence, the earliest that Exchange Notes could have appeared would have been during the zhidao year-period which began the following year. This theory denies that they were created by Zhang Yong, and that, at least, is correct.

Even though Exchange Notes may not have first appeared during the Five Dynasties, they must have done so by the early part of Song. From fragmentary accounts in various books,[12] we may surmise that the Exchange Note evolved through three stages:

The first was the epoch of free issue, when they were probably circulated purely as substitutes for iron cash.

Later, their management was taken over by sixteen families of rich merchants. At the latest, this had taken place during the dazhong/xiangfu period (1008-1016), and possibly earlier, since by that time these sixteen rich mercantile houses had already fallen into decay, and were no longer able to redeem Exchange Notes for cash, leading to numerous legal disputes.

At the end of dazhong/xiangfu, Xue Tian recommended their takeover by the government. Therefore the first and second stages must both have run on for a rather long time. It was not until tiansheng 1 (1023) that the government finally set up an Exchange Note Authority in Yizhou, shifting the trade to official management. This was the third stage.

We know the least about the Exchange Notes of the first stage. There is just a bit of material on their form. We know that the Exchange Note was a mulberry paper certificate, printed on both sides with intricate symbols and flower patterns in red and black ink intermixed. The characters for Exchange Note did not appear on the certificate.

A certificate's value in metal was written in on the occasion of its issue. Presumably this was in response to a request by a merchant or some other person. The user would hand over a certain amount of ready cash, and he would be issued that amount in an Exchange Note. At that time there was likely no consistent uniformity. The printed design was merely the trade mark of the issuer. All things considered, there was no great difference between this and an ordinary receipt.

During the second stage, the form of the Exchange Note was probably reworked, since it was now no longer issued in a catch as catch can fashion, but rather by a cartel made up of a number of rich merchants.[13]

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from the inconvenience to trade caused by the weight of iron coins, he set up a method for correcting the situation."

[8]Shi Wenying, *Xiang Mountain Wilderness Record*, first part: "His lordship [Zhang Shengyai] died in xiangfu 7, jiayin year, 5th month, 21st day. On the day he began in earnest, there was a minor auspicious event. His lordship, in order to end the need to exchange heavy iron coins in conducting outside trade, set up a system of pledges for exchanging one string for one such instrument of exchange having an expiration term of three years. This began in xiangfu year xinhai. It is now xining year bingzhen, and 66 years have passed, during which 22 expiration dates have occurred."

[9]*Song History*, 293, "Biography of Zhang Yong." There are many instances in Song informal writings and stories of the tradition of Zhang Yong's good government in Sichuan. For example, Tian Kuang's *Deeds of the Confucians* and Shi Wenying's *Pure Words from the Jade Jar* have a great deal that is favorable to say about Zhang Yong's administration, but neither says anything about him making Exchange Notes. Other places in the *Song History* that mention Exchange Notes, such as the "Biography of Sun Fu" and the "Biography of Xue Tian" say they appeared from among the people. *Shu Broad Record*, 67, "Coins," mentions Zhang Yong, but does not raise his name in the section "Exchange Notes."

[10]Cf. *Sichuan Gazetteer* (Qianlong 1 woodblock edition), 46.

[11]*Comprehensive Mirror Long Draft Continued*, 59, section on Emperor Zhenzong's jingde 2, 2nd month, day gengchen.

[12]*Shu Broad Record*, 67, "Exchange Notes." This quotes the Yuan Dynasty writer Fei Zhu's *Mulberry Money Catalog*.

[13]*Shu Broad Record* says that "later, sixteen rich merchant households took charge of them," and *True Account of the Song*

There were set patterns for the Exchange Notes of this period, and they were printed on a uniform grade of paper. The design featured buildings, trees and people. For rendering other features, such as the cyphers, flower-marks, seals, etc., the methods of the first stage were retained, with red and black ink intermixed.

The characters for Exchange Note probably still did not appear on the certificate, and the amount of metal for which it was exchanged was still inserted at the time of issue according to the request of the purchaser, with no limit on the amount, so long as that amount of ready cash was paid over. The certificate could be redeemed at any time, except that a processing fee of 30 cash per string was assessed at the time of redemption. [Cf. Plate lviii at end of this subsection]

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The appearance of this sort of Exchange Note was not only an epochal event in economic history, it also had enormous significance in cultural history. First of all, they were probably printed from copper plates, which was an important innovation in the world's history of printing and publishing. Second, the design such a certificate bore surely also had very large value in the history of the printing of images.

The establishments of the rich merchants who issued Exchange Notes then were called Exchange Note shops or Exchange Note households, and since Exchange Notes could circulate both near and far, and be presented for redemption at any time, branch shops were set up in other places in addition to Chengdu.

Every year when the silk worms matured and the rice and wheat ripened, merchants and others demanded circulatory media and means of payment, and so these were the times when the most Exchange Notes were issued. The rich merchants who undertook their issue must have paid a price for this privilege. Every year they paid to the government "in summer and autumn, to the grainary estimators and for the feeding of the dyke workers."

Later, however, these rich merchants used the cash they took in to expand their shops, homes, farms and holdings of precious goods. Their management deteriorated, and their wealth decayed. When holders of Exchange Notes brought them in for redemption, the merchants were sometimes unable to cash them, resulting in law suits.

At times, frauds committed by Exchange Note shops and households aroused popular anger and led to runs on these proto-banks, at which point the Exchange Note shops closed their doors. Later, the government took a hand, ruling that a string could be redeemed for only 700 or 800 cash. This was one reason for the official takeover of management of Exchange Notes.

The first to recommend that the government take over management of Exchange Notes was the Transport Commissioner, Xue Tian. At the end of dazhong/xiangfu, he memorialized a request for the establishment of an Exchange Note Authority, but at the time the government did not adopt his proposal.

Later, the Prefect and Policy Critic Adviser, Kou Xian, recommended the banning of Exchange Notes. He had induced the Exchange Note house of Wang Changxi to close down its Exchange Note shop, and had placed a seal across its counter to keep it from issuing any more notes. Exchange Note households outside the district had also been closed down in this fashion.[14]

Before long, however, Kou had left office, and was succeeded by Xue Tian. The government asked him and the Transport Commissioner, Zhang Ruogu, to reconsider the matter. They both felt that it would be inconvenient to abolish Exchange Notes, and they revived the recommendation to transfer their management to a governmental Exchange Note Authority.[15]

The government finally accepted this recommendation, and in tiansheng 1 [1023], established the Yizhou Exchange Note Authority. From the 2nd month of the following year, it began to issue official Exchange Notes.

The official Exchange Notes were probably similar to the private ones, since Zhang Ruogu and Xia Tian's memorial had stated that "the Exchange Notes will match those originally issued by the

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Court, 15, states that "in Yizhou, rich commoners with more than 100,000 per household underwrote Exchange Notes." The character for ten-thousand here is likely a misprint for "many," which would make the passage read "ten or more households of rich commoners . . ."

[14] *Shu Broad Record* and *True Account of the Song Court*.

[15] *True Account of the Song Court* quotes the memorial by Zhang Ruogu and Xue Tian: "Within the borders of Sichuan, use is made of iron cash. Ten strings of the small cash weigh 65 catties, and large cash weigh 12 catties per string. To buy or sell goods on the streets or in the markets for as much as 3 to 5 strings, the money is hard to carry. Originally, the method of using Exchange Notes was and for long remained a convenience for the people. Now there are no Exchange Notes in use on the streets and in the markets, and it would be correct for the Exchange Notes to revert to official control. We have considered the matter together, and wish in Yizhou to set up an official building for this purpose, and to have the capital officials set up a separate authority . . ."

people in size, and will still be printed in this prefecture from copper plates.[16] Of course the resemblance was limited to the size and to part of the design. The inscription on the certificate was not necessarily the same. The official Exchange Notes could specify the scope of the notes' circulation and the amount for which they would be redeemed, since the Song used 770 cash

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to make one string.

The certificate probably still did not bear the characters for Exchange Note, and the amount of coin was likely still written in at the time of issue.

Fixed denominations were, however, also established. At first they ran from 1 to 10 strings. In baoyuan 2 (1039), these were reduced to two, 10-strings and 5-strings, and the amount issued was fixed at 80 percent 10-string and 20 percent 5-string. In xining 1 (1068), the denominations were again changed to 1-string and 500-cash, with 60 percent being 1-string, and 40 percent being 500-cash notes.[17] It is possible that the face value in cash was now printed on the certificate, and it is also possible that each denomination had a different form or design.

Official Exchange Certificates were issued with expiration dates. When their terms expired, new Exchange Notes were used to call in the old ones. The *Song History* "Treatise on Food and Money" states that the private Exchange Notes had three year terms, but neither the *Chengdu Record* quoted in *True Account of the Song Court* nor the section on "Exchange Notes" written by Fei Zhu of Yuan quoted in *Shu Broad Record* mentions terms for private Exchange Notes. Since the *Song History* is not very reliable on the origins of Exchange Notes, it may not be trustworthy on the terms of duration of private Exchange Notes either.

It may be that private Exchange Notes could be redeemed at any time. The three-year term would refer to official Exchange Notes, and three years merely meant three New Year's days, and not a full three years. When the Chinese calculate a person's age they have never reckoned in terms of entire calendar years, and so this three-year term actually only amounted to two full years.

There were apparently limits on the amount issued of official Exchange Notes, and they were backed by hard money. The issue limit was 1,256,340 strings for each period.[18] This, however, was the maximum, not the amount actually issued for each term. If purchasers were not many, the amount issued would not reach the limit.

Later on, Exchange Notes were used to pay for army provisions, and their amount often exceeded the limit. Their hard money backing was the Sichuan iron coins in general circulation. For every issue, 360,000 strings of such coins were employed, which amounted to 28 percent of the note issue limit.

Though there were objective reasons for the appearance of Exchange Notes, their use was accompanied by a number of abuses.

For example, their private manufacture was a big problem. Copper and iron cash could also be privately made, but they at least had some intrinsic value, and their private manufacture required a certain amount of capital. For Exchange Notes, only a printing plate was required. Paper and ink cost practically nothing. Moreover, unlike copper or iron coins, which were made one coin at a time, Exchange Notes were made by the string.

Illicit private manufacture appeared during the qingli era [1041-49]. Some advocated the abolition of Exchange Notes, but given the existing fiscal difficulties, how could the authorities agree to that?[19] During the reign of Shenzong, Wen Yanbo once more discussed the inconveniences associated with Exchange Notes, but Shenzong said these were unavoidable.[20]

The region of circulation of Exchange Notes was originally limited to Sichuan, but in xining 2 [1069] their use was extended into Hedong. Later, when merchants

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proved unwilling to sell food and fodder to the government, their use there was halted. They were also circulated in Shaanxi on two occasions, both times unsuccessfully.

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[16] *True Account of the Song Court*.

[17] *Shu Broad Record*.

[18] *True Account of the Song Court*, 15: "In tiansheng 1, 11th month, 28th day, arrived at this prefecture. By tiensheng 2, 2nd month, 20th day, the books were opened. At the end of one full year, in all there were issued on the accounts for the second term 3,884,600 strings." Apparently there were only something over 1 million strings per period.

[19] *Searches into a Multitude of Books*, latter collection, 62, "Fiscal Applications: Mulberry Paper Money" quotes a tomb inscription: "In qingli 7, Sun Fu had looked into the Exchange Note Authority. The Transport Commissioner wanted to abolish them because there was much illicit making of Exchange Notes. Fu said: 'Exchange notes may be illicitly made. Iron coins may be privately minted. If there is illegal private

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minting, may we abolish coins?'"

[20] *Searches into a Multitude of Books*, quoting the *Long Draft*.

In huangyou 2 [1050], someone advocated issuing a deerskin coin reserve oranmented with feathers, pearls and jade, which would be circulated along with coins. This would have been similar to the Hide Money of Emperor Wu of Han, and no doubt was aimed at hindering counterfeiting. Because of opposition, nothing came of this proposal.[21]

During the first decade of the twelfth century a monetary reform was carried out, under which Exchange Notes were changed into Coin Vouchers. In chongning 4 (1105), the circuits outside Sichuan printed new style Cash Vouchers, but for the time being Sichuan continued to use the old forms. It was not until daguan 1 [1107] that its Exchange Note Authority was formally renamed Cash Voucher Authority, but the 43rd term issue that year retained the old printed form to avoid arousing suspicions. It was not until the 44th term was issued in daguan 3 [1109] that a changeover was made to the new Cash Voucher printed forms.[22] We do not know whether the Cash Vouchers issued by the other circuits in chongning 4 were the same in form as those put out by Sichuan in daguan 3.

The term Exchange Note [*jiaozi*] was probably a local Sichuan expression, the suffix *zi* in particular being a local dialectical component. During the xiantong period [860-874] of late Tang, carved woodblock printed books were called *yinzi* --printed things-- in western Sichuan to distinguish them from manuscript copies, and this too carried the flavor of the local dialect.

The character *jiao* means "to exchange," i.e. to trade coins for a certificate. The later terms *huizi* --Account Notes-- and *guanzi* --Communicating Medium-- had similar meanings, the words *jiao*, *hui* and *guan* being rather close in meaning. The meaning of *qianyin* --Coin Voucher-- is clear. Coin Voucher is a term parallel to tea voucher [*chayin*]. A tea voucher was a certificate for drawing upon government stocks or selling of tea, and so a Coin Voucher was a certificate for drawing cash, with the same meaning as certificate of exchange.

Fei Zhu of the Yuan Dynasty gives a description of the form of the Coin Voucher in his *Mulberry Money Catalog*. Each Coin Voucher bore six seals and was printed in three colors, which represents the beginning of multi-color printing.

The first seal or printed block was of the character *chi* --imperial order. The second was of an aniseed. The third gave the expiration year. The fourth was a seal on the note's reverse. All four of these seals were affixed with black ink. The fifth seal was of a ferocious face, and employed blue ink. The sixth seal was of a red circle, and employed red ink.

The six seals were all ornamented with flower patterns. The character *chi*, for example, might be surmounted with a golden chicken or a golden flower or a double dragon or a dragon and phoenix. Each new issue differed. The ferocious face would be ornamented with flowers, trees and animals, as on long-life wreaths, towers rising from the blue sea, fish leaping through a dragon gate, and entwined branches of Beijing mock orange flowers.

The red circle and reverse seals contained illustrated stories. The red circle had such things as dragons and tortoises, red fermenting grain, Meng Chang returning the pearl, Zhuge Kongming waving his feathered fan to the three armies, Mencius having audience with King Hui of Liang, and Yao and Shun shedding their garments to govern the Empire.

On the reverse were scenes from works like Wu Yin's prose-poem "Weighing Desire for Treasure," depiction of the law-abiding clerk of Han increasing the measure when conferring gold, King Xuan of Zhou repairing the chariot horse harness, Shun playing a five-stringed lute as he sings the "Airs of the South," Marquis Muniu of Wu herding horses, and King Wen paying his respects when the cock crows at dawn.

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Examining the Coin Voucher as a whole, at the top was written the term, followed by a year (such as xinji, shaoxing 31). Next were affixed some five-character slogan (such as "great enrichment for the state's finances," most of which were maxims). Next came the imperial seal with its flowery lines. Next came the ferocious face and then the red circle illustrated story. Next came the year of expiration surrounded with flowery lines (most being flowers and plants). Next came the reverse printing, divided into two types: 1-string and 500-cash. Finally came the written form of the amount.

We can tell from this description that the Coin Voucher was a much better looking object than the Exchange Note. Although the pattern described by Fei Zhu is that of the period from the 70th term of shaoxing 31 [1161] to the 79th term of chunxi 6 [1179], we may judge that this pattern was created at the beginning of the century at the time of Emperor Huizong.

The reign of Huizong was the period of China's greatest artistic development, and Zhao Ji himself was an outstanding calligrapher and painter. Under

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[21] *Searches into a Multitude of Books*, latter collection, 62, "Fiscal Applications: Mulberry Paper Money."

[22] *Song History*, "Treatise on Food and Money," latter part, 3. *Investigation of Literary Remains*, 9.

his rule coins were also incomparably beautiful. He even personally wrote coin inscriptions, and so how could he have failed to view the illustrations on the printing plates as important? We can imagine that the designs on the Coin Vouchers of that time must have had a very high artistic value.

Exchange Notes sometimes retained one characteristic of Flying Cash. Exchange Notes issued in one place would be cashed in at another.[23]

The sphere of circulation of Exchange Notes was still not broad during Northern Song. At first, they only circulated in Yizhou. In xining 2 [1069], to relieve Hedong from the inconvenience of shipping iron coins, an Exchange Note Authority was set up in Luzhou. The next year it was temporarily abolished. The year after that, they were again circulated in Shaanxi, but in xining 9 they were again abolished. They were, however, once more circulated in Shaanxi in chongning 1 [1102].

Hence, outside of Sichuan, the sphere of circulation of Exchange Notes did not go beyond Hedong and Shaanxi Circuits, or in other words, the region of circulation of iron coins. The later Coin Vouchers circulated more broadly. In addition to Sichuan, they also circulated in Jingdong, Jingxi, Huainan and Jingshi Circuits.

The sphere of circulation of Southern Song's paper money was broader, and there were more different kinds of paper money. The earliest of these was Communicating Medium, which were for a time turned into Exchange Notes, but the most generally circulated were Account Notes.

Communicating Medium also originated as a kind of money order. Because in shaoxing 1 [1131] communications were inconvenient for the soldiers garrisoning Wuzhou, and ready cash could not be forwarded to them, an edict called on merchants to put forth ready cash in exchange for Communicating Medium in Wuzhou. They could take this Communicating Medium to the government's commodity monopoly office to receive cash. They could also receive tea, salt, and incense commodity vouchers. These were certificates or licenses allowing them to traffic in these commodities. Therefore Communicating Medium was very similar to the Tang Dynasty's Flying Cash.

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Among the several types of Communicating Medium was the ready cash or bronze cash type, by which was meant that it did not exchange for tea or salt vouchers, but solely for ready cash.

There was also *gongju* Communicating Medium. This was issued in shaoxing 29 [1159], and used in Huaidong. Face values ran from 10 Thousands to 100 Thousands in five denominations. They were to circulate for two years. Ordinary Communicating Medium had a three year term. Merchants could use coins and silver to buy these *gongju* from the government, and could probably then use them as licenses to acquire such commodities as tea, salt, incense and alum, so they cannot be considered to have been genuine money.

In the last years of the dynasty, Jia Sidao also made copper cash Communicating Medium, as well as gold and silver Communicating Medium which bore a seal in black ink resembling the character for "west." The middle bore a red seal mark of three strokes as in the character *mu* --"eye." Below on both sides were small elongated black seals. The whole design was neatly designed to form the character *jia* --Jia Sidao's family name.[24]

Exchange Notes were also issued during the shaoxing period, and an Exchange Note Authority was established in Hangzhou. It was originally intended to circulate them in all the circuits of the southeast, but because of bad management they were later changed back into Communicating Medium.[25]

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[23] *Comprehensive Mirror Long Draft Continued*, 457, yuanyou 6, 4th month: "The Department of Ministries states that Shaan prefecture is the border between the bronze and iron coin regions. When westerners come, they must make exchanges for bronze cash before they can go on to the east. Now it is the case that the people must exchange 1,700 iron coins before they can get 1,000 bronze coins. This has led to the successive lightening of the iron cash. . . . Officials going east with payment certificates and armies going east with payment certificates, if they wish to, can exchange them for cash in Shaanzhou, and those who wish to exchange bronze cash in Shaanshizhen may also do so. A thousand iron cash will exchange for 800 bronze cash. Those who wish to emit Exchange Notes in Shaanzhou and Shaanshizhen may seek out people who will cash them in the Western Capital. Assented to."

[24] *Song History*, 474, "Biography of Jia Sidao": "He then used mulberry paper to make silver Communicating Medium, with one of them exchanging for three of the 18th term of Account Notes. He himself arranged the seals to resemble the character *jia*. The 17th term was abolished." *Essentials of the Administrations of Three Song Reigns*, 3, Emperor Lizong's jingding 5, 1st month: "Gold, silver and ready cash Communicating Medium were made, with one to be exchanged for three of the 18th term of Account Notes. These mulberry paper notes would be accepted in exchange for precious goods from the treasury. They abolished the 17th term. This Communicating Medium was printed atop in black with a seal resembling the character *xi* [west] in the middle with three parallel lines in red resembling *mu* [eye], and below on both sides with a small elongated black seal, the whole appearing to form the character *jia*."

The most common form of paper money during Southern Song was the Account Note. The term Account Note was already present during Northern Song. Lü Huiqing's *Daily Record* mentions Account Notes, saying "the people bring in coins and request Exchange Notes, that is, Account Notes. If a family has cash, then it gets Account Notes." The terms Exchange Note and Account Note would seem to have been synonyms.

In shaoxing 7 (1137), Wu Jie issued silver Account Notes in Hechi (the present Fengxian in Shaanxi, near Gansu).[26] The *qian* [i.e. 0.1 ounce of silver] was made its unit. There were denominations of 1-*qian* and 0.5 *qian*. They were turned over annually. This was the earliest use of a silver standard. At that time Wu Jie was the Proclamation Commissioner of Sichuan and Shaanxi. Some 140,000 of the 1-*qian* denomination notes were issued, and 10,000 of the 0.5-*qian* notes.

They were linked to Coin Vouchers. Four *qian* worth of the silver Account Notes were equated with

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[25] *Sagely Government of the Two Reigns of the Dynastic Revival of Imperial Song*, 19, edict of shaoxing 4, 5th month, day yiyou: "Exchange Notes brought in are to be treated like the Communicating Medium of successive years, and the office managing them abolished. At first, the advice of Zhang Deng was taken, and an Exchange Note authority set up in the Temporary Capital [*Searches into a Multitude of Books*, latter collection, 62, says these were Account Notes, but this must be an error.], but they were not exchanged for coin, and this gave rise to extremist talk that they were bad notes.

"Exchange Notes circulated in Sichuan for nearly two centuries to the profit of both public and private interests, and nothing to contradict their use was heard. Why, when there is an abundance of cash in the official coffers, and people come bearing Exchange Notes, and they are given coin when they so desire, are there still doubters? Now, when the Temporary Capital has established an authority, and has printed 300,000 worth, the commodity monopoly authorities have been ordered to issue ready cash for them. Directives will continue to be sent down to print Notes and collect cash in exchange for Exchange Notes to the amount of 1.5 million in Liangzhe, Jiangdong and Jiangxi.

"If We do not hear that they are being redeemed for coin, then how can this show our credibility to the people? When Harmonious Purchase in previous years has used ready cash Communicating Medium, those who hurried to the monopoly commodity authority to request cash have been paid but a percentage, and those who have been circulating these notes among the people have also been discounting them. Last year there was 1.3 million in Harmonious Purchase Communicating Medium.

"First the monopoly commodity authority must be ordered to prepare enough strings of cash, and make them available for inspection daily. They should also be made visible to the people. This is the basis for establishing the notes' credibility. There is no other. If it is desired to print Exchange Notes, the treasury authorities must first be ordered to accumulate ready cash. If on the day of issue, any are presented for redemption in cash, whether many or few, they must be redeemed in a timely fashion. Then the people will harbor no suspicions, and they can be circulated for a long time.

"Should there chance to be a temporary blockage, then merchants who trade with them at a distance are certain not to circulate them at the points of exchange. . . . It is also said that previously the court ordered the monopoly commodity authority to accumulate 200,000 strings of cash as backing for the ready cash Communicating Medium, and permission has been given to circulate them in Jiangnandong Circuit. After this they were changed to Exchange Notes because it was desired to broaden their use.

"There is to be 300,000 strings worth in the six circuits of Guangnan and Fujian, 100,000 in Exchange Notes in Liangzhe Circuit, and 100,000 small Exchange Notes within the city limits of Lin'an Prefecture. In addition, 1.5 million in reserve Exchange Notes has been accumulated in Jiangnan and Liangzhe, but because a reserve in actual cash has not been worked up, disputes have arisen with gentry and commoners near and far. All believe these arrangements to be inconvenient. . . The Chief Regulatory Commissioner of Jiangxi, Li Gang, also sent up a letter saying that they could not be circulated. For this reason the Communicating Medium was subsequently restored."

[26] *Song History*, 28, "Basic Annals of Emperor Gaozong, 5," shaoxing 7, 2nd month: "Wu Jie set up silver Account Notes in Hechi." *Essential Record of the Years Since Jianyan*: "The Deputy Proclamation Commissioner of Sichuan and Shaanxi, Wu Jie, began to set up silver Account Notes in Hechi, and up to the present they have not been changed."

Miscellaneous Record In and Outside Court Since Jianyan, Collection A, 16, "Silver Account Notes Outside the Passes": "Silver Account Notes were established outside the Passes in shaoxing 7. Wu Fuwang first set them up in Hechi while serving as Deputy Proclamation Commissioner. His rule was to issue them in 1-qian [0.1 ounce] and 0.5 *qian* denominations. In all 140,000 1-*qian* notes were issued, with 4 such notes equated with a 1-string Coin Voucher. There were 10,000 notes of the 0.5-*qian* denomination, and 8 of these were also equal to a 1-string Coin Voucher. At first they were only circulated in Yuguan and in Jiezhou, Chengzhou, Minzhou, Fengzhou, Xingzhou and Wenzhou. There was one exchange per year. The money belonged to the army. When Wu An died, it was placed into account, and in shaoxing 17 [1147], 7th month, it was again turned out in Daanjun, again with a one-year term. In qiandao 4 [1168], 4th month, they began to increase

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the 1-*qian* silver notes by 30,000 notes, and in the 9th month these were circulated in Wenzhou. Thereafter they flourished to a degree. Up to the present, some 610,000 notes have been printed at two year intervals, and altogether these are the equivalent of 150,000 strings of Sichuan Coin Vouchers."

a 1-string Coin Voucher. The total quantity issued was 145,000 *qian*, equal to 36,250 strings of Coin Vouchers. At first they only circulated in Yuguan and in Jiezhou, Chengzhou, Minzhou, Fengzhou, Xingzhou and Wenzhou. At that time the larger part of Shaanxi was under Jin occupation, and Song only retained Jiezhou, Chengzhou, Minzhou and Fengzhou. Xingzhou and Wenzhou were under Lizhou Circuit. All of these places were on China's northwest frontier. This use of silver might have been influenced by the peoples of the northwest.

After Wu Jie's death, a reform was carried out in shaoxing 17 [147], 7th month. Under its terms, they were turned out again in Lizhou Circuit's Da'anjun, with a term of two years. In qiandao 4 (1168) 4th month, an additional 30,000 1-*qian* silver Account Notes were issued. Beginning in the 9th month, they were put into circulation in Wenzhou. Later, their circulation was further broadened. Every two years they issued over 610,000 notes, which were equal to over 150,000 strings worth of Sichuan Vouchers.[27]

Evidently they were still pegged at 4 1-*qian* notes per 1-string Sichuan Voucher. The latter rested on an iron cash standard. I do not know how the two were able to be linked together. Perhaps that silver standard was only nominal.

In addition, there also seem to have been gold and silver Account Notes,[28] the nature of which is not specified in detail. During the baoyou period, however, silver Account Notes were still being issued in Sichuan at

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a ratio of 1:100, which caused inflation.[29]

The Account Notes used in the southeast were also issued by the people to begin with, and were called Convenient Cash [*bianqian*] Account Notes, a term which probably was an extension of a synonym for Flying Cash, *bianhuan* --convenient exchange. Only later was control over the redemption center taken over by the officials of Lin'an.

Still later, the coin authority was transferred to the Executive of the Board of Census, which then took over its management.[30] This occurred in shaoxing 30 (1160). At first, they were only circulated in Liangzhe. Later, their use was expanded into the Huai, Zhe, Hubei and Jingxi regions. Most taxes and exchanges could use them, and they virtually became a legal tender.[31]

The style of the Account Note seems to have greatly differed from that of the Cash Voucher. [Plate lix] From surviving Account Note printing plates we can tell that the vertical rectangle format was retained.

The top half gave the conditions of the rewards for catching counterfeiters:

> It is decreed that those guilty of counterfeiting Account Notes are to be beheaded. There will be a reward of one thousand strings. If it is not desired that a reward be paid, the person will be promoted to *yixiaowei*. If among a person's followers, there are families which harbor them, he can himself inform on them, and specially thereby avoid guilt. He will also be given the above-mentioned reward or the above title, as he prefers.

On the right side of this statement was displayed the face-value of the note, such as "large one string of cash reduced." On the left was a serial number, labeled number such-and-such. Below the reward statement is a line of five large characters running from right to left and reading "Travelling Capital Account Note Treasury." Below that is a decorative pattern.

It is possible that these are not as beautiful as the Coin Vouchers because Southern Song's cultural level seems to have fallen below that of Northern Song. However, different issues of Account Notes or different denominations of them were not necessarily the same in style. Perhaps at the time of the qiandao [1165-74] reform of the system of issue of Account Notes, their style was also changed. At least the chunxi 1 [1174] Account Note had people depicted on it, and its design employed the three colors earth-red, indigo blue and black.[32]

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[27] *Miscellaneous Record In and Outside Court Since Jianyan*, Collection A, 16, "Silver Account Notes Outside the Passes." Collection A was completed in jiatai 3 [1203].

[28] *Miscellaneous Record In and Outside Court Since Jianyan*, Collection B, 16, "Small Silver Account Notes of the Sichuan Central Administration": "Because of a revenue shortage, in year dingmao Chen Fengru initiated small Account Notes. . . . The Proclamation Commissioner then made gold and silver Account Notes, which later were no longer circulated."

[29] Li Cengbo, *Ke Pavillion Continued Draft*, 3, "Secret Memorial to Rescue Shu From Mulberry Paper."

[30] *Miscellaneous Record In and Outside Court Since Jianyan*, 16, "Finances and Taxes, 3, Account Notes of the Southeast."

[31] *Song History*, "Treatise on Food and Money," latter part, 3.

[32] Concerning the form of the Account Note, in addition to the actual copper printing plate, *Collected Works of Civil Duke Zhu*, 19, "Memorials and Petitions," also yields some evidence under Tang Zhongyou, Number 4 Petition on adding yellow, and Number 6 Petition on making counterfeit Account Notes law case. Petition Number 6 states: "According to what Jiang Hui says, he is a commoner from Mingzhou. In chunxi 4, 6th month, along with his fellow defendant Fang Baier, he came to trial for

Account Notes came in four denominations: At first there was one string to the note. Later, in longxing 1, there were added 200-cash, 300-cash and 500-cash denominations.[33] In qiandao 4 [1168], a term of three years was fixed.[34]

There were also some local paper moneys during Song: In addition to Sichuan Vouchers, there were also Hu Account Notes and Huai Exchange Notes. The former were Hubei and Huguang Account Notes. Hubei Account Notes were created in longxing 1 [1163] by Huguang's Wang Qi (whose given name is also written several other ways). They were called Value-convenient Account Notes, and came in 1-string and 500-cash denominations. They were only used in Hubei Circuit, but probably later spread to Huguang. At the beginning of chunxi [1174], Capital Account Notes were used to call in all of the Huguang Account Notes.

There were in addition iron cash Account Notes, also created in longxing 1 [1163], circulated in Xingyuanfu, Jinzhou and Yangzhou. They came in 300-cash, 200-cash and 100-cash denominations, and were linked to the issue of Sichuan Vouchers. Huai Exchange were the Exchange Notes used in the two Huai circuits. They were printed in qiandao 1 [1165] in four face values, the same ones employed for Account Notes. Printed on the reverse were the characters meaning "entrusted to the prefectures and armies of Huainan for circulation." Hence they only circulated in

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the prefectures and districts of the two Huai circuits. In qiandao 8 [1172], Travelling Capital Account Notes (i.e. Capital Account) were used to redeem them, but they were later again allowed to circulate.

Exchange of the various Song paper currencies into hard money was mainly into copper and iron cash, but gold and silver ordainment certificates were also frequently employed. Buddhist and Daoist clerical ordination certificates were very prevalent negotiable instruments during Song times.[35]

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counterfeiting official Account Notes . . . and was sentenced to Taizhou. . . . In the 3rd month of last year Tang Zhongyou was summoned by Hui to go to the public treasury and began to cut the blocks for printing the *Yang Zi* and *Xun Zi*. . . . The next day, old lady Jin came in with a 1-string reduced Account Note. The person who had given it to her had the air of a gentleman . . . said that it was a person living before the large garrison, and who had the appearance of someone selected for the academy. . . . At that time a pearwood block was given to Hui. In ten days the carving was finished. . . . By the middle ten days of the 12th month, Old Lady Jin had 200 Account Notes in a rattan box, along with a carved Account Note plate, and earth-red, indigo blue and black ink, which she handed over to Hui. Two hundred Account Notes had been printed, but the vermillion seal had not been applied, and was in the box. . . . The next day, Old Lady Jin put forth a 1-string reduced note inscribed in seal script, and impressed with the three characters "solely registered official." On the blue flowered part was written a two-character serial number. Hui used three red seals . . . and printed a total of 2,600 notes. . ."

This account mentions a pearwood printing board, but official Account Notes used copper plates. *Investigation of Literary Remains*, 9: "Chunxi 3, an edict stated that the 3rd and 4th terms were each to be limited to three years. It was ordered that capital tea markets and Account Note treasuries use the 4th term copper plates to continue to print another 2 million Account Notes to be delivered to the Southern Treasury."

[33]*Song History*, "Treatise on Food and Money," latter part, 3: "In Emperor Xiaozong's longxing 1, an edict ordered that Account Notes use the longxing Department of Ministries and Ministry of Finance's officially printed Account Notes for their texts. In addition to 500-cash Account Notes, 200-cash and 300-cash notes were produced."

[34]*Ibid.*: "Qiandao . . . 4, because the old Account Notes had been destroyed, the Account Note Office was commissioned to again manufacture them. Three years was established as one term, and 10 million strings were to be made each term, the newly made notes to be exchanged for the old at the end of the term."

[35]Wang Yong, *Swallow Wing Bequeathed Plans Record*: "Buddhist and Daoist clergy ordination certificates were annually printed from plates. They were printed on paper. With the implementation of the New Laws, the advisers set a price for their sale. Each certificate had a price of 130 Thousands, and the amount issued per year was fixed at a level beyond which it could not go. In xining 1, 7th month, they began to be sold to the public. In the first year only 3-4,000 people took them up. By yuanfeng 6, their number was limited to 10,000. The [?]zhou[a] Transport Commission raised their price to 300 Thousands, and then reduced it to 190 Thousands. In jianzhong/jingguo 1 it was raised to 220 Thousands. During daguan 4 the annual sale was over 30,000 certificates. New ones were circulated atop old ones, and among the people they were discounted to 90 Thousands.

"The court was distressed by the excesses, and halted their sale for three years. The government continued to seek them out among the populace for destruction. When the people of the circuits heard this, they rushed to sell them off, and their price reached 20 Thousands per string. . . . In jianzhong/jingguo 6 an edict changed them to use smooth silk paper, and the regulations of the Executive School Head were instituted. In xuanhe 7, because the number of Buddhist and Daoist clergy had increased to a million, there was an edict halting their sale for five years.

"Subsequently, because of the military disasters, the institution fell out of use. After the move to the south, new rules were enacted under which the price of a certificate of ordination in-

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creased from 60 to 100 Thousands, and at the beginning of chunxi, it was further increased to 300, then 500 and then 700 Thousands. But the court, giving weight to its feelings of love and pity, did not sell them lightly. Frequently cash was brought into the Travelling Capital. Many localities managed the system, and certificates were finally obtained. Later, they were called couch-halting Account Notes, and subordinates were permitted to sell them for 100 Thousands more, raising the price to 800. In recent years, people giving them up have been numerous, and they have been sold locally at reduced prices."

圖版五十八　錢　引

這是鈔板的拓本。上面既無年份，也沒有名稱，金額也是臨時填寫的。看上面文字，可能是崇觀年間四川以外各路所行的錢引。這鈔板不但在世界貨幣史上有極高的價值，就是在印刷史和板畫史上也是很重要的。

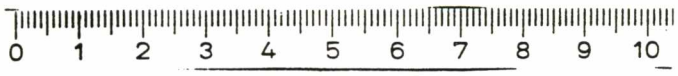

PLATE LVIII. COIN VOUCHER

This is a rubbing from a printing plate. There is no date at the top. Nor does the name appear. The amount in coin was inserted at the time of issue. Judging from its inscription, it could have been a Coin Voucher issued in one of the circuits outside Sichuan during the chongning period [1102-1107]. This printing plate not only possesses extremely high value for the history of the world's money, it is also very important in the history of printing and woodblock pictorial prints.

圖版五十九　南宋會子

會子的圖案在藝術上講來，雖比不上錢引，但在發行制度上，有其重要性。上面有會子的名稱，有發行的機關，有金額(上面右邊的"大壹貫文省")，有賞格。僞造罪和賞格的辦法是北宋熙寧元年制定的，可能是王安石的主意。行在會子是南宋的主要紙幣，流通於兩浙、福建、江東和江西。

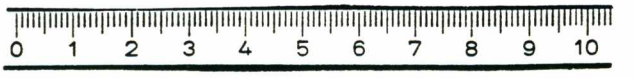

PLATE LIX. SOUTHERN SONG ACCOUNT NOTE

Although the design of the Account Note can not compare in artistic terms with that of the Cash Voucher, their system of issue is significant. The name Account Note appears on it, along with that of the issuing authority, the face value in hard money (on the right "Large One String Cash Reduced" *da yiguanwen sheng*), and the rules for earning rewards. The punishment for counterfeiting and the reward were fixed during Northern Song in xining 1 [1068], possibly being the idea of Wang Anshi. The Travelling Court Account Notes were Southern Song's main form of paper money, circulating in Liangzhe, Fujian, Jiangdong and Jiangxi.

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5.2 Money's Purchasing Power

1. The Value of Early Northern Song's Money

The three centuries of the Song witnessed few days of pure peace. Because its rulers emphasized literature and the arts, and disparaged military preparations, it was a weak period militarily, and Song regularly suffered oppression at the hands of the peoples of the north and west:

First there was the threat from the Western Xia [Tanguts] and the [Liao Dynasty] Khitan, followed by the attacks of the Jurched [Jin Dynasty], and finally the dynasty's extinction by the Mongol conquest.

Though there were always some literati engaged in chanting about flowers and singing of the moon, and so giving the impression of an age of profound peace, particularly during Northern Song this was a false picture. In actual fact society was not stable, and this instability was reflected in the circulation of money, in the oscillations in money's purchasing power.

In studying the value of Song money, there is one point that ought to be emphasized, and that is the localized character of changes, particularly during Northern Song. Because China's territory was broad and communications were not convenient, basically every dynasty's monetary system and changes in the value of its money were all localized, and conditions in various localities were not necessarily the same.

Such divergences became more severe after the Five Dynasties period. Though a unified nation in political terms, monetarily China remained divided into a great many independent units, almost like the situation during Spring-Autumn and Warring States times. A number of regions had their own currencies, particularly the Lianghuai and Sichuan, whose coins were not permitted to leave their frontiers, and which did not permit external coins to enter their frontiers.[1] Under these circumstances, a particular locality's monetary inflation might not have any influence on other places.

For example, because during the time of Emperor Taizong too many iron coins had been issued in Sichuan, a bolt of silk gauze cost 20,000 cash there. Under Emperor Zhenzong, in xianping 5 [997], 7th month, official salaries in cash were especially increased in Sichuan and Shaanxi.[2] From the perspective of the entire nation, however, the value of money remained stable.

During the reign of Zhenzong [998-1023], Sichan circulated both large and small iron coins.[3] Zhang Yong sold rice for 350 small iron cash per *dou*, and a century later there were still people praising his virtuous government.[4] Between the Huai and Cai Rivers wheat was 10 cash per *dou*, and a *hu* of non-glutinous rice was 200 per *hu*.[5]

During the first few decades of Northern Song, there were simultaneous attempts to achieve political unity and to regularize the chaotic monetary systems inherited from the Five Dynasties, as for example, by banning small coins adulterated with iron and tin, abolishing the iron coins of Southern Tang, banning the south's

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small coins and getting rid of the privately minted light coins adulterated with lead and tin in Henan.

However, Liu Jiyuan of Ten Kingdoms' Northern Han did not accept a bribe to surrender until taiping/xingguo 4 [979], 5th month, and within three months of that, war with the Khitan began. Hence these attempts enjoyed no great success. This

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[1] *Investigation of Literary Remains*, "Investigation of Coins, 2": "From the time of their pacification, the Guangnan and Jiangnan were allowed to use old coins, which were not to cross the borders of these circuits." "The iron coin areas, Sichuan, Shaanxi and Fuzhou, retained their old system. In kaibao 3 [970] it was ordered that an inspectorate of [i.e. mint for] iron coins be set up in Baizhangxian, Yazhou, and entrance of copper coins into Sichuan was forbidden. Later, joint circulation

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of copper coins was ordered, with one copper equal to ten iron coins."

[2] *Song History*, 6, "Annals of Emperor Zhenzong, 1."

[3] *Song History*, 7, "Annals of Emperor Zhenzong, 2": "In jingde 2 [1005], 2nd month, Jiazhou and Qiungzhou minted large iron coins." *Song History*, "Treatise on Food and Money," latter part, 2: "The [iron] coins minted in Jiazhou and Qiungzhou weighed 25 catties 8 ounces per string. Copper cash were used at a value of one equal to ten small iron cash. Later, because iron was heavily demanded, many were illicitly melted down to make utensils, and 25 catties had a value melted down of 2,000." Shi Wenying, *Pure Words from the Jade Jar*, 6: "Secretary Zhang Yong was again made magistrate of Yizhou. . . . At that time the bandit vanguard of Fang Qian and Ji Gang was crossing Gansu, and the people of Shu still worried about being attacked, and so large Jingde iron coins were newly minted in Jiazhou and Qiongzhou. Their benefit or harm had yet to be determined. Advice came from all sides, and the court pondered it."

[4] Dong [Wei?], *Relief of the People Book*, 3, "Zhang Yong's Charitable Sales."

[5] *Song History*, 7, "Annals of Emperor Zhenzong, 2," jingde 4, 12th month: "Abundant harvests in the various circuits. Between the Huai and Cai, wheat was 10 cash per *dou*, and non-glutinous rice was 200 per *hu*."

was particularly true of the iron coins of Sichuan and Shaanxi, which circulated as of old.

The main problem involving the value of money at the beginning of Northern Song involved iron coins, and that was mainly a question in Sichuan.

Sichuan had a long history of using iron coins. Not to speak of too remote events, Meng Chang of Latter Shu's Guangzheng Circulating Treasure represented the beginning of formal use of iron coins in Sichuan. From then on, Sichuan continued to use iron coins. Their use in Shaanxi and Hedong was the result of influence from Sichuan.

Latter Shu did not, however, produced very many iron coins, and so depreciation in their value did not occur. It was only when the number produced suddenly increased at the beginning of Song that the iron coins could no longer retain parity with bronze cash, and as a consequequence the bronze cash were all driven out of circulation, and Sichuan became a region using only iron coins.

We do not know the annual production of iron coins by Latter Shu, but by the beginning of Song, in Yizhou, Qiongzhou, Jiazhou and Meizhou (perhaps an error in my source for Yazhou) over 500,000 strings of iron coins were produced annually.[6] This quantity would be considered significant even for bronze cash. Iron coins were symbols of value, and the authorities originally wanted to have them circulate at parity with copper coins, as a kind of fiduciary currency. Since, however, limits on their quantity were not maintained, the exchange rate could not be maintained, and neither could their value.

The exchange ratio of iron with copper cash was originally one for one.[7] By qiande 4 it had fallen from 1.1:1 to 5:1.[8] During the taiping/xingguo period, it fell to 10:1,[9] and even as low as 14:1.[10] Probably the price of 20,000 cash per bolt of gauze silk belongs to this period. It is said that in chunhua 5 the authorities fixed a ratio of 10:1.[11]

Li Shun's uprising halted production at all the mints.[12] That was in chunhua 4 and 5 [993-4]. Although minting resumed after Li Shun's defeat, the quantity made steadily declined until, after dazhong/xiangfu 7 [1014], annual production was only 210,000 strings.[13] During the huangyou period production went back up to 270,000 strings,[14] but in jiayou 1 [1056] it was back down to a little over 100,000 strings.[15] In jiayou 4, minting was halted for ten years in Jiazhou and Qiongzhou, leaving only Xingzhou with its annual production of 30,000 strings.[16]

The value of iron coins probably did not fall further. During xining and yuanfeng [1068-86], minting of iron coins rose once more, but at the end of xining the quantity minted annually in Sichuan's Jiazhou, Qiongzhou and Xingzhou was only something over 236,000 strings, and during yuanfeng it was only some 139,000 strings, figures far short of the early Song level.

Hence, in yuanfeng 2 [1079] the copper-iron coin exchange ratio in Lizhou Circuit was from 1.5:1 to 2:1.[17] Because by that time Exchange Notes had become the main basis for making up for deficits in expenditures, iron coins were no longer an important instrument.

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[6] *Comprehensive Mirror for Illumination of the Prince, Long Draft, Continued*, 59, jingde 2, 2nd month, day gengshen: "Previous to this, Yizhou, Qiungzhou, Jiazhou and Meizhou annually produced over 500,000 strings of cash. From the time of Li Shun's rebellion, minting was abolished."

[7] Cao Xuequan, *Shu Broad Record*, 67, notes the entrance of Latter Shu iron coins into Chengdu. "The Daying Treasury often had iron coins mixed in at random with copper coins. Their workmanship was fine." The *Chengdu Record* contains a similar account. Cf. note 24 in chapter 4.2.2 above.

[8] *Shu Broad Record*, 67: "In qiande 4, the Prefect, Lord Lü Yuqing, and the Transport Commissioner, Lord Shen Yilun, memorialized on the selection of a plan for issuing copper coins in Shu territory. Iron coins were exchanging with copper ones at a rate of 1,100 for 1,000. Copper utensils would be sought out for minting into additional coins so as to increase the supply of copper coins in the market. But this plan failed in the execution. Prices increased, and iron coins became excessively cheap, reaching an exchange ratio of 5,000 iron for 1,000 copper coins."

[9] *Searches into a Multitude of Books*, latter collection, 61.

[10] *Shu Broad Record*, 67: "Taiping/xingguo 4 . . . At this time, the old coins had been exhausted, and there was trouble among the people. At times the northern guests were dealing bronze cash into Shu, with one of them exchanging for 14 iron coins. It even reached the point that several ancient tombs were being broken into for the few bronze cash they contained, and religious images were being illegally eliminated. The court investigated, and an edict ordered that, as of old, only iron coins need be used to make payments. Then people's hearts were set at rest."

[11] *Shu Broad Record*.

[12] Cf. note 6.

[13] *Song History*, "Treatise on Food and Money," latter part, 2, "Coins."

[14] *Song History*, "Treatise on Food and Money," latter part, 2, "Coins."

[15] *Comprehensive Mirror for Illumination of the Prince, Long Draft, Continued*, 183.

[16] *Song History*, "Treatise on Food and Money," latter part, 2, "Coins."

[17] *Song Collected Statutes Compiled Draft*, "Punishments:

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At the beginning of Song, the iron coins of Jianzhou in Fujian also underwent depreciation. Actually, Fujian only produced a total of 100,000 strings of iron coins.[18] This was during the taiping/xingguo period [976-984]. It was probably because the people of that area were not accustomed to the use of iron coins that their value could not be maintained. Prior to taiping/xingguo 8 [983], their price ratio to copper coins was 3:1,[19] and in jingde 2 [1005] the ratio had fallen to 10:1.[20]

Nevertheless the circulation of iron coins during Northern Song remained chaotic. Studies by earlier scholars were relatively limited, merely recording the exchange ratio between the various copper and iron coins, without organizing the material further, so that a reader could not tell if iron coins were becoming ever more expensive or ever cheaper.[21]

It is necessary to take the exchange ratios in a single area as the standard for making comparisons over time, since the ratios of different places were not necessarily the same. For example, during the zhidao [995-998] period, the ratio in Lizhou Circuit was 5:1, but it was 6:1 in Mianzhou Circuit, 8:1 in Yizhou, and 10:1 in Shaanxi.[22]

Even in the same region, different uses would have different ratios. For example, in Sichuan and Shaanxi at the beginning of xianping [993], for paying the land tax one iron coin was as good as one copper coin, but for the firewood-salary of clerks and soldiers, 5 iron cash had to replace 1 copper cash, and in trade 10 iron cash exchanged for 1 copper cash.[23]

Nevertheless, compared to the whole course of Song, the purchasing power of money during the first seven or eight decades of Northern Song was high. Particularly in the copper coin regions, everyone said that "prices were cheap" then.[24] Though these statements are only relative, since at the beginning of the dynasty society was at peace and the population was not yet large, nevertheless goods must really have been cheap.

During Emperor Taizu's kaibao 4 (971), because the price of rice had risen, it was fixed officially at 70 cash per *dou*.[25] In years of good harvest, rice was still cheap. Sima Guang once said that when Emperor Taizong was pacifying Hedong, rice was a little over 10 cash per *dou*.[26] That probably happended in taiping/xingguo 4 [979]. In duangong 2 [989], millet and wheat were 10 cash per *dou*.[27] In chunhua 2 [991], the Lingnan price of rice was only 4-5 cash per *dou*.[28] During the xianping years [993-1004] even in iron coin using Sichuan it only cost 36 cash per *dou*.[29] At the end of jingde 4 (1007-1008), in the Huai-Cai region, non-glutinous rice

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Penalties for Banditry," 3.3.

[18] *Song History*, "Treatise on Food and Money."

[19] *Song Collected Statutes Compiled Draft*, "Punishments: Penalties for Banditry," 3.2.

[20] *Searches into a Multitude of Books*, latter collection, 61.

[21] Hino Kaisaburo has written a rather deep study of the minting of iron and copper coins during Song. Cf. his "On the Development of Exchange Notes," *Shigakku* No. 45.3, and "The Quantity of Copper and Iron Coins Minted During Northern Song," *Shigakku*, No. 46.1. The section on Sichuan iron coin inscriptions in *Medieval Oriental History*, volume 3, chapter 3 provides only a general table of copper-iron coin exchange prices, from which it is difficult to derive a clue.

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[22] *Song History*, 293, "Biography of Zhang Yong."

[23] *Song History*, 309, "Biography of Zhang Zhi."

[24] *Song Collected Statutes Compiled Draft*, "Food and Money, 41": "During the jianlong era [960-963] of Emperor Taizu, grain was cheap in Hebei. Prices were raised through purchase of grain so as to benefit the poor." *Ibid.*, "Food and Money," 53: "An edict of Emperor Taizong's chunhua 3 [992], 6th month stated that there was a large harvest in the Capital Districts, making prices cheap." *Ibid.*, "Food and Money," 39, Emperor Zhenzong's dazhong/xiangfu 5 [1012], 6th month, 20th day: "The Emperor said to Wang Dan, 'The various circuits all memorialize abundant harvests. Prices are especially low in the districts of Jingdong.'" *Memorials on Government of Wenzheng Duke Fan*, first, "Reply to a Hand-Delivered Edict Discussing Ten Matters": "At the beginning of our August Dynasty, after distancing ourselves from the chaos of the Five Dynasties, the masses were weak, and for a time goods were cheap." Wang Yong, *Swallow Wing Bequeathed Plans Record*, 2: "At the state's beginning . . . goods prices were terribly cheap."

[25] *Song History*, 276, "Biography of Chen Congxin": "Now rice is expensive in the market. The official price is 70 cash per *dou*. The merchants are losing their profit. No one dares to go to the capital. Although the resident merchants have an abundance, they will not sell any. This makes rice still more expensive."

[26] *Song Collected Statutes Compiled Draft*, "Food and Money, 4." *Song History*, 336, "Biography of Sima Guang," makes it 10 cash per *dou*.

[27] *Comprehensive Mirror for Illumination of the Prince, Long Draft, Continued*, 30, duangong 2 [989], Summer, 4th month, Li Jue sent up the statement: "In recent years, millet and wheat have become cheap below the capital . . . with a *dou* worth 10 cash."

[28] *Song Collected Statutes Compiled Draft*, "Food and Money," 57, chunhua 2, 4th month, edict: "Granary rice under official management in the prefectures of Lingnan was previously sold every year for 4-5 cash per *dou*, which amounted to nothing at all."

[29] Fan Zhen, *Eastern Studio Record of Events*, 3: "When Secretary Zhang Yong was in Shu, a *dou* of rice was 36 cash."

was 200 cash per *hu*.[30] The following year, a *dou* of rice ranged from 7-8 to 30 cash.[31] At the end of dazhong/xiangfu 5 [1012], in Hedong a *hu* of rice sold for 100 cash.[32]

Even in qianxing 1 (1022), when Exchange Notes were already being issued, the price of grain in Jingxi fell to as low as 10 cash per *dou*.[33] There is a similar report for tiansheng 6 [1028].[34]

The most important episode of inflation during Northern Song was caused by the war with Western Xia's Yuan Hao. In Emperor Renzong's bao-
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yuan 2 [1039], 1st month, Yuan Hao requested the title of emperor, and in the 12th month, rose in rebellion along with the Northern Capital.

Northern Song had never really enjoyed any genuine peace, particularly along its frontiers, which were generally in a very tense state. In qianxing 1 [1022], 12th month, there were already reports saying that "merchant travelers report frequent difficulties involving provisions on the frontiers. Prices are shooting up, with bolts of cloth, gold and silver double their old prices, and food and fodder expensive everywhere."[35] In tiensheng 5 [1027], the price of gold rose to 1 string per ounce.[36] Many peasants were then being conscripted as soldiers, and not only was production thereby reduced, but natural disasters may also have increased in frequency.

As soon as the war with Western Xia broke out, the fiscal situation became even more difficult. Therefore, at the end of the following year (the beginning of 1041), a 10-cash coin was minted to aid in meeting frontier expenses.[37]

In qingli 1 [1041], 9th month, Yuan Hao conquered Fengzhou and Zhizhou, and as a consequence Hedong was ordered to mint large iron coins. In the 11th month, Jiangzhou, Raozhou and Chizhou were ordered to mint 3 million strings of iron cash to meet military needs in Shaanxi.[38]

In qingli 5 [1045], the Qingli Heavy Treasure 10-cash bronze and iron coins were minted.[39] The

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[30]Cf. note 5.

[31]*Song History*, 7, "Annals of Emperor Zhenzong," dazhong/xiangfu 1 [1008]: "The circuits say that at harvest time a *dou* of rice was 7-8 cash." *Comprehensive Mirror for Illumination of the Prince, Long Draft, Continued*, 69, dazhong/xiangfu 1, 7th month: "This month in Xiangzhou, Xuzhou, and in several prefectures in Jingnan Circuit, a *hu* of rice was 300 and a *dou* of wheat was 12 cash."

[32]*Song Collected Statutes Compiled Draft*, "Food and Money," 39, dazhong/xiangfu 5, 12th month, 12th day: "At this time, Hedong had an abundant harvest. A *hu* of rice was 100 cash."

[33]*Song Collected Statutes Compiled Draft*, "Food and Money," 39, qianxing 1, 11th month: "The Jingxi Transport Office says 'the price of grain is 10 cash per *dou*. It is feared that this is too cheap, and there will be injury done to agriculture. It is requested that the Finance Office at an early time buy grain in the market.'"

[34]*Song History*, 9, "Annals of Emperor Renzong," tiansheng 6, 11th month, day wuwu: "In Jingxi it is said that 'a *dou* of grain is 10 cash.'" Lu Shiyi, *Discussion of Reasons for Wealth*: "In the time of Emperor Renzong of Song, 10,000 households of navy households were established in the Jiangnan circuits. . . . As the years multiplied, a *dou* of rice reached 5 cash." Cf. *Mystical Observation Hall Collectanea*, "Record of the Events of Jiashen."

[35]*Song Collected Statutes Compiled Draft*, "Food and Money," 1.20.

[36]*Searches into a Multitude of Books*, latter collection, 62, "Mines and Smelters": "In tiansheng 5, to buy an ounce of gold required 1 string of cash."

[37]*Song History*, 10, "Annals of Emperor Renzong," kangding 1, 12th month, day wushen: "A 10-cash coin was minted to temporarily aid with frontier expenses." *Song Collected Statutes Compiled Draft*, "Food and Money," 11.6: "In kangding 1, because an insufficient amount could be moved to Shaanxi, the Garrison Fields Assistant Division Chief, Pi Zhongrong, advised increasing the output of the mints. Because of the edict to Jiangnan to mint large coins, Jiangzhou, Chizhou, Guozhou and Raozhou also minted small iron coins, all transported to the northwest region inside the passes." As only small iron coins which bear the kangding year period label exist, I do not know what coin the 10-cash coin referred to here might be.

[38]*Song History*, 11, "Annals of Emperor Renzong."

[39]*Song History*, 180, "Treatise on Food and Money." *Song Collected Statutes Compiled Draft*, "Food and Money," 11.6: "In qingli 1, 11th month, there was an edict to Jiangzhou, Raozhou and Chizhou to mint 3 million strings of iron coins to meet Shaanxi military expenses." *Comprehensive Mirror for the Illumination of the Prince, Long Draft, Continued*, 164, qingli 8, 6th
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month: "When military activities in Shaanxi first began, the amount moved there was insufficient. The magistrate of Shangzhou, Pi Zhongrong, at first recommended smelting copper at Qingshui, Guozhou, and at Red Cliff Mountain in Luonanxian, and to set up two inspectorates, the Foumin and Zhuyang, to mint coins. Then, the Chief Transport Commissioner of Shaanxi, Zhang Kui, and the magistrate of Yongxingjun, Fan Yong, asked that large coins be minted and circulated alongside the small coins. A large coin would be equal to ten of the small ones. They also asked that the iron coins amassed in Jinzhou be used to mint small coins.

"When Zhang Kui reached Hedong, he minted large iron coins in Jinzhou and Yizhou, which were also each equal to ten small ones. These were used to aid in meeting military expenses in the northwest. Unexpectedly, the Finance Office memorialized to request abolition of the minting of iron coins in Hedong, and

10-cash copper coin weighed less than 2 *qian*, which amounted to a weight reduction to one-fifth. Extra profit from minting the iron coin was still larger, particularly for the 10-cash iron coin. The cost of minting this coin was less than 10 percent of its face value.

The Song Dynasty made iron coins throughout its history, but not in large numbers, except for during the kangding and qingli periods [1040-49].[40] Because the value of iron coins then was very low, copper coins were hoarded,[41] or were melted down to be recast into inferior coins.[42] Naturally, prices increased.[43] Even small iron coins could be melted down and reminted, since the histories all mention Qingli small iron cash, and a large number of them seem to have been minted. Yet none of them have survived, while large iron coins are not hard to come by. If the histories are not in error, these small coins must have been melted down and recast into large coins. Minting of iron coins was halted in qingli 8 [1048].[44] The large copper coin was revalued to be worth 3-cash.[45]

The fall in the value of money then was not solely due to the depreciation of copper and iron coins. It was also a consequence of the use of paper notes. It was during the reign of Renzong that issue of Exchange Notes was nationalized. Though the amount of the issue was limited to about 1.25 million strings, because their sphere of circulation was

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that Shaanxi go back to getting the yellow copper of Yizhou's Zhujianling mountain range, and set up the Boji Inspectorate to mint large coins. As a consequence, the court ordered the minting of large copper coins in Jiangnan, and that Jiangzhou, Chizhou, Raozhou and Guozhou mint small iron coins, all to be forwarded to the northwest. The coins from these several prefectures were circulated intermixed.

"The large coin was about equal to three small bronze coins, and it was possible to mint a 10-cash large bronze coin, causing illicit coining to flourish among the people. Coin inscriptions were in great disorder. Prices leaped up. Both public and private interests suffered. Thereupon Zhang Kui again memorialized that Jinzhou, Yizhou and Shizhou and Weishengjun were daily minting small iron coins and keeping them solely for the use of Hedong. Since Hedong's iron cash were circulating, illicit coiners were obtaining profits of 60 percent. Money was lightly demanded and goods heavily demanded, and the troubles were as great as in Shaanxi."

[40]For the iron coins made during qingli in Jinzhou and Yizhou, cf. Ouyang Xiu, *Complete Works of Wenzhong Duke Ouyang*, 115, "Correspondence Requesting Abolition of Iron Coins." Based on the figures contained in this work, Hino Kaisaburo put together the following table. Cf. *Medieval Oriental History*, vol. 3, chapter 3:

Type	Place of Mfg	Quantity (1,000str)	Face Value	Mfg Cost	Profit	Profit Rate
10-csh	Jinzhou	28.8	288	17.8	270.2	15-fold
	Yizhou	16.0	160	6.4	153.6	24- "
1-cash	Jinzhou	114.5		46.0	68.5	1.5- "
	Yizhou	4.0		0.99	3.01	3- "

[41]Wang Gong, *Convenient Miscellaneous Record*: "In Shaanxi, each string of copper cash could be exchanged for 1 string 30 cash. Later, because the Ever Normal Granary officers of the prefectures did not issue copper coins, the other offices subsequently imitated them. The people spread the word that iron coins were no longer to be used, and every household hoarded copper coins, and used iron coins because they were lightly demanded. This caused the coins to be cheap and goods to become more expensive.

[42]Li Gou, "Strategies for Enriching the State," number 8: "This spring flows, spreads and is dispersed, linking those above with those below. If there is not enough for the state, then there is a surplus among the people. This is a necessary tendency. Now among the people there are families newly hoarding strings of coins. Without old coins being destroyed, new ones are minted daily in large numbers. The total must increase and cause harm. What is the reason for this? . . . It is because there are licentious people who are melting them down. These licentious people melt them down to make bad coins to spread through the markets. Bronze images and bronze utensils are spread through the temples and monasteries. . . . If one legal coin is melted down, perhaps four or five can be minted. Brought to market and exchanged, each can fetch what two or three coins would, thus yielding interest of several fold. Since the people hoard bad coins, they cannot be kept from using them. Where there is profit, no matter what rules and orders be set, there is no way for them to succeed. The state loses lawful coins, and the people obtain bad coins. Bad coins cannot in the end be employed by the state. That is why these [good] coins grow increasingly few." Cf. *Collected Works of Li Zhijiang*, 16.

[43]*Song History*, 320, "Biography of Wang Su": "Iron coins spread all through Shu, and their manufacture did not cease. The coins became increasingly light. Merchants did not go forth. Minting was ordered halted for ten years so as to control prices." Su Che, *Luan City Three Collections*, 6, "On Plans and Problems": "The Large Spring Value Ten circulated for only a decade. Goods were heavily demanded, and coins were lightly demanded. Private coining was as of old. Goods in general jumped in price. People suffered from this for a long time."

[44]*Song History*, 11, "Annals of Emperor Renzong," qingli 8, 7th month, day xinchou: "Minting of iron coins was halted."

[45]*Sea of Jade*, records an edict of qingli 8 making a large copper coin equal to three small ones.

narrow, and because some people made them privately, the tendency toward monetary depreciation was exacerbated.

Since there were very many counterfeit Exchange Notes, in qingli 7 [1047] the Transport Commissioner was thinking of abolishing them. The man then in charge of Exchange Notes, Sun Fu, said that both Exchange Notes and iron coins could be counterfeited, but that no one seriously proposed abolishing iron coins.[46]

When Wen Yanbo was magistrate of Yizhou in qingli 8 and 9 [1048-1049], he sent up a memorial in which he discussed how the Chengdu Exchange Note Authority obtained a very generous profit each year for its issues of Exchange Notes, because by then it no longer kept a reserve of ready cash.[47]

Therefore, not only were Exchange Notes not abolished, thought was given to using them more broadly. For example, in xining 2 [1069], the Regulations Office advocated circulating Exchange Notes in Hedong, though the Transport Office opposed this. Because of an insufficiency of ready cash in Shaanxi, Shen Qi asked that Exchange Notes be circulated there, but because there was opposition to doing so, this was not done.[48]

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To what degree did prices rise during this period? During tiansheng 4 [1026], rice cost from 70 to 100 full cash per *dou*.[49] As stated above, in tiansheng 6, the price of grain fell to 10 cash per *dou*. At the beginning of mingdao [1032], drought and grasshoppers between the Yangtze and Huai drove a *dou* of rice up to several hundred cash.[50] During qingli 3 [1043], in rice producing regions of the lower Yangtze, a *dou* of rice ranged from 60-70 full to 100 cash reduced.[51] It was probably still more expensive in the north. After qingli 8, a *dou* cost 700 in the localities of Hebei, and at times was as high as 1,000.[52] These prices may have been calculated in terms of iron coins.

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[46] *Searches into a Multitude of Books*, latter collection, 62, "Fiscal Applications: Mulberry Paper Money," quoting a funerary inscription.

[47] *Duke Wen Lu Collected Works*, 14: "The Exchange Notes employed by the Yizhou Exchange Note Authority yield a very generous annual profit for the public. The people have come to rely upon them, for they are easier to exchange in the market than iron cash. Now, because Qinzhou had brought in provisions and fodder, and on two occasions 600,000 strings had been paid out, there are no reserves of ready cash accumulated for backing the Exchange Notes. If one considers this deeply, during the next year or two, when the terms of the notes have expired, the customers will bring in Exchange Notes to the officials, and when there is no cash to redeem them, and requests to do so are blocked, the Exchange Note system will be spoiled, and both public and private interests will be defrauded. I humbly request that the court direct the Transport Office of this circuit to collect from its various offices the profits of some 30-50,000 strings per month, and pay them over to the Yizhou Exchange Note Authority, to serve as reserves for payment of holders of Exchange Notes. This would avoid corruption of the old system, and stop the defrauding of both the public and private interest."

[48] *Searches into a Multitude of Books*, latter collection, 62, "Mulberry Paper Money": "In xining 2, the Regulations Office said, 'Gao Zunyu has requested the establishment of an Exchange Note Authority. . . . Now, to transport iron coins in Hedong is laborious and wasteful. Exchange Notes ought to be circulated.' Later, the Transport Commissioner said, 'If Exchange Notes are circulated, merchants will be unwilling to bring in provisions and fodder. Not only will purchases on the frontiers be harmed, we also fear that salt and alum will not be sold.' Subsequently this was not done. Because the coins of Shaanxi were insufficient in number, Shen Qi asked that Exchange Notes be circulated. Later, Zhang Jingning went out as commissioner, and said that Exchange Notes could be circulated in Shu, but not in Shaanxi. He feared that people would lose their businesses, and would have nothing on which to depend for their livelihoods. This practice was abolished. Later, there was another plan for using notes, which harmed procurement on the frontier. Exchange Notes were circulated for two years, but again could not be kept up for lack of cash backing. With no profit from such a note scheme, it was once again given up."

[49] *Song Collected Statutes Compiled Draft*, "Food and Money," 39, tiansheng 4, intercalated 5th month, 2nd day: "The Financial Office said that in the four circuits of Jingnan, Hunan, Jiangnan and Huainan, rice was 70 to 100 full cash per *dou*."

[50] Liu Shang, *Gongshi Collection*, 51, "Reports on Previous Investigations of Yizhou Prefecture By His Lordship": "In mingdao 1, there was a great drought between the Yangtze and Huai, grasshoppers appeared, and were especially severe between Yangzhou and Chuzhou. . . . This year a *dou* of rice was several hundred cash."

[51] *Comprehensive Mirror for Illumination of the Prince, Long Draft, Continued*, 143, qingli 3, 9th month, day dingmao: "Now the rice of Jiang and Zhe is not less than 600-700 full cash per picul to 1 string reduced."

[52] *Eastern Studio Record of Events*: "For provisions and fodder imported into Hebei, ready cash was formerly used. After qingli 8, tea, salt, incense and medicine ready cash certificates were used on the frontiers. These certificates entered the towns at a discount, but when merchants did not get cash for them in a timely fashion, they traded in the market cheaply, and caused provisions to be sold at a high price per *hu*, and this raised prices in general. A *dou* of rice was 700, and even reached 1,000." *Song History*, 184, "Treatise on Food and Money: Tea," latter part: "In qingli 7 . . . the tea system had been spoiled for some years. The value of certificates in fodder and grain was probably to be reckoned at 80 percent. A *dou* of rice was 700, and even

During huangyou 2 [1050], there was a famine in Liangzhe, and grain was fetching 120 cash per *dou*.[53] In Mengzhou, which was not suffering from famine, the price of wheat at harvest time was 60 cash per *dou*. Later, when bought by the authorities, a *dou* ranged from 90 to 120 cash.[54] In general during the huangyou years, the price of rice in the southeast during times of abundant harvest was 50-60 or 80-90 cash per *dou*. In times of famine, it was 120-130 or 220-230 cash per *dou*.[55] There are also records of price increases in other goods.[56]

Some historians note that prior to xifeng [1068-1086], there were certain things assumed as a matter of course. For example, the classic price ratio of "a *dou* of rice for a catty of salt" probably goes back to this time. It was said that then a *dou* of rice and a catty of salt each cost 76 cash. Approximately the same rice-salt exchange rate held for high Tang as well. At that time salt cost 10 cash per *dou*, or 2 cash per catty. The cost of rice reached 20 cash per picul, so that 1 *dou* was also 2 cash. However, the Tang and Song *dou* were not identical. Therefore, the equation of a *dou* of rice and a catty of salt was not, in fact, the same for the two periods.

In zhihe 1 [1054], the Western Xia were overcome by the Khitan, with whom Song was then temporarily allied, and so the war came to an end. Minting of iron coins had already been temporarily halted, and the face value of the large copper coins had been changed. Minting of small copper coins was begun. Prices probably gradually leveled off. When the histories say that prior to xifeng a picul of rice was only 600-700,[57] they must be referring to this period.

Up to now, however, I have never seen a small Huangyou coin. The Zhihe coins were still rather light and small, and were crudely made. Moreover, there were still large coins. Even the Jiayou and Zhiping coins were not as fine as the prewar coins. Evidently all that was done then was to stop further

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as much as 1,000 cash."

[53]Wu Ceng, *Loose Record of the Ability to Change Studio*, 2, "Record of Fan, the Duke of Shu": "When Fan Wenzheng governed Hangzhou, there was famine in Liangzhe. [This was in huangyou 2. Cf. Shen Gua, *Mountain Stream Dream Jottings*, 11.] Grain prices spurted, with a *dou* fetching 120 cash."

[54]*Collected Works of Chen Xiang, Mister Guling*, 16, "Report of Magistrate of Heyangxian Requesting Abandonment of Harmonious Purchase of Wheat" [*Ibid.*, 26, "Reports of Yeh Zuxia, Mister Guling," states that in huangyou 3 he was magistrate of Heyangxian in Mengzhou.]: "I have observed that this prefecture each year abandons tens of thousands in harmonious purchase of wheat. Most is bought up after the deadline. For each *dou* the officials pay out no less than from 90 to 120 cash. This is 30 or 40 cash higher than the market price among the people at the time of the harvest. . . . A *dou* of wheat's normal market price at harvest time is only 60 cash."

[55]Li Gou, *Collected Works of Li Zhijiang*, 28, "Letter Sent to Pacificator Sun": "In huangyou 4, 11th month, 13th day . . . for the most part in the fertile areas of the southeast, though it was a famine year, there were places with good harvests. Recently, the various districts have made their own plans, and have retained surplus grain, not allowing it to go beyond their own borders. Yesterday I made some ten observations. One *dou* of rice was being sold for 50-60, or 80-90, or 120-130, or 220-230 in different places. Even though the sounds of dogs and cocks could be heard from one place to the other, a boat was not permitted to go up or down stream. This kept peasants in places where the price was cheap from gaining money, and people in places where it was expensive from obtaining food. This is no proper plan."

[56]*Song Collected Statutes Compiled Draft*, "Food and Money," 23, quoting Bao Cheng: "In places where military activity has begun, feathers, horns, lacquer, iron, pottery, wood, stone

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and lime are broadly exchanged. Grasping merchants take advantage of the times to take aim at profit, and connive in acts of fraud with the officials and clerks so as to drive prices up. A beam of wood for which the fixed price is 1,000, fetches a mat of salt. . ."

Memorials on Government of Wenzheng Duke Fan, first part, "Memorial for the Establishment of an Official Monopoly on the Annual Contribution of Miscellaneous Goods for Military Needs": "I observe that since military activity got under way, rates have been set for what is called harmonious purchase within the Empire of such goods as leather, horn, material for bows and arrows, spears, armor, lacquer and feathers, all of which come from the people. Most are not local products, and are hard to obtain. Since they are called military requirements, and their acquisition is backed by threats of punishment, prices have gone up ten fold, and the clerks commit abuses on a hundred fronts." *Song History*, 184, "Treatise on Food and Money," edict of huangyou 2: "Recently the food and mony regulations have been spoiled, and fodder and grain prices have gone up several fold."

Comprehensive Mirror for Illumination of the Prince, Long Draft, Continued, 158, qingli 6, 5th month, day wuzi: "[In Sichuan] at first the salt gabelle discounted silver and silk by 50 percent. One catty of salt was 20-30 in coin. One ounce of silver or one bolt of heavy silk were from 900 to 1200 cash. Later, an edict had the gabelle discounted to metal and cloth, price varying over time. Thereupon the Xinzhou Transport Office requested an increase in the price of silver and heavy silk. The Finance Office was advised that though the price in silver and heavy silk had reached 3,000, neither could the price of salt be compared to its original level, a catty now being sold for 140 cash."

[57]*Song History*, 182, "Treatise on Food and Money: Salt," middle part.

increases in prices, which was nothing much to brag about.

2. *Value of Money During the Xining and Yuanfeng Years*

Northern Song gave rise to China's second high tide of monetary circulation. The peak of this high tide occurred during the xining and yuanfeng year periods [1068-1086].

Because of the dearth of coins from late Tang through Five Dynasties, the share of the barter sector of the economy greatly enlarged. Even during the first few decades of Northern Song, the barter economy continued to flourish. We can see this from the official salary system. During the jiayou period [1056-1064], the proportion of official salaries paid in goods ranged from 7 or 8 percent to over 50 percent.

The quantity of coins shot up during yuanfeng, and in parallel with this the proportion of official incomes paid in money diminished. Various ranks' payments in cash varied from something over 30 percent to something over 40 percent. The rest was paid in goods. Nevertheless, the quantity of coins minted grew ever larger.

Putting aside the qingli period [1041-49], during which there was an untoward superficial increase caused by the minting of 10-cash coins, the quantity minted annually steadily increased, reaching its highest point during the xining and yuanfeng years.

During xining, quite a few additional coin minting inspectorates were added. In xining 4 [1071], mints for copper coins were established in Jingzhaofu and Huazhou; in xining 7, Henanfu set up the Foucai Inspectorate, Weizhou set up the Liyang Inspectorate, Liangzhe's Jiandefu set up the Shenquan Inspectorate, and Jinghu's Ezhou set up the Baoquan Inspectorate. In xining 8, Jingzhaofu and Huazhou each established iron coin inspectorates and Huainan's Anqingfu set up the Tong'an Inspectorate. In xining 9, Shaanxi's Minzhou established the Taoshan iron coin Inspectorate.

During the tianbao period [742-756] of Tang, annual coin production was only 320,000 to 330,000 strings, amounting to only 6 or 7 coins per capita. By early Northern Song, a ten-fold increase had occurred. Some say that during the kaiyuan

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period [713-742] annual coin production was a full million, but this was only one-fifth the number turned out during Northern Song's yuanfeng period. Iron coins and paper money are not included.

TABLE OF NORTHERN SONG COPPER COIN PRODUCTION

Year	Annual Quantity	Coins Per Cap.	Source
taiping/ xingguo 6 (981)	500,000 strgs	---	Song History
Mid-zhidao (996)	800,000 "	40 cash	" "
xianping 3 (1000)	1,250,000 "	---	Song Coll. Stat.
Mid-jingde (1006)	1,830,000 "	90 cash	Song History
dazhong/ xiangfu9(1016)	1,250,000 "	58 "	Sea of Jade
Late tianxi (1021)	1,050,000 "	53 "	Song History
During tian-sheng (1030)	1,000,000+ "	---	Searches Mult.Bks
Drng qingli (1045)	1,000,000 "	131 c	MtnStrm DrmJtgs
Drng huang-you (1050)	1,460,000 "	---	Sea of Jade
During zhi-ping (1066)	1,700,000 "	58 c	Song History
Late xi'-ning (1077)	3,730,000 "	121 "	Song Coll.Stat.
During yuan-feng (1080)	5,060,000 "	203 "	Inves.Lit.Rem.
chongning 5 (1106)	2,894,000 "	---	Sea of Jade
daguan (1107-1111)	2,900,000 "	66 c	Song History
xuanhe 2 (1120)	c.3,000,000 "	---	Song History

The total quantity of money in circulation then is hard to calculate,[1] but if we reckon in terms of the

[1]For the quantity produced during taiping/xingguo, cf. *Song History*, 265, "Biography of Zhang Qixian." For the zhidao, jingde and tianxi quantities, cf. *Song History*, "Treatise on Food and Money," latter part, 2. For xianping, cf. *Song Collected Statutes Compiled Draft*, "Food and Money: Coin Regulations," 11.1. These only give the quantity minted in Jiangzhou, Chizhou, Raozhou and Jianzhou; the quantity minted in the north is not included. For tiansheng cf. *Searches into a Multitude of Books*, latter collection, 60, "Types of Copper Coins," quoting *Lei Yuan*. For the qingli quantities cf. *Collectanea of Ancient and Modern Books and Illustrations*, quoting *Mountain Stream*

annual production of coins, then up to the end of yuanfeng times [1086], Northern Song had minted some 140 or 150 million strings of copper coins. Undoubtedly there were also private coins, and if we include them, the total would approach 200 million strings. There must also have been several tens of millions of strings of iron coins, and a small number of Exchange Notes. There were also undoubtedly a large number of old coins from previous dynasties still in circulation, particularly Inaugural coins, which probably constituted between one-fifth and one-fourth of all copper coins.[2]

Therefore, the total quantity of coins in circulation must have been 250 to 260 million strings.

The large quantity of money was in part the consequence of the development of production and commerce. It also in part probably reflected the policies of the authorities. The sharp increase in the quantity of coins minted during the xining and yuanfeng periods in particular could have been specifically intended. It could have been a result of Wang Anshi's policies, or have been influenced by his policies.

Wang Anshi sought to enrich the state and strengthen the armies, and was a politician in the mold of the Legalist Shang Yang. His

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policies did not make Northern Song into so strong an empire as Han or Tang because he faced very great obstructions. As early as the huangyou period [1049-1054] he had said that the fiscal difficulties of the age were results of bad management.

He advocated raising official salaries, and said this need not harm the budget.[3] Naturally, this could only mean minting more coins and increasing taxes. His policies required increasing the power of the central government, and assuring that government personnel be loyal to their duties. After he took power, these things were all done: Coin minting, tax collecting and official salaries were all greatly increased.

By no means were all of the coins he minted issued. In fact, the majority of them were either kept in the treasury or collected in taxes and put back there. This was because most official salaries were still paid in kind. He undoubtedly believed that these coins were the nation's reserve force. Nevertheless, the goals he sought were not achieved.

The takeoff-like development of Northern Song's monetary economy had no great effect in military affairs, because money was not put into military preparations, but was instead used to maintain a luxurious way of life for the official class, and hence produced a large effect only on the cultural side.

This money virtually brought into being a literary and artistic renascence. Historiography, literature, philosophy, fine arts and science and technology all displayed a rare vivacity, and made striking accomplishments. These accomplishments exceeded those of any other period in Chinese history except for those of the Warring States period.

These accomplishments also generally correspond in time to the years of greatest production of coins, and we cannot say this is entirely coincidental. In principle, it is only after the transformation of a natural economy to a monetary economy that cultural development can be promoted. To be sure, an increase in the quantity of money alone is insufficient to encourage cultural development, but if the authorities have the intelligence to make use of money to develop culture, to use it to encourage those engaged in cultural tasks, then culture can feel the encouraging effects of money's expansion.

Dream Jottings.

For the xining figures cf. *Song Collected Statutes Compiled Draft*, which does not give specific years. From the history of the establishment of the various mints, however, we can tell that these figures pertain to late xining. For the yuanfeng figures, cf. *Investigation of Literary Remains*. In addition there were 1,139,234 strings of iron coins. The *Secretariat Reference* gives the figure as 889,234 strings. *Searches into a Multitude of Books*, latter collection, 60, "Types of Copper Coins," quotes the *Lei Yuan* as saying that after Emperor Shenzong's xining, annual production of copper coins was more than 6 million strings. This figure probably includes iron coins as well.

For the chongning figures, cf. *Sea of Jade*, 180, "Coins." For the total daguan figures, cf. *Song History*, "Treatise on Food and Money." These two sets of figures could have been the same statistics entered into the records. *Song Collected Statutes Compiled Draft*, "Food and Money," 11.1 says that annual coin production during daguan was 2,890,400 strings from the ten mints of the four southern circuits, and does not include the north's contribution. The population figures are based on *Song Collected Statutes Compiled Draft*, *Song History*, *Universal Record*, *Investigation of Literary Remains* and *Universal Statutes Continued*. I have taken the figures for the years closest to those in the table.

[2]A hoard of old coins was dug up in April 1940 inside Dingxian, Hebei Province. The latest in date were tiansheng coins, so they must have been buried during the tiansheng period. They included 4 Five-grainers, 1 Monetary-spring, 1 Sui Five-grainer, 389 Inaugurals, 11 Qianyuan, 11 Huichang Inaugurals, 1 Tianhan, 4 Zhouyuan, 4 Tang State, 23 Southern Tang Inaugurals, 24 Song Originals, 81 Taipings, 58 Chunhua, 145 Zhidao, 138 Xianping, 153 Jingde, 247 Xiangfu Original Treasures, 87 Xiangfu Circulating Treasures, 58 Tianxi and 1 Tiansheng. There was a total of 1,441 coins. Cf. "Report on Excavation of Ancient Coins in Hebei Province," *Kahei*, No. 257, p. 1.

[3]Wang Jiefu, *Letters to Emperor Renzong Discussing*

In modern times, some economists suppose that the quantity of money is of no relevance at all, and that increases or decreases in the quantity of money are of no importance. They say that if the quantity of money increases ten fold, then all prices and wages will also increase ten fold, so that no one will be able to gain any extra advantage. The same sort of thing will happen if the quantity of money is reduced.[4]

This is a mechanistic view. First of all, neither prices nor wages can rise or fall exactly in parallel with rises or falls in the quantity of money. Second, these economists view the circumstances of society as static, supposing that change is the exception, and repose the norm. They do not realize that circumstances are eternally changing, and that things can never be at rest. Changes in the quantity of money cannot appear immediately or to the same degree in each sector or in the income of each individual. Each increase must be the occasion for society's
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purchasing power to be reallocated once more.

Just to take official salaries and wages as examples, whosoever's income increases most or earliest has the advantage and receives a stimulus. The Northern Song government threw most of the money into the hands of the meritocratic class. This amounted to stimulating this class and thus encouraging its culture.

Northern Song's monetary system had obvious localistic characteristics, and that these did not block this cultural high tide would appear to be hard to explain. Moreover, ancient Greece and Warring States era China operated under similar circumstances.

I have two explanations for this seeming paradox. The first is that during Northern Song the different individual monetary regions each had relatively stable monetary systems. This was especially so for the important copper coin region, where no extended period of weight reduction ever took place. This was the region which served as the foundation for Northern Song culture.

The same sort of argument holds for ancient Greece and Warring States era China. A stable monetary system is not in itself sufficient to bring forth a high tide of culture, but at least it does not constitute an obstacle to one.

The second explanation is that silver and heavy silk could pass between the otherwise separate monetary regions. These two commodities served as interregional media of payment. Silver in particular could be exchanged for the local coins anywhere. Warring States era gold also played this sort of role. Therefore, this period's localism was a kind of open door localism rather than a closed off localism. If it had been of the latter type, then the isolation of its regions could have blocked the flow of goods and the development of culture.

Did the great increase in the quantity of coins influence prices?

Prices were not greatly affected during xining and yuanfeng because, as was reported at the time, there were frequent abundant harvests.[5] In xining 2

Affairs.

[4]Lyman J. Gage, "The Sufficiency of Our Present Currency System," *Sound Currency*, vol. X (1903), pp. 61-63. The Frenchman Charles Gide also says that the quantity of money is irrelevant. If the quantity is large, then each unit's purchasing power is reduced. If the quantity is small, then each unit's purchasing power is increased. Cf. his *Principles of Political Economy*. Both of these are quoted by Norman Angell, *The Story of Money*, p. 128, who evidently agrees with them. They do not realize that
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the importance of such increases or decreases in the quantity of money occurs during the course of the change, and not after the influence of the increase or decrease has been extinguished, just as the influence of throwing a rock into a pond occurs at the time the wave induced thereby is present, and not after the pond has returned to its peaceful state. Actually, even this is not an apt analogy, since there can be no time when an economy and society are absolutely at rest. Rocks are constantly being thrown into the water, and the weights of the rocks vary, as do their number, direction and angle of fall. [Peng here quite correctly uses Austrian School monetary doctrine to correct these classsical economists. Two points might also be added: First, an increase in the quantity of money may be useful if it brings the total supply up to the threshold of adequacy for the number of exchanges society wishes to make. Second, as Peng notices a little further along, who gets hit by the rock –i.e. who gets the money first-- also counts for a lot. If, as Peng argues, culture-building literati get the money first, you get the cultural glories of Song. If investment-making businessmen get the new money first, as is the case since fractional-reserve banks and central banks began playing large roles in economic life, you get the business cycle. EHK]

[5]*Comprehensive Mirror for Illumination of the Prince, Long Draft, Continued*, 228, xining 4, 12th month, day xinyou, petition sent up: "The Hebei Convenient Purchase Office has greatly decreased expenditures for military provisions. In this year of abundance, the degree to which prices have fallen is really pitiable." *Ibid.*, 248, xining 6, 12th month, wuyin, Chen Shu said: "In xining 5, there were large harvests in Su-Hu. The price of rice was just half the level in Huainan." *Ibid.*, 278, xining 9, 10th month, wuzi, Pi Gongpi said: "Exceedingly abundant harvest enjoyed in this circuit this year, and the Ever Normal Granary is accumulating many coins." *Song Collected Statutes Compiled Draft*, "Food and Money," 39, xining 10, 11th month, 15th day, the Financial Office said: "This year in Shaanxi the autumn

(1069), though the cost of rice in the capital districts was 100 cash per *dou*, in the outer regions it was only 40.[6] North of the Yellow River, it was 70 or 80 cash.[7]

In xining 3, there was a drought in Shaanxi, and the following year a *dou* ran to 100 cash full,[8] though old rice was 75 cash per *dou*.[9] In xining 5 it was 80 cash.[10] In xining 6, the price in the capital, Bianjing, ranged from 75 to 105 cash.[11] In xining 7, it ranged from 85 to 150 cash.[12] In xining 8, it ranged from 80 to 100.[13] In rice producing areas, a *dou* was only 50 cash.[14] In yuanfeng 2, a *dou* of rice sold for 20 cash in rural areas.[15] In yuanfeng 7, the price of dryfield grain was only 30 in Jingxi,[16]

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harvest was abundant, and goods became cheap."

Comprehensive Mirror for Illumination of the Prince, Long Draft, Continued, 292, yuanfeng 1, 9th month, bingxu, Xu Xi said: "In Shaanxi Circuit, to the very edge of its frontiers there have been extraordinarily abundant harvests. Goods have become cheap." *Ibid.*, 300, yuanfeng 2, 10th month, xinchou, Wu Yong said: "There have been abundant harvests in successive years in the Huai and Zhe circuits. Grain is cheap." *Ibid.*, 307, yuanfeng 3, 8th month, yimao, the Court of Agricultural Supervision said: "Abundant harvest this year in the border circuits. Prices extremely cheap." *Ibid.*, 337, yuanfeng 5, 7th month, dingmao, the Haidong Transport Office said: "The harvest has been quite abundant; food and fodder are cheap." *Ibid.*, 338, yuanfeng 6, 8th month, dinghai, Li Liang said: "This year along the borders, the Autumn harvest was twice normal." *Ibid.*, 402, yuanyou 2, 6th month, renchen, the Board of Revenue said: "Within the prefectures of the circuits of Huainan, Hebei, Jingdong and Jingxi, this year the summer wheat harvest was abundant, and grain prices were terribly low." *Ibid.*, 429, yuanyou 4, 6th month, guihai, Fu Raoyu said: "In my humble view, the harvest of silkworms and dryfield grain this year is very great in most areas, and their prices will in consequence fall."

[6]*Song History*, 175, "Treatise on Food and Money: Harmonious Purchase," xining 2, Wang Gui memorialized: "In the outer commanderies it fetched 40 cash. To get a *dou* of rice in the capital districts, since there is now a cash shortage there, the granaries must pay out 100 cash. This is quite untoward."

[7]*Song History*, 176, "Treatise on Food and Money: Ever Normal and Righteous Granaries," xining 3: "Last year there were abundant harvests north of the Yellow River. A *dou* of rice was only 70 or 80 cash."

[8]*Collected Works of Guowenzheng Duke Wen*, 43, "Request to Not Add Garrison Fields Horses": "Last year [xining 3] Shaanxi endured a Summer drought. At the beginning of Autumn, there was abundant rain, and none of the five grains ripened. . . . Now, a *dou* of white rice costs 100 cash full."

[9]*Collected Works of Guowenzheng Duke Wen*, 44, "Memorial Petitioning a Request to Not Use Rice to Pay for Green Sprouts Cash": "Last Summer and Autumn, the five grains were abundant in some places, and meager in others. Grain prices are hard to predict. Now, old white rice is just 75 cash per *dou* in ready cash."

[10]Jojin, *San Tendai gotai sanku*, 1, (Complete Works of Japanese Buddhism), xining 5, 5th month, 7th day, in Shaoxingfu: "it took 400 cash to buy 5 *dou* of rice."

[11]*Collected Works of Mr. Xitang*, 1, "Opening the Granaries to Sale of Rice," xining 6: "Since the 10th of the 3rd month I had heard that the market authorities were buying rice. From the 11th on, I heard that the price was daily increasing, from 85 cash per *dou* to 105 on the 25th. In response to an order of the 27th of the 3rd month, the capital has sent officials to the various centers to sell rice. On that day, the price suddenly fell. By the 30th of the 3rd month, in the market rice cost 75 cash."

The Fan Clan's Rules for Righteousness Continued, xining 6, 6th month: "Five piculs of coarse rice to be provided per month for the various professors (if the price of rice reaches more than 1 string per picul, then only 1 string of cash is to be paid in lieu of each picul)."

[12]*Comprehensive Mirror for Illumination of the Prince, Long Draft, Continued*, 251, xining 7, 3rd month, jiazi: "At this time a *dou* of rice was 150. An edict to the Court of Agricultural Supervision called for Ever Normal Granary rice to the amount of 320,000 *hu*, and Finance Office rice to the amount of 1.9 million *hu* to be used to level the price down to 100 cash. By this time it had gone down 10 cash due to the official sales." *Ibid.*, 252, xining 7, 4th month, yihai: "Another edict to the Finance Office was issued because a picul of high grade non-glutinous rice was

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1,000 cash, . . . and middle grade was 85 cash per *dou*."

[13]*Ibid.*, 265, quoting *Lü Huiqing's Daily Record*, xining 8, 9th month, 16th day: "At first rice was only being sold for 80 in the capital. The Court of Agricultural Supervision sold rice for 100." *Song History*, 15, "Annals of Emperor Shenzong," xining 8, 8th month: "There was an edict to the Transport office to secure the price of rice in Huainan, Jiangdong and Liangzhe. No less than 1 million piculs of tax rice was provided to the people at a low price of not less than 80 cash per *dou*.

[14]*Comprehensive Mirror for Illumination of the Prince, Long Draft, Continued*, 267, xining 8, 8th month, Lü Huiqing's reply to Emperor Shenzong's question: "In Suzhou we all have fields which have been acquired for 1 string pledged per *mu*. The annual income from these is 4 to 5 *dou* of rice, but there is often a deficiency, and there might be only one harvest in two years. Then better fields yield 3 *dou* of rice. With a *dou* selling for 50 cash, that is only 150 cash."

[15]Jing Jin, *Outline of the Collected Works of Dongpo*, 45, "Reply to Qin Taixiu": "In districts outside [Huangzhou], a *dou* of rice is 20. . . . Fish and crab fetch no price in cash." (In yuanfeng 2, Su Shi was dismissed to the sinecure of Deputy Militia Commandant of Huangzhou.)

[16]*Comprehensive Mirror for Illumination of the Prince, Long Draft, Continued*, 348, yuanfeng 7, 8th month, wuchen, Sai Xuchen said: "I have heard that in Jingxi the price of dryfield

and 40 in Shaanxi.[17]

During the yuanyou period, prices continued very low. In yuanyou 1 (1086), a *dou* of rice was 40 to 50 cash, and at its lowest only 30 or 20 cash.[18] In yuanyou 4, there was flood and drought in Zhexi, and in Hangzhou a *dou* jumped from 60 cash full to 95 cash full. Because the authorities generally reduced tax rates, the following year it fell back to 60 to 70 cash.[19] In yuanyou 5, there was famine in the lake district between Suzhou and Hangzhou. In Suzhou the price jumped from 67 cash full per *dou* to 95 cash full. In Zhexi it jumped to 100 cash full.[20]

In yuanyou 6, in Huainan's

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Suzhou and Haozhou there was damage from natural disasters, and a *dou* jumped to 77 cash, 70 cash in Jiangdong.[21] In Sichuan during the yuanyou period, rice cost 60 to 70 cash per *dou*[22] or 70 to 80 cash.[23]

Fundamentally, what do these prices signify? Were they low goods prices? Or were they high goods prices? They are lower than the qingli and huangyou prices, but higher than prices during the first few decades of Northern Song. Some contemporaries praised them, but some complained bitterly.

Those who praised them were those possessing an abundance of goods, the people whom Wang Anshi described with such phrases as "water fills their irrigation ponds, grain fills their baskets. Reckless they waste greens and fruits, but more fills their hands;" or "dew accumulates in mountains, of which a hundred kinds come in; fishing poles are rich with loaches;" or "every family's dew accumulates like mounds and hills; yellow hair sighs to see what is not."[24]

Those who complained were those with things they could not sell, the so-called "eastern families with rice grains as white as silver; the western families with paddy rice as big as drums; three times over they bring it into the market, and then carry it back again; anxiously they reduce their prices, but there are no buyers."[25] Su Shi said there were even people who worshipped in the temples day and night, hoping for a famine.[26]

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grain is only 30 cash."

[17] *Collected Works of Guowenzheng Duke Wen*, 44, "Memorial Petitioning that Rice Not Be Discounted for Green Sprouts Cash."

[18] *Comprehensive Mirror for Illumination of the Prince, Long Draft, Continued*, 365, yuanyou 1, 2nd month, yichou: "In normal times, a *dou* was worth only 40 or 50 cash, and at the extreme, was 30 or 20 cash." *Song Collected Statutes Compiled Draft*, "Food and Money: Labor Service Avoidance Cash," 13.4, records the same information for grain prices in general, but perhaps this is also what Sima Guang meant, and he just used rice as a specific example.

[19] *Comprehensive Mirror for Illumination of the Prince, Long Draft, Continued*, 451, yuanyou 5, 11th month: "Last year in several commanderies of Zhexi, drought followed floods. . . . In Hangzhou, the price of rice rose to 80-90 per *dou*." Also, "this office held investigations during the 8th and 9th months. The market price of rice in Hangzhou was 60 cash full per *dou*. By the 11th month, it had risen to 95 cash full. Because of this jump in prices, the court ordered the Transport Office to reduce the amount of grain paid in by one-third, and at that point the cost of rice fell. . . . Now, rice coming into the market is 75 cash full."

[20] *Ibid.*: "We see now that the price of rice is daily going up in Suzhou, Huzhou, Hangzhou and Xiuzhou. In Hangzhou . . . a *dou* is no less than 67 to 70 cash full." In day wuyin "according to reports from Suzhou, rice is already up to 95 cash full in the market." 11th month: "In the 7th month [in Zhexi], a *dou* had reached 100 cash with a full hundred."

[21] *Op. cit.*, 456, yuanyou 6, 3rd month, yiyou.

[22] *Loyal and Severe Collection*, 5, "Memorial Requesting the Chengdu Provisions Office to Discount Tax Rice": "I have heard that in Chengdu Circuit . . . rice sells among the people for 60-70 cash."

[23] *Purity and Virtue Collection*, 4, "Ten Memorials in Reply To Messengers Received": "In Shu in recent years grain has been extremely cheap. . . . A picul of rice is worth 70-80 cash."

[24] Wang Anshi's "Five Stanza Song of Yuanfeng":

Water fills their irrigation ponds, grain fills their baskets,
Reckless they waste greens and fruits, but more fills their hands;
Spirit groves everywhere sound with flutes and drums,
Together they compete in yuanfeng's first Autumn.
Dew accumulates in mountains, of which a hundred kinds come in,
Fishing poles are rich with loaches;
Healthy and pleased, they dream on, out of touch with reality,
They can't they see yuanfeng's second Autumn.
In lakes and seas the yuanfeng harvests ascend,
Weeds grow in the dark ditches;
Every family's dew accumulates like mounds and hills,
Yellow hair sighs to see what is not.
My song goes ahead to the grove,
It wavers with the fertile sounds of abundant harvests;
I await on the Jade Steps to learn the Imperial Power,
In my song at times there is the spirit of Yao.
In the midst of the sounds of the suckling pigs and chickens,
The evening grove shimmers and leaves fall on the southern hills;
In abundant years everywhere people are well,
They go and come as the please.

[25] Lü Nangong, *Irrigated Garden Collection*, 4, "Sent From the Mountains Proclaiming Virtue to the District Magistrate."

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These two attitudes represent differing points of view. Superficially, those who praise the low prices are holding the perspective of the consumer. Those who complain are taking the position of the producer. A fall in prices was a blow to artisans and peasants, who are producers.[27]

And yet, abundant harvests must after all be praised. Those people who were praying for famine were mostly landlords. They hoped that other people would starve while they themselves continued to enjoy rich incomes by taking advantage of high prices to sell to the people who were starving. Theirs was a psychology of deriving joy from the misfortunes of others. We can only criticize the government of those times for not putting forth policies to profitably use the surplus of goods.

To sum up, no matter how antagonistic they were, these two positions show that people then realized that goods were cheap, even too cheap.

Given the repeated good harvests and low rice prices, why was the price even as high as it was? Why were there not prices as low as during Han and Tang? The answer to this must be sought on the monetary side. In other words, this was the result of a fall in the value of money because its quantity had greatly increased.

First of all, the rate of production of copper rose. As copper production increased, its price fell, and this influenced the purchasing power of copper cash. During the most flourishig period of Tang, annual coin production was at most something over 300,000 strings. During the xining and yuanfeng periods [1068-1086] of Northern Song, a rate twenty times this was achieved. During the reign of Emperor Yuan of Western Han [48-32 B.C.], the wealth of imperial consort families rarely was as much as 10 million cash, but during Northern Song households of middle standing might have this much.[28]

Second, there were regions which circulated large numbers of iron coins, and iron coins' purchasing power was still lower. In addition, the Exchange Notes of Sichuan were also depreciated. Beginning from xining 5 [1072], two terms' worth of notes were circulated simultaneously, which represented a doubling of their number to a total of 2.5 million strings' worth. Their normal value could no longer be retained, and each paper string was only worth something over 900 cash.[29] Because of the fall in the value of money,

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it was natural for prices to increase.

The quantity of coins minted by Northern Song was twenty times that turned out during high Tang, but the number and size of good harvests did not exceed the levels for high Tang.

Even by the time of Emperor Renzong, the area of land under cultivation was still far short of the level achieved by high Tang. During the kaiyuan period of Tang [713-742], the total number of households in the country was over 8 million, and the amount of land in cultivation was over 14.3 million *qing*. During the reign of the Song emperor Renzong, the total number of households was 7.3 million, and the land under cultivation totaled only 2.15 million *qing*.[30]

Though the amount of land under cultivation greatly increased during xining and yuanfeng,[31]

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[26] *Investigation of Literary Remains*, 14, yuanyou 8, Su Shi send up word: "When I went to Huangzhou, I personally observed that when there were good harvests year after year, and the peasants' carts were lined up axle to axle bringing rice into the market, they did not even get salt or wine money, and families which held grain prayed day and night in the temples for a famine." Zheng Xia, *Collected Works of Mr. Xitang*, 6, "Public Letter Sent to Wang Jing": "As for the limits to what is collected, . . . if it is sold cheaply in the market, the profit was 100 percent, but now 50 or 60 percent remains unsold. It cannot even be used as security for loans. Some have even had to give up their clothing as security for loans."

[27] Huang Shang, *Yan Mountain Collection*, 46, "Coins Heavily Demanded and Goods Lightly Demanded": "When coins are heavily demanded and goods are lightly demanded, in the realms of grain and cloth, harm is done to peasants; in the realm of utensils and mechanical contrivances, harm is done to artisans. . . . Only artisans and peasants alone endure the bad results." [This does not take into account the terms of trade factor. If the prices a group pays fall faster than the prices it receives, it is improving its situation. EHK]

[28] *Investigation of Literary Remains*, "Investigation of Coins," quoting Mr. Ye of Shilin.

[29] *Song History*, 181, "Treatise on Food and Money," latter part, 3, xining 5: "Having two terms of Exchange Notes now began. At this time the supply of Exchange Notes was great, and the number of coins was insufficient, which made prices too cheap." Lü Tao, *Purity and Virtue Collection*, 1, xining 10, memorial of petition: "In the prefecture [Pengzhou] the actual value now of one of the 27th term of Exchange Notes when sold is 960. The Tea Office redeems them for 1-string. Notes of the 26th term sell for 940. The Tea Office managers redeem them for 960." Su Che, *Luan City Collection*, 36, yuanyou 1, memorial: "In former days the people of Shu profited from the lightness and convenience of Exchange Notes. There were instances of a 1-string note trading for 1-string and 100 cash. In recent years they have only been selling for something over 900."

[30] *Song History*, 317, "Biography of Qian Yanyuan."

[31] *Song Collected Statutes Compiled Draft*, "Food and Money," 70, zhenghe 3, 9th month, 28th day, Wang Shou said:

there is no way to prove that the total area exceeded that of high Tang. Why then were not prices during xining and yuanfeng several dozen times higher than those of High Tang? We may adduce a number of reasons for why this was not the case.

First, the quantities of coins reported minted by the histories cannot represent the actual supply of currency during these periods or the quantity in circulation. The figures in the texts are merely official figures, and do not include statistics for private coining. During high Tang, private coining was extraordinarily virulent, and indeed was a necessity, since there were too few official coins. That is why when the government withdrew bad coins, merchants and people felt inconvenienced.

During Northern Song, aside from the period of war with Western Xia, private coining was not a serious problem. Even during the war with Western Xia, it seems not to have been as rampant as during Tang. During the xining and yuanfeng years, the officials minted so many coins that not only was there no problem of private coining, private melting of coins flourished instead, with coins being transformed into utensils.[32] Therefore, the difference in the quantity of money in circulation between Tang and Song was not so great as indicated by the figures in the histories.

Second, during the xining and yuanfeng years, Wang Anshi's Labor Service Avoidance Tax drew currency into the treasury, neutralizing a portion of the money supply. This tax included the Avoidance of Labor Service Cash, Aid for Labor Service Cash, and Avoidance of Labor Service Broad Surplus Cash.

The Avoidance of Labor Service Cash was a monetization of labor service. Its intent must have differed little from that of Yang Yan's Double Tax of mid-Tang times. The other two resembled the Reckoned-contribution tax of Western Han. All of these caused money to flow into the state treasury.[33]

To merely speak of the Avoidance of Labor Service Broad Surplus Cash, in xining 10, Lü Tao reported that in four districts of Sichuan's Pengzhou, during four years, over 48,700 strings had accumulated, and he estimated that for the entire country there must have been 6 or 7 million strings in the official treasuries.[34] In yuanyou 1 [1098], Su Che said that since the adoption of that tax some 16-17 years previously, more than 30 million strings of income from it had accumulated, but had not been used.[35]

Therefore, though a great many coins had been minted during xining and yuanfeng, the number actually in circulation was not that large. Some coins did not circulate at all after they were minted. For example, during xining, many of the 2-cash coins were kept on deposit in various districts, and it was not until the chongning period

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that they were reminted into 10-cash coins.

Hence, not only did the phenomenon of an excessive issue of currency not appear, its opposite, the phenomenon of monetary contraction, was produced. This is what contemporaries called a coin famine. Some people blamed this coin famine on collection of the labor service taxes.[36] Others blamed it on an outflow of coins from China.

"In Tangzhou, Dengzhou, Xiangzhou and Ruzhou of this circuit, before zhiping [1064-1068], the land was mostly forested hills, and there were few people engaged in agriculture. Since the middle of xining [early 1070s], people have crowded in from all sides, and have opened land within a range of a thousand *li*, making good fields."

[32] *Comprehensive Mirror for Illumination of the Prince, Long Draft, Continued*, 269, xining 8, 10th month, renchen: "And since the ban on copper was removed, melting down among the people has become unmanageable. If ten coins are melted down, 1 ounce of pure copper is obtained. If made into utensils, a five-fold profit is obtained. Thus, in one prefecture after another, furnaces have been set up. Each increases the toll. This is like increasing the number of ditches in the field, and then providing another pond for them to drain."

[33] *Collected Works of Guowenzheng Duke Wen*, 47, "Petition Requesting Abolition of Avoidance of Labor Service," yuanfeng 4: "In recent years, prices have become ever cheaper, and life in the villages increasingly difficult. As a consequence, coins have all been concentrated in official hands. . . ." *Comprehensive Mirror Long Draft Continued*, 393, yuanyou 1, 12th month, wushen, quoting Wang Yansou: "From the time when the state established the law to collect taxes to pay clerks, the coins of the Empire have been constricted. Nine out of ten coins have left private households and returned to the public offices. . . . When a string of cash enters public hands, it does not return to circulation outside. . . ."

Su Che, *Luan City Collection*, 37, "Petition Requesting that Ever Normal Cash be Borrowed for Army Provisions in Various Districts": "Ever since xining, the people have been putting out cash to avoid labor service, and have also been putting out cash to pay interest on Ever Normal Granary loans. Coins in the official treasuries are so abundant that the strings have rotted and they cannot be counted. Official coins have disappeared among the people. Those used in the markets are mostly privately coined small cash. . ."

[34] *Song History*, 177, "Treatise on Food and Money: Labor Service Regulations," first part.

[35] *Song History*, 177, "Treatise on Food and Money: Labor Service Regulations," first part.

[36] *Comprehensive Mirror Long Draft Continued*, 294, xining

Third, the quantity of copper coins exported to foreign countries during the xining and yuanfeng years far exceeded the amount exported during Tang. The outflow of copper coins during Tang had only cultural significance, and was without economic importance, since the quantity involved was not large. Things had changed by Song times. The court frequently gave copper coins to foreign envoys,[37] though most of these were used to buy commodities or precious metals in China,[38] and few were carried home by them.

Some countries, however, employed Chinese copper cash as their money. Their ambassadors not only brought home with them these gifts of Chinese coins, they also made arrangements to export coins privately. In principle, China did not permit the export of copper coins. To illegally transport even one string of them was to be subject to the death penalty. In xining 7, this ban was removed. Thereupon "heavy carts exited from the frontier passes; fully loaded ships returned home by sea." It was said that border districts merely collected taxes on copper coins being exported, and that this was an important reason for the cash famine of those times.[39]

The most important source of demand for Chinese copper coins then was Japan. The Imperial Dynasty 12-cash [*Kocho junisen*] which they minted themselves, was not very successful. In 958, after issuing their last *Kengan daihō* coin, they lost the people's confidence, no longer minted coins, and depended on importing Chinese coins.

It was during Northern Song times that Vietnam began to mint coins. It probably also imported Chinese coins. Use of Chinese coins in the South Seas probably also began during this time, since of several dozen Chinese coins dug up in Java in recent years, all except a few Inaugurals were Northern Song coins, and of these the yuanfeng coins were the most numerous.[40]

8, 10th month, renchen, quoting Zhang Fangping, "On the Banning of Copper Because of Coins," giving Su Che's statement of yuanyou 2, 1st month, gengwu: "The harm from the Avoidance of Labor Service is that it confiscates the wealth of the people. Of every ten households, nine are empty. Coins are collected above, and below there is suffering from a cash famine." I find that of all those who discussed the cash famine from xining 8 into the shaosheng period, only Su Che insisted that it was caused by the Avoidance of Labor Service Cash. The others either did not propose a cause, or said that it was caused by an outflow of coins.

[37] *Searches into a Multitude of Books*, latter collection, 64, "Tribute From the Barbarians of the Four Directions: Zhunian State": "In tianxi 4, 2nd month, yiyou, Guangzhou said . . . Feast and reward their subordinates, give them utensils and money in strings of cash to send off with them." *Ibid.*, "Yudian State": "In Emperor Shenzong's yuanfeng 6, 5th month, bingzi, tribute goods were exhibited in the Yanhe Palace. In yuanfeng 8, 11th month, renyin, horses were brought in, and 1.2 million in coins was allocated." *Correspondence from Beyond the Southern Mountains*, 2, "Zhancheng State": "Its vassals included Bintonglong State and Binshilong State. . . . In Emperor Zhezong's yuanyou 1, 12th month, they again brought tribute, and there was an edict to award them 2,600 strings of cash. Their longing to become civilized was admirable."

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[38] *Song Collected Statutes Compiled Draft*, "Border Barbarians," 4.95, jingde 1, 1st month, edict: "The chief envoy, Puduan, was granted an evening feast by lamplight, and was also given strings of cash. In the 5th month, they sent Ambassador Li Shihan to offer tribute. In the 9th month, the office in charge said that Puduan had bought Chinese goods and gold and silver in the markets to bring back to his country." *Song Collected Statutes Compiled Draft*, 7.31, zhiping 1, 3rd month, 1st day: "The visitor from Yudian advanced to be registered, and Luo Chewen left court with a gift of 5,000 strings of cash. Now that they have been given ready cash, they are pretending to consider using it to buy goods, but are unwilling to actually part with any. They desire to fill their coffers with heavy and fine silk. This was permitted."

[39] *Comprehensive Mirror Long Draft Continued*, 269, xining 8, 10th month, renchen: "Since coins are hard to obtain, grain and cloth become increasingly cheap. People are hard-pressed, and speak of it as a coin famine. Prefectural treasuries are all empty, and households have no savings. I do not know in what year coins were last minted. Now how are we to manage? . . . Since xining 7, when the new regulation was issued, and the old one forbidding removal of coins was abrogated, heavy carts have exited from the frontier passes; fully loaded ships have returned home by sea. I have heard that when coins are being exported, the border districts merely collect a tax on each string. . . . Now, from Guangnan and Fujian to Liangzhe and Shandong, cash leaves with abandon, and the officials everywhere aid and abet secret departures. Various forbidden goods are bought and sold privately. None leave without carrying coins. Coins are China's treasures, and now they are being given to the Four Barbarians to use."

Liu Zhi, *Loyal and Severe Collection*, 5, "Communication Requesting Restoration of the Coin Prohibition": "Of the coins minted in the inspectorates of the various circuits of the Empire, the amount entering into the royal offices and lost annually is several tens of millions of strings. . . . Now, however, we do not hear of the strings of these coins rotting after they enter the treasuries, and yet when they are lacking among the people at the shop counters, some call this a coin famine. Why do they say this? The main reason for it is leakage to the Four Barbarians. . . and also because of melting down of legal coins."

[40] For the Chinese coins excavated in Java, cf. note 21 of

Fourth, Song's monetary economy was far better developed than was high Tang's. A barter economy bulked very large during Tang before the Double Tax reform was carried out. A number of localities used cloth rather than coins. During Song, most payments were made in coin.

Moreover, Song's domestic and foreign trade were better developed, and demanded still more currency. Of the above-mentioned export of coins, a large proportion was a consequence of foreign trade, and it was for just that reason that a great many people opposed foreign trade.

Domestic commerce was also very well developed, especially the trade in the cities, as compared with Tang times. Tang urban trade was mostly concentrated in several marketplaces, like Chang'an's Eastern and Western Markets. By the Song Dynasty, one could open a shop anywhere in a city. Except for a few places in the south, like Yangzhou, night markets were banned during Tang. Markets opened in the morning, and closed before sunset.[41] Song cities like Bianjing had night markets.[42]

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Fifth, Song employed the Short-hundred system for its currency. They called it the Reduced-hundred. A string nominally was 1,000 cash, but actually only 770 or less cash would be paid.[43] Hence, before we can draw comparisons of prices with those of high Tang, we must allow for this difference, since high Tang used a full string. The Song Reduced-hundred system differed from those of Jin, Northern and Southern Dynasties, Tang and Five Dynasties. It was not used because of a coin shortage, but because popular custom had become systematized.

Sixth, the Song picul was one-tenth bigger than the Tang picul,[44] so Song food prices must be discounted further even after allowing for the Reduced-hundred, before they can be compared with Tang prices.

To determine the cost of rice during Song, in addition to noting the use of the Full-hundred where relevant, we use the 77 for a 100 everywhere else, and convert such prices to the Full-hundred equivalent.

That done, we can say that during the first 130 years of Northern Song, that is from the '70s of the tenth century to the end of the eleventh century, the average price of a picul was 346 cash. Converted to hectoliters, that comes to 520 cash.

During the 60-70 years prior to the Western Xia war, a hectoliter of rice was only 253 cash, compared to the high Tang (first half of the eighth century) price of 336 cash. The high Tang figure is not, however, actually a recorded average, but rather is an estimate of the normal cost of rice based on the figures in the records. If we were to strike an average from the rice prices recorded during kaiyuan

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chapter 5.2.5, below.

[41]Song Minqiu, *Chang'an Record*, 8, 10. Xu Songtang, *Investigation of the Two Capitals' Neighborhoods*, 3, 4, 5. *Tang Collected Statutes*, kaiyuan 5, order: "The capital night markets are ordered to be halted." Ma Gao, *Notes on Ancient and Modern China*: "Under the old system of Tang, within the walls of the capital the curfew was from dusk to dawn, so as to prevent movement." *Biography of Li Gui*: ". . . for a long time, when the sun set, there were four rolls of the drum. The matron said, 'The drum has sounded. We must hurry back lest we violate the prohibition.'"

[42]*Flowery Dreams of the Eastern Capital*, 2, "The District Bridge Night Market."

[43]The Reduced-hundred system arose during Eastern Han. High Tang employed a Full-hundred, but during Emperor Xianzong's yuanhe period, a string was diminished by 20 cash per hundred in the capital districts. At the end of Zhaozong's reign, 850 cash constituted 1 string in the capital, which was 85 per 100. During the military disorders at the end of Tang, 85 was used in place of 100. During the tiancheng era of Latter Tang there was a diminution of 5-cash. At the beginning of qianyou of Latter Han, there was a diminution of 3-cash. At the beginning of Song, taxes were paid with 80 or 85 cash to the hundred, but private practice locally was not uniform, and there are instances of 48 cash being used in place of 100. It was not until taiping/xingguo 2 that an edict was handed down imposing a uniform discount to 77 in place of 100 (*Song History*, 180).

Luo Dajing, *Crane Grove Jade Dew*, 4: "According to the *Five Dynasties History*, when Zhang, the Prince of Han, was Finance Office Commissioner, he extorted profits. Transactions were originally made at 80 to the 100, but whenever Zhang made a payment he insisted on reducing it by 30 percent. The present practice of officially reducing the string to 77 began with Zhang. Now, however, the officials take off an additional 5 or so in the hundred along with the 77, and so they are even more exploitative than was Zhang."

Ouyang Xiu, *Record of a Return to the Fields*, 2: "The rules for use of coins, have taken 77 for 100 since Five Dynasties times. This is called the Reduced-hundred. Now, in market exchanges, another 5 are taken off, and this is called a dependent subtraction."

Flowery Dreams of the Eastern Capital, 3, "Market Cash Hundreds": "The market cash hundred was 77 for official use, 75 for general trade in the markets, 72 for fish, meat and vegetables, 74 for gold and silver, 68 for gems, fans, slave girls and crickets, and 56 for writings. In the market, each activity had its own degree of diminishment of the hundred."

[44]According to Wu Chengluo, *History of Chinese Weight Measures*, the Tang picul was 0.5944 hectoliters, and the Song picul was 0.6641 hectoliters.

and tianbao 713-756], then a hectoliter was only 136 cash.

The figure for Northern Song is an average of the recorded prices, and these are mostly from years of good harvests. Normal rice prices must have been 50 to 100 percent higher. In any event, the Song figure must be higher than the high Tang rice price. Records of rice prices after the war with Western Xia are relatively more representative of the normal price level. During the latter half of the eleventh century, a hectoliter was 875 cash.

Therefore, during the period of more than a century occupied by Northern Song, the cost of rice doubled.

Such a tendency is not discernible in the price of heavy silk. A portion of the Northern Song annual land tax was paid in heavy silk, and so silk was frequently given an official price. Naturally, changes in official prices were not as sharp as changes in market prices. Though there were frequent increases and decreases, over the long run of more than a century, these were not large.

At the beginning of Northern Song, a bolt was probably 900 or 1,000 cash.[45] In taiping/xingguo 2 [978], the officials of Jiangxi raised it from 1,000 per bolt to 1,300.[46] During xianping [993-1004], a bolt was commuted to 1,000 cash,[47] but in the four circuits of Sichuan and Shaanxi, a bolt of heavy silk was only discounted into 300 cash.[48] In dazhong/xiangfu 9 [1016], 1 bolt was worth 800 in Shandong.[49] In qingli 6 [1046], the price of heavy silk in Xinzhou, Sichuan rose from 900-1,200 to over 3,000.[50]

This was its highest price during Northern Song, and this was undoubtedly

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the consequence of the depreciation of the coins.

During jiayou [1056-1064], a bolt cost 1,300 in Yizhou.[51] During xining 2 and 3 [1068-1069], a bolt was commuted to 1,000, and this was later increased to 1,500.[52] At the end of xining [1078] the Sichuan market price of a bolt was 1,400-1,500 cash.[53] In yuanfeng 2 [1079], it was 1,300 in Chengdu.[54] During yuanyou [1086-1094], a bolt was 1,700-1,800 in Chengdu.[55] In yuanfeng 4

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[45] *Comprehensive Mirror Long Draft Continued*, 158, qingli 6, 5th month, wuzi: "At first, the salt gabelle was allowed to be half commuted to silver and cloth. One catty of salt was reckoned at 20 to 30 cash. One ounce of silver was equal to 1 bolt of heavy silk, or 900 to 1,200 cash."

[46] *Song History*, 174, "Treatise on Food and Money," first part, 2, "Taxation": "In taiping/xingguo 2, the Jiangxi Transport Commissioner said . . . for heavy silk of the superior kind, the old rate was 1,000 per bolt. Now it is requested that it be calculated at 1,300."

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[47] *Song History*, 175, "Treatise on Food and Money," first part, 3: "When Emperor Shenzong ascended the throne . . . when paying in heavy silk, 1 bolt was equal to 1,000 cash."

[48] *Miscellaneous Record In and Outside Court Since Jianyan*, 14, "Fiscal Affairs and Taxes, 1: Discounting of Cloth for Cash in the Southeast": "In xianping 3 . . . in the four circuits of Sichuan and Shaanxi, generally when discounting heavy silk into cash, 1 bolt was discounted into 300 cash. This was the actual value during xianping."

[49] *Ibid.*: "In dazhong/xiangfu 9 . . . between Qing and Qi, heavy silk was worth 800 and fine textured silk 600. The official rate was increased by 200, which greatly aided the people."

[50] *Comprehensive Mirror Long Draft Continued*, 158, qingli 6, 5th month, wuzi: ". . . later there was an edict to commute the levy into metal and cloth, the discount to be calculated at the times of payment. Thereupon the Xinzhou Circuit Transport Office requested an increase in the silver, fine silk and heavy silk price. This was sent down to the Finance Office for advice. Though based on the old price, these goods were increased by more than 3,000, but there was no old price to serve as the basis for comparison for salt. Sold in the market, a catty fetched 140 cash." This passage somewhat obscures the price of heavy silk. Judging from the tenor of this statement, it was increased by 3,000 over the old price, and so we cannot tell what the new price actually was.

[51] *Song History*, 340, "Biography of Liu Zhi": "In Yizhou . . . from then on heavy silk was 1,300, cotton was 76. The people cried out in joy until tears came."

[52] *Song History*, 175, "Treatise on Food and Money": "When Emperor Shenzong ascended the throne . . . it was ordered in successive years that when paying in heavy silk, a bolt be commuted to 1,000 cash." *Ibid.*, "In xining 3, the Censor Cheng Ying said that when the Jingdong Transport Office bought light and heavy silk under Harmonious Purchase, it increased the rate to 1,000 cash for a bolt of heavy silk. Later, for both Harmonious Purchase and tax purposes, a bolt of heavy silk was always rated at 1,500 cash."

[53] Lü Tao (in xining 10 the magistrate of Pengzhou), *Purity and Virtue Collection*, 4, "Memorial on Ten Matters in Reply to Receiving a Messenger": "In Shu in recent years . . . heavy silk has remained at 1,400 to 1,500 cash per bolt."

[54] *Song History*, 199, "Treatise on Punishments": "In yuanfeng 2, the Controller of the Seal of Chengdu Circuit said that in past times, the Sichuan and Shaanxi price of a bolt of heavy silk was 2,600 cash. Using this as a basis for calculation, 2 iron coins are equivalent to 1 copper coin. Recently, a bolt of heavy silk has only been 1,300."

[55] *Loyal and Severe Collection*, 5, "Memorial Requesting that Chengdu Provisions Tax be Commuted": "I have heard that in Chengdu . . . the price of a bolt of heavy silk is 1 string plus 700 or 800 cash." *Searches into a Multitude of Books*, latter collection, 64, "Tribute from the Barbarians of the Four Quarters":

[1081], however, the price in Zhejiang was only 1 string per bolt.[56]

The relative stability of the price of heavy silk during Northern Song must be ascribed to the increase in its production and a rise in productivity, but even so, the price of heavy silk was higher during Northern Song than during high Tang.

"In Emperor Zhezong's yuanyou 1, 4th month, jiawu, the censors and high officials all said . . . yesterday there came into the inner treasury the proceeds from sale of the cloth from those dismissed over many years. Each bolt only fetched 200-300 cash, only 10 or 20 percent of the price."

[56]*Comprehensive Mirror Long Draft Continued*, 432, yuanyou 4, 8th month, yichou, Su Shi said: "As Zhang requested Harmonious Purchase official cash, 1 bolt was 1 string. A lower price could not be taken. The coarse, short, heavy silk of Changhuaxian was bought and delivered to the officials."

3. *The Fall in Money's Value During Chongning and Daguan*

Many things were happening to Northern Song from the time Huizong ascended the throne (1101). Domestically, Cai Jing assumed power, and widespread poverty provoked uprisings by Fang La and Song Jiang. Externally, the eunuch Tong Guan's foreign adventures initiated a chain of disasters, with the ensuing loss of credibility inviting the subsequent Jin invasion. Increased expenditures gave rise to monetary inflation.

Output of mines reached a peak during xining and yuanfeng [1068-1086]. In copper, for example, annual production was 5 million catties during huangyou [1049-1054]. During tianxi [1017-1022], it was 7 million. By yuanfeng 1 [1078] it had increased to 14.6 million catties. Lead and tin enjoyed similar increases.

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That is what allowed so many coins to be produced during xining and yuanfeng.

After yuanfeng, production gradually decreased. At the beginning of shaosheng [1094], the Secretary of the Board of Revenue, Cai Jing, tried many things to develop the mining and smelting trades, but nothing came of them, and so attention was focused on the copper-immersion technique.[1] This involved soaking iron in what was called gall water to turn it into copper, a Chinese-invented metal smelting technique. The copper-immersion technique was said to have been invented by Xu Shen. During shaosheng, Zhang Qian wrote *Essentials of Immersion Copper*. Probably the results were not significant.

In xuanhe 6 [1124], the authorities formally acknowledged that the profits from minting and smelting were "less than 10 percent of those of the xining and yuanfeng periods."[2] Therefore, from yuanyou on, the quantity of coins minted diminished.[3]

A reduction in the quantity minted should not, however, be equated with a reduction of the quantity in circulation. With the death of Wang Anshi during yuanyou, the Avoidance of Labor Service Tax was abolished, and export of copper cash was again banned. These moves must have increased the number of coins on the market.

Probably 2-cash coins were more numerous than small 1-cash coins, which is a characteristic of depreciation, and prices had begun to rise. This was particularly true of prices reckoned in terms of iron coins.[4] During yuanfu, rice ranged from 300 to 500 and 600, to as much as 1,000.[5] In yuanfu 3 [1100],

[1]*Song History*, 180, "Treatise on Food and Money," latter part, 2, "Coins." Note: "An ingot of pig iron is forged into plates, and then immersed in a trough of gall water. It is left there to soak for several days. The iron plate is made thin by the gall water. Red coal is then applied and the combination is placed in a furnace and smelted three times to produce copper. On the average 3 catties 4 ounces of iron are required to make 1 catty of copper. A certain amount is produced annually from the lead mines of Raozhou, Xingzhou. Lizhou, Changzhou and Xinzhou. This is what is called gall copper."

[2]*Song History*, 185, "Treatise on Food and Money: Mining and Smelting."

[3]Cai Tiao, *State History Supplement*: "State minting of coins was an old tradition by Five Dynasties and Southern Tang times. The quantity annually minted steadily increased. It reached its apogee during the period from qingli to yuanfeng [1041-1086], with over 3 million strings of copper and iron cash without doubt being produced. By yuanyou and shaosheng times [1086-1098], things slackened off. By the beginning of chongning [1102], the quantity was no longer as great as during the times of the founding ancestors."

[4]*Comprehensive Mirror for Illumination of the Prince, Long Draft, Continues*, 512, yuanfu 2, 7th month, guimao, Lü Huiqing said: "Since yuanyou and shaosheng, iron coins have been steadily lightened, and so the price of rice has steadily increased."

[5]*Ibid.*: "Now, moreover, Weizhou is saying 'In former

both the Summer and Autumn harvests were excellent, but prices did not fall back.[6] At the end of the year, floods caused the price of a *dou* of rice to go to 340 in several districts of Hebei.[7] Prices that low were not to be seen again during the twelfth century. In the Spring of jianzhong/jingguo 1, the year Huizong ascended the throne, in rather distant frontier locations like Luyan Circuit's Xincheng Fortress, a *dou* of rice brought as much as 1 string 400 cash in Reduced-hundreds.[8]

Cai Jing came to power in chongning 1 (1102). In that same year, there was an uprising by the Yao in Chenyuan (Hunan), and in its 12th month, a 5-cash coin was minted. The following year, the Man of Anhua rose as well, and the 10-cash Chongning Heavy Treasure was minted, and was ordered circulated everywhere except for the iron coin areas of Shaanxi, Hedong and Sichuan.

In chongning 3 [1104], the 1-cash and 5-cash coins were abolished, and sole reliance placed on the 10-cash coin. Even the 2-cash coins which had been kept in reserve since xining were reminted into 10-cash coins.

Once this large coin had been issued, much confusion arose among the people, so that there were some who were unable even to use coins to purchase goods.[9] This was because whether in terms of weight or in copper content, one large coin was not even the equivalent of three Tianxi small coins. Each of them only weighed 3 *qian*, and contained less than 60 percent copper, a depreciation to less than one-third of the former value.

As a consequence, coins were divided into two types, and there were two prices in the market, which gave rise to illicit coining. Zhang Yan of Suzhou illicitly coined as many as several tens of millions of strings of cash, and received a heavy sentence for doing so. Naturally, privately minted coins did not reach 3 *qian* in weight. Most small coins were melted down and reminted. Later, because prices had shot up, the southeast was ordered to change to a 5-cash coin, but this did not put an end to private coining, and so there was a further revaluation to 3-cash. This probably happened during chongning 4.[10]

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Cai Jing became chief minister again in daguan 1 (1107), and again advocated use of a 10-cash coin. Therefore, a 10-cash large coin was minted along with a small coin, 2-cash and 3-cash denominations. All bore the inscription Daguan Circulating Treasure.

Though the Daguan 10-cash was much heavier than the Chongning 10-cash,[11] this still represented a weight reduction compared to the small 1-cash coin, and so there was still profit to be made from private coining.

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days, a *dou* of rice or wheat was only 100 cash. Nowadays a *dou* is more than 300 cash. When bought along the new frontiers, it comes as high as 500 or 600 cash.'" *Ibid.*: "Recently, Yan'anfu officials bought rice for 520 cash full. On the market, new rice is 780 cash full. Old rice is 720 cash full." Li Xin, *Jumping Turtle Collection*, 19, "Message of Ten-thousand Words Sent Up to the Emperor": In yuanfu 3, 5th month, 11th day . . . Recently a flood in Hebei covered 1,000 *li*. . . . From Yong west, a *dou* of rice was 1,000 cash, and goods in Jingdong and Jingxi shot up in price."

[6]Fan Chunren, *Posthumous Writings of the Shilang, Duke Fan*, "Advice Advanced on Things Inconvenient," jianzhong/jingguo 1, 5th month: "After the major military movements, there were bad crop years. Although last year the Summer and Autumn harvests were both abundant, prices were not much reduced."

[7]*Song Collected Statutes Compiled Draft*, "Food and Money," 59, yuanfu 3, 12th month, 3rd day, the officials said: "Several frontier districts in Hebei suffered breaches of the river dikes, with a thousand *li* being emptied. . . . This has brought the price of rice now to no less than 300 to 400 cash per *dou*."

[8]Fan Chunren, "Advice Advanced on Things Inconvenient."

[9]*Song History*, 328, "Biography of Zhang [Ci?]": "At this time, the Chongning large coins had just been minted. When the order came down, the markets remained closed during the day, and when people brought coins to buy goods, by sunset they had become agitated because no one was willing to sell. Those in charge of the market, and whose authority extended to goods in general, would accept small coins for them, and pressed the granary clerks to sell rice for large coins. It was a full ten days before the people could be calmed down." Zeng Minxing, *Lone Awakening Miscellaneous Record*, 9: "In chongning 2, a large coin was minted. Cai Yuanzhang advised making it equal to 10 cash.

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The people did not find it convenient. Some good fellow was holding a feast, and gave a large coin for a glass, when he asked for his change, the seller would have no coins with which to give it, and he would have take his change in drink instead. After drinking as many as five or six, he would belch and say, 'What would you have done if it had been a 100-cash coin?' This story impressed the Ruler, and because of it the rule was changed."

[10]*Events of Great Song Handed Down from Xuanhe* says that minting of the Chongning 10-cash coin was halted in chongning 4.

[11]Some historians suppose that the Daguan and Chongning 10-cash coins were the same. (Cf. Cai Tiao, *State History Supplement*, and *Imperial Song Comprehensive Mirror Long Draft Digest*, 136, zhenghe 6, 5th month, dingmao section.) Actually the Daguan 10-cash weighs more than 5 treasury *qian* [over 0.5 ounces], and it is generally believed that the 5-cash Daguan

Cai Jing again fell from power in daguan 3, and since people had been suffering from the large coins for some nine years, attacks were launched against them from all sides. The new chief minister, Zhang Shangying, advocated calling them in at a price of an ounce of silver or a bolt of heavy silk for each 10 strings. Once recalled, the heaviest of them were to be selected and revalued to 3-cash. This recommendation was carried out in zhenghe 1 (1111). Naturally, some people were harmed by it.[12]

After minting the Chongning 10-cash coin, Cai Jing also minted the so-called tin-alloy coin, which was indeed made of an alloy of copper and tin. Each string used 8 catties of copper, 4 catties of black tin and 2 catties of white tin. Each coin weighed less than 3 *qian*, and was equated to 2 copper coins. This was done in chongning 4 (1105).

These coins were originally restricted to use in Shaanxi, but some advocated circulating them throughout the country. Cai Jing was one of these, but just then he left office, and so in the end this was not done.

After he was restored to the chief ministership in daguan 1 (1107), he had a 5-cash tin and iron alloy coin minted. Shaanxi had hitherto only used iron coins, and so when first exposed to these tin alloy coins, it viewed them favorably.[13] It was only because their fineness became ever lower, at times requiring 7 or 8 of the alloy coins to equal 1 copper coin, that they eventually became virtually identical to iron coins. This forced prices up several fold.[14]

Cai Jing left office again in daguan 3, and the tin alloy coins minted in the southeast were withdrawn. The following year, this was also done in Hebei, Hedong and Jingdong Circuits, but Shaanxi continued to use both the tin alloy and large iron coins, both at a face value of 2-cash. The tin alloy coins of the southeast promptly all flowed into Shaanxi, with the result that their value fell to the point that it took 20 of them to equal 1 ordinary coin.[15]

Cai Jing returned to power in zhenghe 2 [1112], and again requested use of tin alloy coins. Thereupon the copper coin inspectorates of the various circuits set to work minting tin alloy Zhenghe Circulating Treasure coins. There was a degree of fineness of metal content displayed by these tin alloy coins, and their inscriptions still bore the current year period, but because they had been abolished and reinstituted twice, most people avoided using them, and so their use had to be enforced. After several disorderly years, however, even Emperor Huizong himself said that the suffering caused by the tin alloy coins was even greater than that caused by the 10-cash coins. They were still being minted and used in the northwest up into the zhonghe period.

Actually, not just copper coins were being depreciated during this period. There was also a paper money inflation going on in the Sichuan-Shaanxi region. Ever since xining 5 (1072), two terms of Exchange Notes had been circulating simultaneously, and a local inflation had already broken out in Sichuan. From shaosheng (1094-1097) on, the quantity issued was frequently increased for use in the Shaanxi frontier areas to recruit soldiers and supply the armies. It is estimated that in shaosheng 1, there was an increase of 150,000 strings, and in yuanfu 1 [1098]

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an increase of 480,000 strings.[16]

As a consequence, their value fell sharply. When redeemed, 1 string of new Exchange Notes was exchanged for 4 strings of old ones. Jingxi Circuit (the present Henan) began to use Exchange Notes in chongning 3 (1104). The next year they were changed to Coin Vouchers, and their sphere of circulation broadened. They could be used virtually everywhere except Min,[17] Zhe, Hu and Guang.

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weighed over 3 *qian*.

[12] *Song History*, 351, "Biography of Hou Meng": "When the large coin system came to ruin, the court was advised to change them from 10-cash to 3-cash. The clerks in charge of the treasuries all came to report, saying that in all the prefectures the large coins were being carried to market to exchange for goods, and that everyone suspected the regulations were to be changed. Meng asked, 'How many have accumulated in our prefecture?' The reply was, '8,000 strings.' Meng sighed and said, 'How could things change still more and I not know about it?' The next day the regulations were sent down."

[13] *Song History*, 285, "Biography of Jia Yan": "During zhenghe . . . since Shaanxi had first circulated iron coins, they had long suffered from the coins being increasingly lightened. Cai Jing established measures to collect all of them and mint coins alloyed with tin which were somewhat heavier." *Song History*, 348, "Biography of Shen Qi": "Of old, Shaanxi lacked copper coins. Therefore it treated tin alloy coins as valuable."

[14] *Floating Island Collection*, 1, "Letters to the Emperor": "Moreover, the tin alloy coins do not even yield a profit of 10 percent, and goods have become three times more expensive. This has occurred during recent years. As prices become ever heavier, state requirements become ever more humbled."

[15] Li Gang, *Liangqi Complete Works*, 144, "On Resisting Barbarians": "Since the removal of the tin alloy coins from circulation in the southeast, they have all been transported to Shaanxi, and prices have jumped there, with coins being increasingly lightly demanded. Twenty have become equivalent to one."

[16] *Shu Broad Record*.

Hence they became still more important. This occurred during the war with Western Xia.

Proliferating military expenditures caused an uninterrupted increase in the quantity issued.[18] In chongning 1 [1102], there was an increase of 2 million. The following year, the amount went up by 12,435,000. In chongning 4, there was an increase of 5.075 million. In daguan 1 [1107], the increase was 5,545,666 strings.[19] This was twenty times more than the issue of the tiensheng era.

Later (1108), a reserve of ready cash was no longer maintained, and a 1-string Cash Voucher was only worth a dozen or several dozen cash.[20]

Sichuan's monetary system was reformed during daguan. Coin Vouchers were issued, with a limit set based on the 1.25 million strings issued during tiansheng, but the old Exchange Notes of the 41st through the 43rd terms were not redeemed for cash.[21] This amounted to their repudiation, and some merchants were brought to suicide.

In brief, after chongning and daguan [1111], prices increased still more.[22] At the beginning of chongning [1102], under special circumstances, a *dou* of rice reached 3-4 strings full in Shanlang.[23] In jianzhong/jingguo 1 [1101], a bolt of heavy silk cost 1 string 400-500 cash full.[24]

In daguan 2 [1108], Emperor Huizong himself criticized "the recent doubling of the price of heavy silk."[25] Even in the capital, house rents doubled.[26] At the beginning of zhenghe (1111), "in the various circuits, the exchange prices of fine and heavy silk and plain cloth rose several fold."[27] In zhenghe 2, the market price of rice was 120 cash per *dou*.[28] In xuanhe 4 [1122], Jiao Huowu said that the price of rice was four times higher than prior to xining and yuanfeng.[29]

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[17] *Song History*, 181, "Treatise on Food and Money: Account Notes": "Zhao Yanzhi supposed that because Min [Fujian] was Cai Jing's native place, it got to avoid using them."

[18] There are no exact records of the quantity of Exchange Notes and Coin Vouchers circulated over the years. Though some have made estimates, these are unreliable. For example, not even Li Xinchuan of Southern Song times gives complete figures for the quantity in circulation during daguan 1 [1107]. In *Essential Record of the Years Since Jianyan*, 16, under jianyan 2, 6th month, Li says they "increased to over 26 million strings." Later, in *Miscellaneous Record In and Outside Court Since Jianyan*, Collection A, 16, "Sichuan Coin Vouchers," it is stated that "the increased amount printed reached 24.3 million strings."

[19] *Shu Broad Record.*

[20] *Investigation of Literary Remains*, "Investigation of Coins, 2": "As a general rule in earlier years, the term of an issue was one year, there was a reserve of 360,000 strings, and the new issue was the same size as the old. During daguan, a cash reserve was no longer kept, and no limits were put on issue. It reached the point that a 1-string Voucher was equal to several dozen coins." (*Song History*, "Treatise on Food and Money," makes it "equivalent to a dozen or so coins."

[21] *Searches into a Multitude of Books*, latter collection, 62, "Mulberry Paper Money," quoting the *Comprehensive Mirror Long Draft Continued*. *Song History*, 328, "Biography of Zhang [Ci?]": After the issue of Chongning large coins, "before long, the new notes were circulated, and the old notes entirely abolished. For a time, the merchants wrung their hands or committed suicide. Those who held the old notes could only exchange 300,000 for 1,000 in coin. He sent up a communication saying that the paper money rules were cheating the people, and requested that the contracts be lived up to so as to display the government's great faithfulness. The Ruler was angry and dismissed him." *Miscellaneous Record In and Outside Court Since Jianyan*, Collection A, 16, "Sichuan Coin Vouchers": "During chongning and daguan, soldiers were employed in Shaanxi, and the amount printed increased to 24.3 million strings. . . . This caused great harm to the system. . . . Cai Jing was anxious about this, and in daguan 1 changed the Exchange Notes into Coin Vouchers. None of the old Exchange Notes could be redeemed for cash."

[22] *Song Collected Statutes Compiled Draft*, "Food and Money," 59, chongning 2, 10th month, 14th day, edict: "There was no Autumn harvest in Liangzhe's Hangzhou, Yuezhou, Wenzhou and Wuzhou. . . . It has reached the point where households are fleeing, and bandits are multiplying. Prices have risen so high that there is no exchange going on among the people." *Ibid.*, daguan 3, 9th month, 6th day, edict: "The circuits of the southeast have suffered from unprecedented disasters, and prices have leaped up."

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[23] Comprehensive Mirror Long Draft Continued, 23, chongning 3, 4th month, xinyou: "But at that time [the beginning of chongning], food was brought in without regard to the expense. In Shanlang, a dou of rice did not fall below 3 or 4 strings full."

[24] *Comprehensive Mirror Long Draft Continued*, 18, jianzhong/jingguo 1, 8th month, renzi: "And to speak of Wuweijun, when a bolt of heavy silk was bought among the people, it required 1 string 400-500 cash full."

[25] *Song Collected Statutes Compiled Draft*, "Food and Money," 38, daguan 2, 3rd month, 4th day.

[26] *Song Collected Statutes Compiled Draft*, "Punishments," 2, daguan 1, 8th month, 12th day, edict: "In the capital, there are families in the house and room trade. Recently, using renovations as their excuse, they have been increasing rents, frequently by more than double. Daily, the problem is becoming more severe."

[27] *Song History*, 175, "Treatise on Food and Money," first part, 3, "Plain Cloth."

[28] *Song Collected Statutes Compiled Draft*, "Equitable Purchase."

The xining 2 [1069] price was 400 per picul in the outer districts, and 1,000 in the capital. In xining 8, the government set a price of 800 per picul for its sales to the people. In xuanhe 4, each picul was 2,500 to 3,000, and by the end of xuanhe 7, a picul fetched 10,000.[30]

These were still prices in coin. I do not know how many times higher they would have been if expressed in terms of paper money, since in daguan 1 [1107], the cash equivalent of a 1-string voucher in Shaanxi and Hedong was only from 50 to 70 cash, and in Chengdu it was still only 200 to 300 cash. In trading in the markets, for exchanges involving 10 strings of a thousand or more, people paid half in cash and half in Coin Vouchers.[31]

In the view of the great majority of people, the price of cotton would have been much more important than the price of heavy silk, but material on cotton prices is extraordinarily scanty. In ancient times, the price of cotton was very high, often being reckoned by the ounce, since the cotton plant entered China relatively late.

In yongming [*sic*] 2 [457?] of Southern Dynasties' Liu-Song, it was 4,800 cash per catty. During the Southern Tang of Five Dynasties times, it ran from 240 to 640 cash per catty.

The situation was nearly the same during Northern Song. The highest price was the jiayou [1056-64] era's 932 cash full per catty. The lowest
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was the xining 7 [1074] price of 123 cash full per catty. During yuanfeng [1078-86], it was 431 cash full per catty. Obviously the difference between the high and low price was not great, and no trend can be discerned.

By this time, even though Northern Song was not yet suffering from the Jin invasions, its economic foundations had been shaken. Waste inside the palace had become boundless, and the government was handing out wealth to the officials recklessly. During the reign of Emperor Taizong, a courtier only received 5 strings of cash per month, and some got as little as 700 cash. One of the secondary wives of Emperor Shenzong would get 800 strings of cash per month. The marriage of a princess might cost 700,000 strings. During the jingde era [1004-8] there were around 10,000 government officials. By huangyou [1049-54] times, the figure had increased to over 20,000, and in yeping [1064-68] to 24,000.

During the reign of Huizong, the situation was further aggravated, and official ranks were sold. There was a nursery rhyme in the capital that went:

> Three-hundred strings makes you Prefectural Vice Administrator in a day;
> Five-hundred is worth a cabinet member's pay.

There were more than 80 Regional Commandants, several thousand prefects, and there were individuals who were receiving a dozen or more salaries.[32] So there were people then who said, "goods have all become expensive, except for men of the official class, who are cheap."[33] These men of the official class were not actually cheap, since it cost the people a great deal of money to maintain them.

Perhaps this phenomenon was a consequence of monetary inflation, but since people at court did not know how to cut back on senseless expenditures, they could only respond by minting more coins and collecting more taxes, thereby increasing the people's burdens until they had no choice but to flee. This is what accounts for the uprisings of Fang La, Song Jiang and Zhang Wanxian. These peasant rebellions had only just been repressed when the Jin invasions began.

Because the purchasing power of Northern Song's money was reduced, the quantity of money demanded increased, and naturally this influenced the state's annual income and the income of the people. At the beginning of Song, annual government income was something over 16 million strings, some 20 or 30 times more than that at the beginning of the reign of Tang Emperor Suzong, and one-third more than the annual income at the end of dali [780]. By the end of tianxi [1022], it had increased to more than 26.5 million strings, and during jiayou [1056-64] to over 36.8 million strings. During xining and yuanfeng [1068-86] it rose to more than 60 million strings.[34]

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[29] *Song History*, 182, "Treatise on Food and Money: Salt," middle section: "In [xuanhe] 4, Jiao Huowu advised that there was of old a tradition that a *dou* of rice should equal a catty of salt. Prior to xining and yuanfeng, a picul of rice was only 600-700 cash. Now a picul of rice had reached 2,500 to 3,000, but salt was still at the old price of 60."

[30] *Comprehensive Mirror for Illumination of the Prince, Long Draft, Continued, Addendum*, 51, xuanhe 7, 12th month, jiazi.

[31] *Searches into a Multitude of Books*, latter collection, 62, "Mulberry Paper Money," quoting *Collected Statutes*.

[32] *Song History*, 179, "Treatise on Food and Money: Accounts."

[33] *Things Worth Talking About on Ping Island*, 1: "Duke Jia Xingguo returned from the capital, and I asked him about prices there. Jia replied that goods have all become expensive, except for men of the official class, who are cheap."

Distribution of income among the populace was very unequal. Upper class official salaries were treated with unprecedented generosity, but what lower class officials received was clearly meager. The incomes of laborers were, naturally, still lower.

The incomes of upper class officials, both in nominal monetary and real terms, far exceeded the levels of earlier dynasties, and moreover won the approval and envy of a number of spokesmen for the official class.[35]

The incomes of lower officials, however, fell far short of this. Not only were they not up to the levels of the higher officials, they did not even reach the levels enjoyed by lower officials during the high point of Tang rule.

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COMPARISON OF HIGH OFFICIALS' MONTHLY SALARIES BY DYNASTY

Dynasty	Rank	Money Income (strings)	Real Income (hctltrs rice)
Han jianwu	10,000 piculs		41.6
Tang kaiyuan	1st rank	c. 54	161.0
Song yuanfeng	Three Tai Three Shao	c.324	386.0

COMPARISON OF LOWER OFFICIALS' MONTHLY SALARIES BY DYNASTY

Dynasty	Rank	Money Income (strings)	Real Income (hctltrs rice)
Han jianwu	100 picul		1.9
Tang kaiyuan	9th rank	3,817	11.3
Song yuanfeng	Chengwulang	7,000	10.3

I should point out that the Song official incomes figures[36] are only a very rough estimate. They are not as reliable as those for Han and Tang, because there were great swings in the nominal prices of goods, particularly of rice. In any event, the real incomes of Song high officials exceeded those of their Han and Tang equivalents. Of that there is no question. It is worth studying whether it is appropriate to match the Chengwulang rank of the yuanfeng era with the Han 100 picul and Tang 9th rank as equivalent lower officials.

Of course laborers' incomes were still lower. Materials, however, are scarce, and calculations are difficult to make, because frequently both ready cash and goods were used simultaneously in making payments.

For example, in kaibao 4 [971], a household-head (worker?) in a brocade establishment got 700 cash, 3 piculs 5 *dou* in provisions and 6 *dou* of rice and beans in meals per month. Each of these people employed 3 or 4 female workers, each of whom re-

[34] *Miscellaneous Record In and Outside Court Since Jianyan*, Collection A, 14, "Fiscal and Tax Affairs."

[35] *Notes on the Twenty-two Histories*, "The Generosity of Song Salary Schedules": "Gifts were generous. Hence those who entered the ranks of the officials no longer needed to be concerned for their entire families. Each encouraged the practice of good government. During the reigns of Zhenzong, Renzong and Yingzong, notable officials became prominent, and the administration of the clerks was virtuous. When business was afoot, many were vigorous in requiting the state."

[36] In addition to monthly salaries, Song official incomes included various goods, such as fine silk, gauze, heavy silk, cotton, salary grain, clothing and food for subordinates and meal cash. Moreover, monthly salaries were rarely issued in actual goods. They were mostly discounted into cash. The histories state that they were paid one-third in ready cash and two-thirds discounted. By "discount" was meant the cash equivalent amounts of goods.

The face values assigned to these goods are an important problem. At the beginning of Song, it is said, the goods so discounted were only worth 10 to 20 percent or 20 to 30 percent of the prices assigned them. This makes it extraordinarily difficult to incorporate them into the calculations. The discount was also two-thirds during yuanfeng.

If we set out the nominal salary figures, the 400 strings of the Three Tai and Three Shao ranks would still be set down as 400 strings, with a heavy silk price set at 1,300 cash per bolt, 1 bolt of gauze put at 3 of heavy silk, 1 of fine silk at 2 of heavy silk, an ounce of cotton bolls at 35 cash, and such other items as salary grain not taken into account. All of these prices, however, are in Reduced-hundreds, with every 100 cash only represented by 77 actual cash. The resulting calculation yields only a rough figure.

If we then convert this quantity of coin into pearl rice, there are still other things to be considered. Here we have used the average rice price during the last half of the eleventh century, which was 839 full cash per hectoliter. In fact, however, at that time there were very great differences in the price of rice between different places at various times. If we use the price of 20 cash per *dou* mentioned by Su Dongpo for Guangdong during the yuanfeng period, then the real monthly income of the Three Tai and Three Shao was not 400 hectoliters, but over 1,000 hec-

ceived 2 piculs of provisions and 6 *dou* of rice and beans.[37] At that time rice cost 700 cash per picul. If the monthly provisions allowance was in rice,

NORTHERN SONG WORKERS INCOMES COMPARED OVER TIME

Year	Type of Work	Amt of White Rice Purchasable by Monthly Wage (in hectoliters)	Source
kaibao 4 (971)	weaver	2.32-3.39	Song Coll. Stat.
" " "	female labor	1.06-1.36	" " "
zhiping 1 (1064)	guard	0.7	Song History
yuanfeng 5 (1082)	stevedore	3.25	Song Coll. Stat.
zhenghe 6 (1116)	sluicegate worker	1.60	" " "
" " "	sluicegate carpenter	2.26	" " "

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then the household-head could have gotten 3.39 hectoliters of white rice per month, and one of his female workers 1.36 hectoliters. If the monthly provisions were in ordinary grain, then the household-head had a monthly real income of 2.32 hectoliters, and the female worker 1.06.

During zhiping [1064-1068], a local guard or bravo could only draw 0.7 hectoliters of rice.

Wages were relatively high during yuanfeng [1078-1086]. A stevedore might draw 3.25 hectoliters of rice. A sluice-gate worker during zhenghe [1111-1118] could only get 1.6 to 2.26 hectoliters.

The first notable characteristic of Song personal incomes is the high salaries of high ranking officials. The second characteristic is the great discrepancy between the incomes of high ranking and low ranking officials, and the comparatively low level of working people's incomes. Hence on the one hand, the culture of the official class reached a high level of development during Northern Song, but on the other hand social contradictions deepened, causing a number of popular uprisings. [Increasing income inequality is also, however, often a sign of accelerating economic development. EHK]

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[37] *Song Collected Statutes Compiled Draft*, "Food and Money," 64.16.

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4. *The Monetary Inflation Set Off By The Jin Invasions*

The Jin invasion, which began in xuanhe 7 (1125), 12th month, carried all before it. As soon as they set eyes on the Jin soldiers, the Song troops turned and fled. As late as xuanhe 6 [1124], in the Eastern Capital "lanterns lit the sky there as though there was no night, and the songs of flutes sounded everywhere as though the Spring had become eternal."[1] Before long, however, the city had fallen into the hands of the enemy.

Rice jumped to 3,000 cash per *dou*, pork to 6,000 cash per catty, mutton to 8,000, donkey meat to 2,000, and even rats sold for several hundred cash apiece.[2] By jianyan 3 [1129], a *dou* of rice had risen to 40-50,000 cash.[3]

Because the Jin had been confiscating gold and silver, these metals were hidden away, and their prices shot up still more rapidly. In jingkang 1 [1126], 1st month, 27th day, the Jin laid siege to the city. The authorities wanted to hold peace talks with the Jin, and so required gold, silver and cloth to pay them off. This made the demand for gold and silver still more pressing.

Orders were sent down for the people to deliver gold and silver to the government at an official price of 20 strings per ounce of gold and 1 string 500 cash per ounce of silver.[4] On the 19th of the 12th month,

[1] *Things Handed Down from Xuanhe Times*, former collection, xuanhe 6.

[2] *Crossing to the South Record*, 1, jingkang 1, 12th month 19th day: "There was heavy snow in the capital. It was several feet deep. Rice became terribly expensive, a *dou* reaching 3,000 cash." *Essential Record of the Years Since Jianyan*, 4, records that in jianyan 1, 4th month, xinyou, when the Jin pulled out of Kaifeng "prices leaped up, with a *sheng* of rice reaching 300, a catty of pork 6,000, of mutton 8,000, of donkey 2,000, and even a rat several hundred."

[3] *Essential Record of the Years Since Jianyan*, 25, jianyan 3, 7th month: "At this time in the Eastern Capital a *sheng* of rice was 4-5,000."

[4] Xu Mengxin, *Three Reigns' Northern Compact Compendium*, 32, jingkang 1, 1st month, 27th day, imperial edict: "The Court has recently been besieged by Great Jin, and the capital government is now discussing making peace. A certain amount of gold, silver and cloth is required as a bounty. Gold and silver are most urgently needed. . . . Beginning on the 27th of this month, families which have stored gold in the capital, or have buried it, or have had it sent off, must within two days turn in the entire amount to the Yuanfeng Treasury, the Daguan Treasury, the Left Treasury, the Bridge Goods Market Exchange Authority, or the Capital Tea Market. For an ounce of gold the

the authorities used tea and salt vouchers to exchange for gold and silver at the rate of 30 strings per ounce of gold and 2 strings 300 cash per ounce of silver.[5] On the 13th of jingkang 2, 1st month, the officials raised their prices once more to 35 strings per ounce for gold and 2 strings 500 cash reduced for silver.[6]

After the crossing to the south, not only was the Central Plain and Shanyou occupied by the Jin, even Jiangxi, Zhejiang and Hunan, all below the Yangtze, were also devastated. Large numbers of refugees fled south, and a great many copper coins remained behind in the capital, Bianjing [Kaifeng].

The mints of the south were closed down by warfare. As a consequence, the purchasing power of small 1-cash coins was very high, and prices expressed in them very low.[7] During jianyan (1127) in Yuezhou a *dou* of glutinous rice was 800, and nonglutinous rice was 400.[8] Though these were much higher than Northern Song prices, they must be considered low by Southern Song standards.

The first step of the Southern Song government was to consider restoring the minting of coins, but because supplies of copper, iron, lead and tin had been reduced, it was only possible to mint 100,000 strings annually at the beginning of shaoxing [1131], at a cost of 200,000, and as a consequence minting was frequently interrupted. Copper utensils were confiscated in shaoxing 6 (1136), but only 400,000 strings could be minted from the confiscated metal. Probably most of these were large coins. In shaoxing 13, 100,000 strings were made; in shaoxing 27, 150,000 strings.

How could so small a quantity support so many soldiers in defending that semi-fortress of rivers and mountains? Even after the war, taxes in kind were not sent in on time, and though various taxes in cash were put in place, under the circumstances, they could not be collected either. There was no alternative to paper money.

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At the beginning of shaoxing (1131), Communicating Medium was issued in the southeast only. Basically, this was a kind of money order certificate. Because it was inconvenient to transport coins to the garrison at Wuzhou, merchants were called upon to provide coins in Wuzhou in exchange for Communicating Medium issued there. When brought to Hangzhou, these certificates could be redeemed for cash.

Within a few years, however, the government no longer had enough cash with which to redeem them, and sometimes could only redeem 60 or 70 percent of the face value of the certificates in cash. At this point, merchants no longer wanted to handle Communicating Medium, and local governments finally had to force the issue. In shaoxing 6 [1136] 1.5 million in Exchange Notes was issued, but because there was no hard money backing for them, the people put no faith in them.[9] Later these were changed into Communicating Medium.

It is necessary to observe that during the early years of Southern Song the southeast still did not rely mainly on paper money. The center for circulation of paper money remained Sichuan. The southeast still mainly used metal coins.

During the jianyan and shaoxing periods [1127-1163], the coinage remained rather chaotic. Among jianyan coins, there were small 1-cash, 2-cash, 3-

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price in coin will be 20 strings; for an ounce of silver, 1 string 500 cash. On the first occasion, payment will be made with *gongju* exchange certificates, which can be redeemed for cash later."

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[5] *Record of Things Seen and Heard During the Two Reigns of Jingkang and Jianyan*, first part, jingkang 1, 12th month, 19th day: "There was another edict for the calling in of gold and silver in exchange for tea and salt vouchers. An ounce of gold was equated with 30 Thousands, and an ounce of silver with 2 strings 300 cash."

[6] Ding Teqi, *Annals of Things Heard During Jingkang*, jingkang 2, 1st month, 13th day, poster: "Gold, per ounce, 35 Thousands. Silver, per ounce, 2 Thousands 500 reduced." *Record of Things Seen and Heard During the Two Reigns of Jingkang and Jianyan*, first part, jingkang 2, 2nd month, 21st day: "The official bureaus still feared they would be unable to gather it in, and so established ten markets in the four quarters, where heaps of official coins were piled up to effect their purchase. The price was 35 strings per ounce for gold, and 2 Thousands and 500 per ounce of silver. Much escaped their hands." *Three Reigns' Northern Compact Compendium*, 83, jingkang 2, 2nd month, 24th day: "Official coins were again used to buy it up at a high price, and more than ten markets set up to do so. Gold fetched 35 strings per ounce, and silver 2 strings 500 cash per ounce."

[7] *Comprehensive Mirror for Illumination of the Prince Continued*, jianyan 1: "When the 3-cash large coin was first circulated in the various circuits, it was at the request of Zhang Jue. Under the old zhenghe period regulations, the 3-cash large coin only circulated in the capital, in the southeast, and in Hedong and Hepei. For this reason, the small coins of the southeast were terribly heavily demanded, and goods were lightly demanded."

[8] *Song Collected Statutes Compiled Draft*, "Food and Money: Miscellaneous Records on Taxes," 9.19.

[9] *Searches into a Multitude of Books*, latter collection, 62, "Mulberry Paper Money," says that in shaoxing 6 what Zhang Deng memorialized to request was the issue of Account Notes, but *Sagely Government of the Two Reigns of the Dynastic Revival of Imperial Song* says they were Exchange Notes. Cf. section 5.1.3, note 25.

cash and 10-cash denominations, with many variant forms among the 1-cash. The shaoxing coins also came in 1-cash, 2-cash and 3-cash denominations, in both Circulating Treasure and Original Treasure forms.

There were also privately minted coins, and it is even said that most of the coins used in the localities of Jiangxi were private ones. People everywhere were melting down official coins for reminting.[10] Most of these reminted coins were probably of 2-cash denomination, since there are some Shaoxing Original Treasure 2-cash coins which are coarse, thin and of poor quality metal. They are virtually the same size as 1-cash coins.

Men like Han Shizhong and Yue Fei were fighting the Jin then, and large numbers of soldiers were stationed in many places. Although support for most of these garrisons was a local responsibility, the expenses of the actual fighting were the burden of the central government. Therefore, the government's fiscal situation was generally one of outgo exceeding income. The annual deficit ranged from several hundred thousand strings to several tens of millions of strings. Naturally, this red ink had to be made up by issue of paper money.[11]

We can discern the value of money during the shaoxing era from rice and heavy silk prices. During xining 2 [1069] of Northern Song, the government bought rice at a price of 100 cash per *dou*, and this caused Wang Gui and Sima Guang to excoriate Lü Huiqing. In zhenghe 2 [1112], the market price was 120 cash per *dou*. In jianyan 1 [1127], a *dou* of non-glutinous rice was 400. In jianyan 4, 10th month, in Yuezhou, a *dou* of non-glutinous rice was 800 cash, and glutinous rice was 400.[12]

In shaoxing 1 (1131), when Emperor Gaozong was told by local authorities that the price of rice in Zhexi had declined from 1,200 cash per *dou* to 600, he was greatly pleased, and said this could stave off starvation.[13] The following Spring, however, it again rose in Liangzhe to 1,000 cash per *dou*.[14]

In shaoxing 3 [1133], Emperor Gaozong said, "The prices of food, drink and clothing, are at least three times what they were during xuanhe."[15] In shaoxing 5, the market price ranged from 700 cash per *dou*[16] to 1,000 cash.[17] At the time of the Autumn harvest, when rice is at its cheapest, rice was often trading among the people for only 300 cash full per *dou*.[18] Prices of 1,000 or 2,000 cash per

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[10] *Comprehensive Mirror for Illumination of the Prince Continued*, quoting Li Shenqi.

[11] *Essential Record of the Years Since Jianyan*, 111, shaoxing 7, Li Dai said: "The coins and goods collected during shaoxing 4 came to over 33.42 million strings. This fell short of expenditures by 510,000 strings. In shaoxing 5, income was over 36 million strings, with a deficit of over 10 million strings. All of this used up the surplus cash in the Proclamation Office and all funds collected for the following year. I have not seen the income figures for shaoxing 6, but expenditures are estimated at over 32.76 million strings. Income for this year is reckoned at 36.67 million strings, with a deficit of 1.61 million strings. . . . There have been deficits in recent years which have been met through issue of Coin Vouchers to make up the remaining expenditures. In shaoxing 4, 5.76 million were printed. In shaoxing 5, over 2 million were printed. In shaoxing 6, over 6 million were printed. At this point, there is too great a shortage of goods, and the price of the vouchers has fallen. This office advises that no more be printed."

[12] *Song Collected Statutes Compiled Draft*, "Food and Money," 70.31.

[13] *Song Collected Statutes Compiled Draft*, "Food and Money," 40, shaoxing 1, 7th month, 3rd day: "The Ruler asked whether the new rice bought last night had gone down in price. Zhang Shou memorialized that according to people who had come from Zhexi, prior to this a *dou* was 1,200, but now had gone down to 600. The Ruler was greatly pleased, and said, 'Not only will the army not lack for food, but this may allow starvation to be avoided. This is no trivial aid to the people.'"

[14] *Song History*, 67, "Treatise on the Five Agents," shaoxing 2, Spring: "There was hunger in Liangzhe and Fujian. A *dou* of rice was 1,000 cash."

[15] *Essential Record of the Years Since Jianyan*, 67.

[16] *Essential Record of the Years Since Jianyan*, 88, shaoxing 5, 4th month, gengxu, Li Guang said: "Recently, the price of rice in Liangzhe has gone up. It is going for 700 cash per *dou* in the market."

[17] Dong [?], *Relief of the People Book*, 2, "Unrestrained Prices," says: "In shaoxing 5, a *dou* of rice was 1,000 cash at the Travelling Capital. At this time, neither the Defender and Assistant Executive of the Secretariat Chancellery, Meng Geng, nor the Secretary of the Board of Revenue, Zhang Yi, restrained the price. I sent up a petition saying that if a *sheng* was sold for 25 cash, it would only be one-fourth of the current price, and would be a great aid to the lower classes. If next year rice became cheaper, orders could be issued to the circuits to buy it so as to restore reserves. Furthermore, the price in the villages will only jump up for two or three months. Once people have eaten the new rice, then the price will stabilize itself."

[18] *Song Collected Statutes Compiled Draft*, "Food and Money," 40, shaoxing 8, 9th month, 4th day, Xiao Zhen said: "I have made an investigation in Zhexi. When the harvest is complete, and rice is cheapest, its price using the official *dou* is 300 cash full among the people. Sometimes it is less than 300. Recently, official purchases have had to be made at a higher price. Though the price goes up and down over time, as supplies wax and wane, the officials often pay a premium of 10 or 20 percent over the price among the people."

dou likely were famine prices.[19] In shaoxing 11 [1141], the price fell to something over 100 cash per *dou* in Hunan, and the officials said that "the price of grain has never been as low as this."[20] In shaoxing 12, it was only 100 cash per *dou*.[21] Fan
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Chengda's couplet "Wheat and millet per *dou* both fetch a hundred coins, Each farm family's called and a decent harvest joins," is probably alluding to this sort of situation.

There was a good harvest in Jinghu during shaoxing 13 [1143], and it is said that prices fell to 6 or 7 cash per *dou*.[22] This could be an error for 60 or 70. By shaoxing 26 [1156], the cheapest price was 130 cash per *dou*.[23] There was a good harvest in Fujian in shaoxing 27, and a *dou* of coarse rice approached 300 cash. The year after that, for people transporting sprouted rice for taxes, each *dou* was reckoned at 800 cash.[24] In shaoxing 29 [1159], goverment rice purchases for relief preparations were at a price of 2,000 per picul, and a portion of this price was paid in Communications Medium and tea vouchers.[25] The price was several dozen cash per *dou* in the Hu-Guang region in shaoxing 30.[26]

Because the price of rice was much influenced by natural phenomena, the degree to which it rose and fell was also great. Generally speaking, the price of rice during the shaoxing period, or during the first half of the twelfth century, was something over 3,000 cash per picul. This was seven or eight times higher that the price during early Northern Song, and three or four times higher than during the xining and yuanfeng eras.

There were great changes in the price of heavy silk during this period. Up to the xining and yuanfeng eras [1068-86] of Northern Song, a bolt of heavy silk ranged from 1,000 to 1,300 cash, and this rose slightly during chongning and daguan [1102-11] times.[27] Later, the abolition of large coins and tin alloy coins, and the putting in order of paper money[28] may have pushed prices down some-

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[19] *Song History*, 67, "Treatise on the Five Agents," shaoxing 5, Summer: "There was famine in the Tong-Chuan Circuits, with a *dou* of rice at 2,000, and people eating hay and husks." In the Spring of the following year, "there was also a famine in Shu, with a *dou* of rice at 2,000, and double that price in Li Circuit. People were starving to death on the roads." *Essential Record of the Years Since Jianyan*, 109, shaoxing 7: "In the Spring there was a great famine in Guangxi, and a *dou* of rice was 1,000 cash. Many people starved to death." *Ibid.* "There was starvation in Sichuan. A *dou* of rice was 3,000 cash." *Song History*, 65, "Treatise on the Five Agents," shaoxing 9: "There was famine in Jiangdong, Jiangxi and Zhedong. A *dou* of rice was 1,000. Things were especially bad in Raozhou and Xinzhou."

[20] *Song Collected Statutes Compiled Draft*, "Food and Money," 40.14, shaoxing 11, 8th month, 13th day, the officials said: "In the southern part of Jinghu, the current price of a *dou* of rice is something over 100 cash. The price of grain has never been as low as this. Today the coin famine is worse in Hunan than any place else. Families are hoarding grain in anticipation of bad harvests."

[21] *Song Collected Statutes Compiled Draft*, "Food and Money," 40.14, shaoxing 12, 11th month, 16th day, edict: "Now the price of rice is only 100 cash per *dou*."

[22] *Song History*, 175, "Treatise on Food and Money: Harmonious Purchase," shaoxing 13: "There was a good harvest in Jinghu. A *dou* of rice was 6 or 7 cash, and it was bought to aid the people of Jiang and Zhe."

[23] Xiung Ke, *Small Calendar of the Dynastic Revival*, shaoxing 26, 7th month: "Word has arrived from all offices in Huainan. In the places where it is cheapest, rice is 130 cash per *dou*.

[24] *Song Collected Statutes Compiled Draft*, "Food and Money," 70.47.

[25] *Song History*, 175, "Treatise on Food and Money: Harmonious Purchase": "In [shaoxing] 29, 2.3 million piculs were purchased to prepare for relief loans. A picul's price had fallen to 2,000. Communications Medium and tea vouchers were used along with silver to make up the payment."

[26] *Essential Record of the Years Since Jianyan*, 187: "In recent years in Jiangxi and Huguang, a *dou* of rice has only been several dozen cash, and those in charge of field rice have ordered that it be discounted to 3-4,000." (The words of Chen Junqing in shaoxing 31, 11th month.)

[27] *Comprehensive Mirror for Illumination of the Prince, Long Draft, Continued, Addendum*, 1, jianzhong/jingguo 1, 8th month, renzi, quoting *Complete Account of Nine Song Reigns Arranged Chronologically*: "And to speak of Wuweijun, when a bolt of heavy silk is bought among the people, it requires 1 string 400-500 cash full." *Song Collected Statutes Compiled Draft*, "Food and Money," 26, shaoxing 8, 2nd month, 28th day: "Only at that time [chongning 2] did the district magistrate begin. He wished to discount the lower level households' footrecruit and salt cash to 9 *chi* of heavy silk for each 220 cash." At the beginning of daguan, in ten commanderies of Jiangxi, 900 cash per bolt was required for harmonious purchase of cloth. (*Song History*, 175, "Treatise on Food and Money," first part, 3.) Harmonious purchase equalled half the requisition.

[28] After the Coin Vouchers were put in order during daguan, their purchasing power rose. *Song History*, 181, "Treatise on Food and Money: Account Notes," states: "When Zhang Shangying took office, there was received an edict restoring the old regulations. During xuanhe, Shangying recorded memorials on current practices, maintaining that since the adoption of the old regulations, the vouchers' price had been restored to a stable level." These old regulations were the limitations on the size of

what, but after the crossing to the south, they rose from a price of 2,000 per bolt.

SOUTHERN SONG CLOTH PRICES[29]

Date	Price per Bolt	Source
jianyan 1 (1127)	2,000 cash	Song Coll.Stat., "Punishments,"3
3	2,000	Song His,"Food & Money,"first,3, "Plain Cloth"
4	3,000	Inv.Lit.Rem, "Market Purchases,"1
shaoxing 1 (1131)	2,000	Song Coll. Stat."F&M," 38
2	3,500	Inv.Lit.Rem, "Market-Purchases,"1
	4,500 reduced to 5,000 cash full	Song Coll.Stat., "F&M,"9
3	3,000 to 6,500	Song His, "F&M," first,3
4	4,000 to 10,000	Song Coll. Stat., "F&M,"38 & 64
	5,200 reduced	Inv.Lit.Rem., "Market Purchases," 1
5	5,500 full	Song Coll. Stat., "F&M," 64
	7,000 reduced	Inv.Lit.Rem., "Market Purchases," 1
6	6,500 to 7,000	Song His., "F&M," first,2,"Taxes"
7	8,000 reduced	Inv.Lit.Rem.,"Market Purchases,"1
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shaoxing 8	8,400	Song Coll. Stat., "F&M,"26
17	6,000 to 10,000	Song His, "F&M," first,3. Song Coll. Stat., "Miscell. Rec.Taxes"
	6,000 to 7,000	Inv.Lit.Rem., "Market Purchases,"1
18	6,000	Song Coll. Stat., "F&M," 9
36	4,000 to 5,500	Ess.Rec.Years Since Jianyan,171. Song Coll. Stat., "F&M," 9
jiading 13 (1220)	4,000	Song Coll. Stat., "Receipts," 68.24

the issue and maintenance of a cash reserve.

[29]The prices in the table include both market and official prices. Market prices were more complicated and changeable than official prices, but official prices followed the trends established by market prices. When the government collected heavy silk, it set a low face value on it, and when it put out silk, it set a high price for it.

The jump in the price of heavy silk was caused by a fall in production and an increase in demand, but it is hard to calculate what portion of the price should be considered a kind of tax, and what portion was caused by the depreciation of the currency.

Although the administrative center then was in the southeast, the center of military operations was in Sichuan and Shaanxi. The various new monetary measures, such as iron coins and paper money, all arose in Sichuan and Shaanxi.

Later, Shaanxi was occupied by the Jin, and Sichuan fell under the protection of Wu Jie and his sons, but because of his large garrisons, its burden remained especially heavy. When Li Dai discussed the fiscal situation of Sichuan in shaoxing 7 [1137], he said that during the Tang at the time of Liu Yan, the entire national income was 12 million, but that now the revenue just from that one corner of the nation constituting Sichuan, and from just the salt and wine tax was 10.91 million, and with the other sources of income included, the Sichuan total came to three times the level for the entire country in Liu Yan's time.

To maintain the large army of that time during Tang there was still a deficit of 1.61 million. In Liu Yan's time, 12 million strings sufficed to support the Six Armies' retaking of the Central Plain, and there was some left over. Now, 36 million strings was not even enough to support the lone army garrisoning Sichuan and Shaanxi.[30] Li Dai's words clearly state the nature and causes of the Sichuan monetary inflation.

The war with Western Xia during Northern Song had already increased the quantity of Sichuan's paper money from some 1.2 million to over 20 million strings, causing a large drop in its value. The situation was regularized during daguan [1107-11] by restoration of the tiensheng period [1123-32] limits on the size of the issue, but after the crossing to the south, the quantity again gradually increased.

In jianyan 2 (1128), Jin Bowen increased the amount printed by 620,000 strings worth to pay for an increase in the size of the garrisons in Lizhou Circuit.[31] In jianyan 3, Zhang Jun printed another

[30]*Essential Record of the Years Since Jianyan*, 111. *Song*

million strings worth for army provisions. During the next eight years, an additional 20.54 million strings were turned out.[32]

By shaoxing 7, three terms of notes were circulating simultaneously, and the total quantity in circulation was 37.8 million strings worth.[33] Over the course of thirty years, there had been an increase of thirty fold, and the extent of the fall in their value can be imagined. This was probably why prices in Lizhou Circuit were often twice as high as levels in other places in Sichuan.

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After the fall of most of Shaanxi, military pressure on Lizhou became heavier.

Since military expenses could not be reduced, the only way to alleviate the situation would have been to mint coins. It was because the Coin Vouchers of that time could not be redeemed for cash that their value fell still more, and everyone felt that if there were coins to redeem them, the tendency for a fall in their value might be mitigated.

It was for that reason that right through the shaoxing period, coins were minted in Lizhou, Qiongzhou and Shizhou. It was to support the Coin Vouchers. But they were only minted in very limited quantities.[34] This had very little effect in handling the several hundred fold increase in paper money. During the shaoxing period, 1 string's worth of Coin Vouchers was nominally valued at 800 iron

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History, 374, "Biography of Li Dai."

[31] *Essential Record of the Years Since Jianyan*, 16, jianyan 2, 6th month: "By now, Bowen had increased the size of the garrisons of western soldiers in Lizhou Circuit, and military provisions were cut off. . . . Later, because that was convenient, he printed 620,000 more strings worth of Coin Vouchers. Thereafter, when high officials took command of armies, they regularly increased the quantity printed."

[32] *Essential Record of the Years Since Jianyan*, 29, jianyan 3, 11th month: "The Proclamation Establishing Commissioner, Zhang Jun, because of its convenience, printed 1 million strings of Coin Vouchers to aid with army provisions. During the remaining eight years, 20.54 million more strings worth were amassed. Jun set up a Coin Voucher Authority in Qinzhou for aid on the frontier." *Song History*, 374, "Biography of Li Dai": "Recently, there have been annual deficits, which have been met by the addition of Coin Vouchers. In shaoxing 4, another 5.76 million strings were printed, in shaoxing 5 another 2 million, and in shaoxing 6 another 6 million. By then their number had become excessive, and the price of the vouchers

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fell. For this reason no more were printed." According to *Shu Broad Record*, from shaoxing 1 to 6, a total increase of 20.7 million occurred. In shaoxing 1, the increase was 600,000; in shaoxing 2 it was 1.4 million; in shaoxing 3 it was 5 million; in shaoxing 4 it was 5.7 million; in shaoxing 5 it was 2 million; and in shaoxing 6 it was 6 million more. In shaoxing 8, another 3 million were added; in shaoxing 9 another 2 million; in shaoxing 10, 5 million; in shaoxing 13, 4 million; in shaoxing 29, 1.7 million. *Song History*, 29, "Annals of Emperor Gaozong," shaoxing 10, 3rd month: "An additional 5 million strings worth of Coin Vouchers were printed and delivered to the Proclamation Office for buying army stores. The Sichuan-Shaanxi Deputy Proclamation Commissioner, Hu Shijiang, had frequently said that the Jin were certain to break the treaty, and that it was necessary to make preparations."

[33] *Investigation of Literary Remains*, "Investigation of Coins," 2, shaoxing 7, 2nd month: "The Sichuan-Shaanxi Deputy Commander, Wu Jie, requested the setting up of silver Account Notes in Hechi. During the 5th month, the Secretariat said that the number of Vouchers was already large, and it feared harm to the established system. An edict halted the move. In the times of the founding rulers, two terms of paper notes circulated simultaneously in Shu, and each term's issue was only 1.2 million. Now, three terms circulate simultaneously, for a total of 37.8 million. By the end of the shaoxing era, the total reached 41.47 million strings of paper, when there were only 700,000 strings of iron coins in all."

[34] *Miscellaneous Record In and Outside Court Since Jianyan*, 16, "Taxes, 3: Minting of Coins in Sichuan and Shaanxi": "Of old in Sichuan and Shaanxi iron coins were circulated. In the times of the ancestral rulers, there were iron smelters in Lizhou, Yizhou and Luanzhou. Hence, mountains of coins were minted. Of old in Qiongzhou, 12 [120,000?] strings of coins were minted. At the beginning of jianyan, the Transport Supervisor, Jin Bowen, estimated that production cost was 210,000 per annum, and since returns did not cover costs, minting was halted.

"In shaoxing 10 [1140], Deng Hengzhong became Proclamation Commissioner of Sichuan, and began to mint coins in Lizhou to the amount of 12 [120,000?] strings annually, so as to remedy abuses of the Coin Vouchers. It cost 2,000 cash to make 1,000 cash. . . . In shaoxing 23, . . . for the following year, Qiongzhou was ordered to mint 30,000 strings, Lizhou 90,000 strings, at a total cost of 175,000 strings in Coin Vouchers. The cost of each 1,000 strings was 1,400 strings. In shaoxing 25, there was another edict for Lizhou to mint 20,000 each of large and small coins.

"A thousand of the large coins weighed 12 catties. A thousand of the small coins weighed 7.5 catties. This reduced the annual cost of minting 30,000. In shaoxing 31, the Lizhou coinage was again reduced to 60,000 strings, half in large and half in small coins. Shizhou had also formerly minted 10,000 strings, and Nanpingjun several thousand strings. At the end of shaoxing, these were all reduced. Currently in Shu 107,000 are minted annually."

Essential Record of the Years Since Jianyan, 154: "In [shaoxing] 15, 7th month, day wushen, the Shaoxing Inspectorate was

coins or 400 copper coins.[35]

Wu Jie no doubt issued silver Account Notes in Hechi so as to stabilize prices in that region. Silver Account Notes took 1 *qian* (0.1 ounces) as their unit. Annually 145,000 *quian*'s worth were issued, equal to 36,250 strings of Coin Vouchers. This was no great amount, but since they developed links to the Coin Vouchers, they were affected by the latter's fall in price, and this destroyed the significance of their being denominated in silver units. It was probably for just this reason that in shaoxing 17 [1147] a reform was carried out.

The total amount of Coin Vouchers that had been issued was over 41 million strings by shaoxing 31.[36] In reserve there were only 700,000 strings of iron coins, and such commodities as salt and stillbeer.

At that time Wang Zhiwang was in charge of the finances of Sichuan. Maintenance of the value of the vouchers was his responsibility. His policy was to spread the distribution of Coin Vouchers into Shaanxi. Shaanxi was then in Jin hands, but the requirements of its people for cloth, tea and medicine were all being met by Sichuan products. Wang Zhiwang asked the government to issue an order that if merchants took Coin Vouchers to Shaanxi, and they were subsequently brought back from Shaanxi, they could circulate them normally. In this way the sphere of circulation of Coin Vouchers might be broadened. He urged strict prudence in expanding the issue of Coin Vouchers, saying that if they were discredited, Sichuan was finished. If it was necessary to increase their issue, it had to be done secretly in stages, and outsiders must not be permitted to learn the size of the increase.[37]

It was at this time that the Jin ruler, Liang, (King Hailing) launched his great attack aimed at keeping watch on Shu. Wang Zhiwang had cudgeled his brains making plans for Sichuan's fiscal policy. This was because, as the saying goes "to win battles requires big rewards; to accept the enemy's surrender requires big expenditures,"[38] and both victory and defeat cost money.

Emperor Gaozong also said that employment of soldiers in Sichuan and Shaanxi depended entirely on Wang Zhiwang: "A great army of over 100,000 has been confronting the Jin, and yet the people of Shu do not realize it. How could any one else have managed this? Zhiwang has been in Shu almost like Xiao He in the Guanzhong.[39]

When we examine the three or four decades beginning with the jianyan era, we see that although production decayed and military expenditures were vast and numerous, and in addition to Sichuan, the southeast was now issuing paper money, high prices only occurred during the decade or two prior to shaoxing 10.

And yet even the price of rice during those years (1121-1140), seems

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not to have exceed that during the two decades of the An-Shi disturbances during Tang (751-770). During the '50s and '60s of the eighth century, a hectoliter of rice averaged 17-18,000 cash, and during the '20s and '30s of the twelfth century, a hectoliter of rice only averaged something over 11,000 cash.

During both periods, a bolt of heavy silk was never higher than 10,000 cash. During mid-Tang, however, demand for silk, in addition to its international trade component, was mainly a domestic socio-economic phenomenon, since people used silk cloth to partially substitute for other moneys. That demand was not an urgent one. If cloth was available, it was used, but if not available, that was also fine. Both before and after the Song imperial house crossed south, demand for cloth, in addition to its international trade component, which exceeded the scale of Tang times, also involved an enormous annual payment of tribute to the northern peoples.[40]

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reestablished in Lizhou. It produced 100,000 strings per annum to help remedy the abuses in the Coin Vouchers."

[35] *Song Collected Statutes Compiled Draft*, "Punishments for Bribery," 12.8, shaoxing 17, 3rd month, 7th day: "For counterfeiting 10 Coin Vouchers, there is to be a fine of 10 Strings, with a market value of 8 strings, or if of copper coins, only 4 strings."

[36] Cf. note 33. *Song History*, 374, "Biography of Zhao Kai": "The Chengu prefectural regulations were again put into effect. A Coin Voucher Authority was set up in Qinzhou. . . . At first, two terms of cash vouchers of some 2.5 million circulated. Now the number which had been printed had increased to more than 41.9 million, and people did not consider that many, nor was their value diminished."

[38] *Essential Record of the Years Since Jianyan*, 198, shaoxing 32, 3rd month: "Wang Zhiwang sent the chief minister a letter saying, 'Up to now, the three commanders have attacked separately, and the offical army's men and those who have come over to our side total 120,000 men. Previous occasions for employing soldiers have not been like this current one. Gifts and rewards, and expenses for provisions and fodder have already consumed over 10 millions in vouchers. During the 20 years since the truce, the very small amount which has been accumulated, as well as the coins and goods which the court has time after time expended, have all been used up, and hardly anything remains.'"

[39] *Essential Record of the Years Since Jianyan*, 199, shaoxing 32, 9th month.

[40] Emperor Zhenzong's Danyuan Treaty called for an annual

Moreover, the price of heavy silk had been high since the beginning of Song. When it had jumped to 10,000 cash per bolt during Tang, that was a fifty-fold rise. The Song rise to 10,000 cash per bolt was only a rise of ten fold.

There must have been particular reasons for this more moderate rise happening to the densely populated Southern Song. One of these particular reasons was the gradual revival of production, since silk was a southern product. Another was that the quantity of coins gradually diminished, and even the paper money issued in the southeast was not very large in quantity.

A portion of the coins minted during xining and yuanfeng flowed abroad, and a portion was perhaps squirreled away in the ground. I suspect the latter was greater in quantity than the former. The troubles of the jingkang era sent many fleeing far from their homes. Since it would not have been convenient for them to carry copper coins away with them, they could only bury them in the earth to await the return of peace. That in modern times large numbers of Song coins have been excavated, illustrates this point.

Since new supplies of coins were extremely limited then, there appeared another coin famine, which kept prices from rising too high.[41] After shaoxing 10, prices fell again.

payment to the Khitan of 200,000 bolts of heavy silk and 100,000 ounces of silver. In Renzong's time, the annual tribute was increased by 100,000 bolts of heavy silk and 100,000 ounces of silver. Emperor Huizong's treaty with the Jin aiming at the destruction of Liao awarded Jin 400,000 bolts annually. After the Jin attacked the capital in jingkang 1, their emissaries extorted 10 million bolts. Cf. *Comprehensive Mirror for Illumination of the Prince Continued*, 97.

[41] Cf. note 20. *Essential Record of the Years Since Jianyan*, 79, shaoxing 4, 8th month, guiji, Chen Jue said: "The bad thing today is that goods are expensive and coins are few."

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5. Southern Song's Account Note Inflation

In the Summer of shaoxing 31 [1161], the Hailingwang of Jin led a large army in an attack on the south. Several months of hard fighting brought him to the lower course of the Yangtze, where he occupied Yangzhou. It was only when he was killed by his war-weary subordinates during the 11th month, that peace negotiations got underway, and the Jin withrew to the north. By then, the Jin had already set up the Hailingwang's cousin as the Emperor who is posthumously known as Shizong. The following year, Southern Song's Emperor Gaozong abdicated, and was succeeded by Emperor Xiaozong. Both sides, however, remained on the alert.

Before the Jin attack, Southern Song had already adopted a new paper money, Account Notes. The term Account Note was not a new one. In shaoxing 7 [1137], Wu Jie had issued silver Account Notes in Hechi, Shaanxi, but large scale use of paper money in the southeast began with this issue of Account Notes. The ability to fight the Jin war naturally depended in large part on Account Notes.

The Account Notes' sphere of circulation was at first limited to Liangzhe. Later it extended into Lianghuai, Hubei and Jingxi. Aside from salt, for which cash was employed, Account Notes could be used for all other purposes.

When first issued, there seems to have been no set limit on the quantity of Account Notes. In qiandao 3 (1167), 1st month, the Duzhilang Tang Yuan said that during the five years between shaoxing 31 and qiandao 2, 7th month, over 28 million Account Notes had been printed, with each note having a face-value of 1 string. Up to qiandao 2, 11th month, 14th day, a total of 15.6 million of them had been issued, but only 9.8 million were in actual circulation. As of qiandao 3, 1st month, 6th day, there were still over 8 million strings worth in circulation. Probably only 600-700,000 per month were being redeemed.[1]

During qiandao 2, the government felt it had issued too many, and so used a million ounces of silver to redeem them. In longxing 2 [1164], the authorities were still selling rice for only 25 cash reduced per *sheng*,[2] but at the beginning of qiandao,

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Investigation of Literary Remains, "Investigation of Coins, 2." *Sagely Government of the Two Reigns of the Dynastic Revival of Imperial Song*, 46, qiandao 3, 1st month: "This month the Duzhilang Tang Yuan said that since shaoxing 31, when Account Notes were created, to qiandao 2, 7th month, a total of 28 million notes had been printed. Before qiandao 3, 1st month, 6th day, aside from those brought in for redemption, there remained more than 8 million strings worth unredeemed among the people. Recently, the circuits have been transporting things according to official instructions, and have been demanding full payment in cash. As a consequence, the localities have not been permitting people and households to make payments to them in Account Notes, which has caused their circulation to be halted. Merchants buy them up at a low price, and cart them to the Travelling Capital. As a consequence, the six Authorities which cash them in have been besieged by disorderly crowds."

rice was being sold for 5-600 cash per *dou*.[3] In qiandao 3, another 2 million ounces of silver from the treasury were exchanged for coins to redeem Account Notes, which were then burned.

In qiandao 4, the system for issuing Account Notes was reformed. Their term was fixed at three years, and a limit of 10 million strings was fixed for each issue, which was eight times more than the limit per issue observed during Northern Song for Exchange Notes. Rice then ran 2 strings 500 cash per picul.[4] In qiandao 9, a 1-string Account Note was only worth 600 cash full of copper coins.[5]

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Nevertheless, Account Note inflation was hard to avoid under wartime conditions.

At the beginning of chunxi [1174], the quantity of Account Notes in circulation exceeded 22 million.[6] Their purchasing power fell, and the government had no choice but to use gold, silver and copper coins to redeem all of them.[7]

In chunxi 3 (1176), the 3rd and 4th terms of Account Notes were both extended for three years. This represented formal doubling of the quantity issued. However, the people accepted Account Notes, and used them to pay taxes, thereby returning them to the treasury. The annual intake of the Board of Revenue then of 12 million strings was half in Account Notes. Simultaneously, the authorities used gold and silver to redeem 4 million's worth, and so the actual quantity in circulation only exceeded the amount set for that term by 2 million. By chunxi 12, a 1 string Lin'an Account Note was only worth 750 cash.

By Emperor Guangzong's shaoxi 1 (1190), the 7th and 8th terms of Account Notes were again extended by three years. In qingyuan 1 (1195), they simply increased the size of each issue by 30 million, three times the size of the qiandao 4 issue. Counterfeits proliferated. A 1-string note fell to 620 cash. Though the authorities wanted to maintain the price of 1 string at 770, they were not very successful.[8] In jiading 3 (1210), a 1-string Account Note was only worth 300-400 cash.[9] Since so many had been issued, the amount the government took in for payment of taxes also increased: By the end of chunxi, there were more than 65.3 million, six or seven times the number at the beginning of Southern Song. The historians sometimes flaunt their sympathy for the people by dwelling on this,[10] but actually this is an inevitable phenomenon during a time of monetary inflation.

During Emperor Ninzong's kaixi period (1205-1207), Han Tochou was in power, and set off reckless military moves. The Jin soldiers took Jing and Xiang and Lianghuai, shaking the southeast. As a consequence, in jiading 2 (1209), the quantity of Account Notes in circulation increased to 115-116 million strings, eleven times more than the quantity in qiandao 4 (1168). This was in addition to the various copper and iron coins.

In Emperor Lizong's shaoding 3 (1230), Li Quan created disorder in Huaidong, and the next year Mongol soldiers attacked Sichuan and Shaanxi. In shaoding 5, the two terms of Account Notes totaled over 329 million.[11] During 65 years, their number had increased 33 fold.

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[2]*Song Collected Statutes Compiled Draft*, "Food and Money: Relief Loans," 63.

[3]*Song History*, 178, "Treatise on Food and Money," first part, 6, quoting the words of the Investigatory Censor, Zhao Shunsun in xianchun 2.

[4]*Investigation of Literary Remains*, "Investigation of Market Purchases, 2, Social Granaries."

[5]*Song Collected Statutes Compiled Draft*, "Food and Money," 40.14, qiandao 9, intercalated 1st month, 7th day, Li Anguo said: "If one uses a 1-string Account Note and 400 cash diminished, one may obtain one picul of rice. Reckoned in ready cash, a *sheng* is 8.4 cash full. From of old, there has been no such example of a price, and I suspect such reports are mistaken."

[6]*Song History*, 181, "Treatise on Food and Money." *Searches into a Multitude of Books*, latter collection, 52, "Uses of Wealth: Mulberry Paper Money," says that in qiandao 4, two terms were in circulation together, amounting to 20 million strings. It also says that in chunxi jiawu (i.e. 1), a total of 41.2 million strings were in circulation. Evidently ever since qiandao two terms had been in circulation simultaneously.

[7]*Song History*, 181, "Treatise on Food and Money."

[8]*Three Pens of the Leisure Studio*, 14, "Exchange Price of Official Account Notes": "In chunxi 12, I was called back from Wu, and saw a Lin'an man holding a small placard saying he would exchange one piece of mulberry paper for 750 cash. . . . But after this, abuses arose, and there were counterfeiters everywhere. Until they were captured, there could not be good government. Hence the notes in circulation were increasingly lightly demanded. By qingyuan yimao [1], most of them exchanged for 620, and the court was grieved by this. An edict to the several circuits of Jiang and Zhe insisted that notes be bought for 770 cash. The intention here was certainly good, but had not been deeply pondered. If, when paper is exchanged for cash there is not even a small profit, who would be willing to do it?"

[9]*Song Collected Statutes Compiled Draft*, "Food and Money," 28.51, jiading 3, 8th month, 27th day, edict: "Families holding paper vouchers are buying Account Notes at a low price. For each string they use 300-400 cash."

[10]*Miscellaneous Record In and Outside Court Since Jianyan*, Collection A, 14, "Finances."

[11]These figures are based on the *Song History*, "Treatise on

Though the rate of inflation could not be considered rapid, it was not small either. These figures are only for those the government issued. If we include counterfeit Account Notes,[12] the figures would be still larger. Originally, because the rate at which paper notes wore out was so large, the quantity presented for redemption was smaller than the amount originally issued. For example, in shaoxing 11, when Coin Vouchers were redeemed, some 200,000 strings worth were not presented for redemption for this reason. This was called fire-and-flood-not-presented-cash.[13] Later, however, the quantity presented for redemption was often greater than the amount originally issued. This shows how much counterfeiting was going on.[14]

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Account Notes were in no sense a nation-wide currency. Account Notes were not the only money used even in areas under Southern Song rule. The Coin Vouchers of Sichuan alone had grown in number by the end of shaoxing to over 40 million.

Later, the wars provoked frequent increases in the issue, and by the end of Emperor Ningzong's jiatai period (1204), two terms were issued together to the amount of over 53 million strings, and the total for three issues was around 80 million strings, 64 times more than during tiansheng. By the beginning of jiading a string was worth less than 400 cash, and later fell to 100 cash.[15]

Food and Money." The figures in *Song History*, 423, "Biography of Wang Yu," are somewhat different. Wang Yu states: "The state is poor and mulberry paper numerous. The abuses began with soldiers. In qiandao and chunxi, when mulberry paper money began to be issued, there was only 20 million. At that time, south and north were at rest. When military operations began during kaixi, they increased to 140 million. During shaoding, things were happening in Shandong, and the amount increased to 290 million. The advisers could only grieve at the poverty caused by mulberry paper, and not reprove for the military disasters. They tolerate the present measures for handling things. During jiading, the amount increased to some 288,000 . . . Now there is no other plan except to resort to mulberry paper money at the first sign of a military or frontier crisis."

Ibid., 415, "Biography of Huang [Shou?]ruo": During kaixi "from the time military moves began, expenditures were broad, and the court issued a great quantity of Account Notes. Now they were being discounted ever more steeply, and the court spoke severely about raising their price, but the people increasingly would not accept this. The local governments tried to measure them out, but people all closed and locked their doors. A traveller might carry his certificates all day long and not get one coin or one thing in exchange for them."

[12]*Record of Barbarian Strength*, Collection E, first part, "The Huangchiniu": "The Huangchi town belongs to Taipingzhou. To its east is the border with Xuanchengxian. Within a space of 10 *li* are gathered the fallen,

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all those who have fallen into the hands of bad elements, and who have no ancestral temples. Howling, they gather to butcher oxen and kill dogs, brew illicit stillbeer, cast feather coins and manufacture mulberry paper money, all of which are forbidden as harmful activities, and none of which they do not practice."

[13]*Essential Record of the Years Since Jianyan*, 141.

[14]*Song History*, Treatise on Food and Money: Account Notes": "In the 3rd year, the officials said, though the quantity of officially printed notes has diminished, counterfeit notes are increasing. For example, of the 15th and 16th terms of Account Notes, the quantity brought in was less than that originally issued. Now, however, though the amount of the original issue has been exceeded, notes keep coming in. If there has not been counterfeiting going on, how could so many be coming in?"

There was also counterfeiting of Coin Vouchers. *Song History*, 374, "Biography of Zhao Kai," records that "the Proclamation Office obtained 300,000 counterfeit vouchers, and 50 lawbreakers." *Song Collected Statutes Compiled Draft*, "Punishments," 2.145, jiading 16, 1st month 5th day, the officials said: "For years counterfeit mulberry paper has steadily grown in amount. When the old mulberry paper of dingmao was to be replaced with new, it was found to be present. It was found among Shu mulberry paper when it was exchanged. It is present in humble households, where it usurps the sovereignty of the Son of Heaven. Private coiners and printers also possess it. When the mulberry paper of a given issue circulates for several years, a certain unknown amount will be lost in fire or flood, or be lost in distant places and so miss the deadline for redemption. If, however, a surplus is presented at the time of expiration, then we can be sure that there are many counterfeits."

[15]*Song History*, 181, "Treatise on Food and Money: Account Notes": "In Emperor Xiaozong's longxing 2, the provisions official Zhao Qin printed 2 million additional [coin vouchers]. In chunxi 5, Shu vouchers were increased to 45 million. They were ordered to increase no further. In Emperor Guangzong's shaoxi 2, there was an edict extending the term of Sichuan vouchers. At the end of Emperor Ningzong's jiatai period, two terms worth were circulated simultaneously, to the amount in all of 53 million strings, and when three terms were circulated, the amount was still greater."

Miscellaneous Record In and Outside Court, 16, "Outline of the Redemption of the Ninety Terms of Sichuan Vouchers": "At the end of jiatai, two terms worth were circulated together, in all comprising 53 million strings, and three terms circulated at a quantity 64 times greater than those of tiansheng times. By the beginning of jiading, a string was only worth 400 or even less. . . . Discussions went on for several months, and then word was suddenly sent down to the prefectures to let the people turn in old vouchers to the officials, and to sell gold and silver in Lizhou. The end of the year was set as the deadline for receiving

Two terms of Hubei Account Notes were also circulated simultaneously in chunxi 11 [1200], to a total amount of 5.4 million strings. In addition, there were also Lianghuai Account Notes in no small quantity. There were also 2.04 million strings of Xingyuanfu iron cash Account Notes printed and issued every two years. This was the equivalent of 400,000 strings worth of Sichuan Vouchers. Silver Account Notes were again issued beginning in shaoxing 17, to be redeemed every two years. In qiandao 4 the size of the issue was increased to 30,000 *qian*. Later, the issue grew to 610,000 *qian*, which was equal to 150,000 strings of Sichuan Vouchers.[16]

Increased issue of paper money caused a reduction in the quantity of hard money, or its being hoarded, or melted down, or its being driven out of the country.

Northern Song's Exchange Notes and Southern Song's Communicating Medium of the shaoxing era were rarely used by common people for ordinary purposes. It was with the issue of Account Notes that a genuine generally circulated paper money came into being.[17]

Later, because prices expressed in paper money increased, people decided that it was better to melt down copper coins for other uses than to employ them as coins, since they could obtain a very large profit from doing so. Hence in chunyou 8 (1248), the Investigative Censor Chen Qiulu said that the Juxin copper utensils and the Liquan musical instruments were all made from copper coins. In Changsha alone there were 64 copper smelters on Wu Mountain, and there were several hundred copper households at Matan and Eyang Mountain.

Export of copper cash was a serious problem during Southern Song.[18] It was even more severe than during Northern Song's xining and yuanfeng periods. The outflow of coins during that earlier period only induced a slight contraction in the money supply. The reduction in the quantity of Southern Song's copper coins caused the purchasing power of the paper money to fall still more rapidly. The route out for these coins seems still to have been by way of foreign trade, and the destinations for the copper coins, as before, were those regions employing Chinese coins as money.

After the Song Dynasty crossed to the south, it was cut off from the land routes to the west which had been open since Han and Tang times. This would seem to have reduced by one the routes out for copper coins.[19] In fact, however, this was not the case.

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them. When the placards were posted, there was great alarm among the people. . . The most distant of the prefectures of Sichuan were well over a thousand *li* away. . . . The vouchers' value was only 100 cash."

[16]*Miscellaneous Record In and Outside Court Since Jianyan*, Collection A, 16, "Finances," 3.

[17]The stories in *Record of Barbarian Strength* all date to after shaoxing times, and frequently mention use of mulberry paper money. For example, in Collection B, "The Teahouse Servant Cui Three": "The Huangzhou townsman Li Ten said he would open a tea shop below the Guanfeng Bridge. At the end of the Spring of chunxi 8, [a young woman knocked at his door and entered] . . . The woman said, 'The monthly rent you get is only a thousand cash, which is usually not enough to meet your needs.' She took out of her sleeve a government certificate for a thousand, and gave it to him. The rest she frequently brought to help out a bit."

[18]*Essential Record of the Years Since Jianyan*, 79: "In shaoxing 4, 8th month, guisi, the Taichang Shaoqing, Chen Jiao, said, 'The current abuse is that goods are expensive and coins are few. Since the days of the founding ancestors, the number of coins minted by the officials has been large, but they have leaked out at the frontiers. Prohibitions have been terribly severe. In Sichuan and Shaanxi, iron has been circulated in lieu of copper."

Song Collected Statutes Compiled Draft, "Punishments: Prohibitions," 2.142, jiading 10, 11th month, 29th day, the officials said: "We have heard that discounting of mulberry paper money originates in the melting down of copper coins. The melting down of copper coins originates in not stopping their leakage abroad. We request that orders be sent to Qingyuan, Quan and Guang that, in addition to dispatching officials to search all boats before they leave the dock, heavy punishments be decreed. If, after a boat has left, someone informs on it, then no matter what the quantity of cash involved, the entire ship's cargo is to be confiscated." In jiading 12, 6th month, 28th day, the Capital Inspector said: "Upon examination, we can see that coins are becoming scarce, and the price of Account Notes has fallen to a low level. I have heard that this is because day by day all the coins are being sent down the Yangtze, loaded aboard ships, and sold beyond the frontiers." *Ibid.*, 144, jiading 15, 10th month, 11th day, the ministers said: "In recent years, the officials in charge of Quanzhou have confiscated over a thousand catties of copper ingots, which gleam like gold, and all made of pure copper. If coins had not been melted down, how could these have been obtained?"

Song History, 180, "Treatise on Food and Money," latter part, 2: "In chunyou 4, the Right Policy Critic, Liu Jinzhi, said, 'If hoarding by great families is halted, then coins can still leak out. Melting down coins to make copper utensils can be halted, but if once the metal enters the sea in ships, it leaves and does not return."

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[19]Because among the copper coins which Sir Aurel Stein discovered in Central Asia, the latest in date were only from the end of Northern Song (like the Zhenghe Circulating Treasure), it would seem that Southern Song copper coins did not flow in that

Not many coins flowed out along the land route during the period between Han and Tang. This was because the states of the west did not employ Chinese copper coins. What the merchant travelers carried away with them was probably limited to the few coins they had on their persons when they left China. What land route travellers most

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worry about are heavy and bulky objects. If they had many copper coins left before their departures, they would certainly have exchanged them for gold, silver or silk.

Because the land route was closed after the regime crossed to the south, the sea route became especially well developed instead. The carrying capacity of seagoing ships far exceeded that of camels or horses.

Because the government issued paper money in exchange for copper coins, these coins fled even faster and in greater numbers. Places as near as Malaya[20] and Java,[21] and as far as India[22] and Africa[23] all absorbed a certain number of Chinese copper coins. China then imported incense, ivory, rhinocerous horn, coral, jade, fine quality steel, leather, tortoise shell, cornelian, water crystal, foreign cloth and *su* wood. Aside from a portion paid for with silk or porcelain, the rest was paid for with gold, silver or copper coins.[24]

Naturally, foreigners did not want Chinese paper money. For example, because Tupo (i.e. Java) "had clusters of pepper, for the carrying of which merchant ships obtained profit of 100 percent, they frequently violated the prohibition on transporting copper cash to pay for it."[25] Later on, they even used Chinese copper coins as a medium of circulation.[26] There were, however, some large countries, like Dashi (Arabia), which had their own independent monetary systems. When their merchants obtained Chinese copper coins, they normally exchanged them for gold, silver and bolts of cloth to take back with them.[27] Chinese silver ingots have been

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direction. Cf. his *Ruins of Desert Cathay*. In fact, however, Northern Song coins did not necessarily flow out during Northern Song times. Because very few coins were minted during Southern Song, most coins used then were Northern Song or even pre-Northern Song old coins. Hence just because Stein only encountered Northern Song coins, this is not enough to prove that these coins were exported during Northern Song times.

[20]In 1827, a great many Song coins were dug up in the vicinity of Singapore. Cf. Crawford's *A Descriptive Dictionary of the Indian Islands*, p. 94.

[21]Dr. Karl Ritter von Scherzen excavated 35 Chinese copper coins in Djakarta, Java. There were 18 different types. Except for 2 Inaugural Circulating Treasures, the rest were all Song coins. Inaugural coins were still in circulation during Song, and so they were probably also exported during Song times. The remaining coins were 1 Sagely Song Original Treasure, 1 Jingde Original Treasure, 1 Tianxi Circulating Treasure, 1 Tiansheng Original Treasure, 3 Huangyou Circulating Treasures, 2 Jiayou Circulating Treasures, 2 xining Original Treasures, 9 Yuanfeng Circulating Treasures (including 3 coins with manuscript style inscriptions), 5 Yuanyou Circulating Treasures (including 2 coins with seal script inscriptions), 3 Shaosheng Original Treasures (including 1 coin in manuscript style), 1 Zhenghe Circulating Treasure and 1 Xuanhe Circulating Treasure. C. Schlegel, "Geographical Notes," *T'oung Pao*, Series 1, Volume X, quoting Pfizmaier's *Bericht ueber einige von Hrn. Dr. Karl Ritter von Scherzen eingesandte chin. und jap. Muenzen.* (Wien: Karl Gerold's Sohn, 1861).

[22]Chinese copper coins have been excavated on several occasions in Mabar, south India. Cf. Yule and Cordier's *Marco Polo*, Vol. II, p. 337.

[23]Dr. S. W. Bushell says that Sir John Kirk excavated Song coins in Zanzibar in Africa. F. Hirth and W. W. Rockhill in their translation, *Chau Ju-kua* [Zhao Rugua], p. 127, under the section on "Zanguebar," in a note quote the *North China Daily News* of May 9, 1888. Cf. also Hirth, in *Journal of the American Oriental Society*, XXX, pp. 55-57, and S. W. Bushell, "Description of Chinese Pottery and Porcelain," *Ibid.*, XVI. Also, in 1898, a German excavated Song coins at Mogadishu on the Somali coast of Africa. Cf. F. Hirth, "Early Chinese Notices of East African Territories," *Journal of the American Oriental Society* (1909), pp. 55, 57.

[24]*Song History*, 186, "Treatise on Food and Money," latter part, 8: "All of the various 'frontier' states, including Dashi, Guluo, Tupo, Zhancheng, Boni, Mamie and Sanfuoqi, send goods for exchange. Gold, silver, strings of cash, lead and tin of varying degrees of purity, cloth and porcelain vessels are used to pay for their incense, rhinoceros, ivory, coral, jade, pearls, fine steel, leather, tortoise shell, cornelian, cart wheels, crystal, foreign cloth, ebony and *su* wood."

Essential Record of the Years Since Jianyan, 69, shaoxing 3, 10th month: "It was also heard that Yizhou, Yinzhou and Lianzhou were in touch with Jiaozhi by the sea route. Those who had made profit over the years going there had traded gold and incense, and had had to use small 1-cash coins to do so. Orders were issued to these states that if they permitted small coins to enter, and did not proclaim strict prohibitions on their entry, great harm would result."

[25]Zhao Rugua, *Record of Various Barbarians*, first part, "The State of Tupo."

[26]Ma Huan, *Overall Survey of the Ocean Shores*, "The State of Java."

[27]*Song Collected Statutes Compiled Draft*, "Frontier Barbarians," 4.93, shaoxing 4, 7th month, 3rd day, the Punishment Office of Guangnan Eastern Circuit said: "The state of Dashi has sent an emissary, Puyali, to bring tribute and return with gifts. For cash, he got 600 ingots of large silver, as well as gold and

unearthed in the Middle East.[28]

The biggest exit route for copper coins then led to the Jin in the north. The Jin seem to have deliberately absorbed copper coins from the south.[29] Though they minted coins themselves, they did not do so in great quantity, and for the most part depended on Song coins. Moreover, they took extreme measures to prevent the flow of copper coins to the south. That is why they issued paper money in Kaifeng to exchange for Song coins which had been transported north of the Yellow River.[30]

Korea also absorbed some Chinese money. Aside from these other places, the country using the most Chinese copper coins was Japan. Chinese coins were already flowing into Japan during Northern Song times, but at that time Japan was under the control of the Fujiwara family, and limits were placed on Sino-Japaanese trade. I suspect more Chinese went to Japan then than Japanese came to China, and there were limitations even on Chinese merchants going to Japan.

During Southern Song times, power in Japan fell successively into the hands of the Taira and Minamoto clans, and the shoguns of these two families all encouraged Sino-Japanese trade. In chunxi 6 and 7 [1179-80], the Japanese Fujiwara Motohiro spoke about the circulation of Song coins among the Japanese people. After Minamoto defeated Taira, they set up a military government at Kamakura in chunxi 12 (1185). During this Kamakura period, coins became still more widely circulated in Japan. There was a group of merchants who specialized in importing copper coins from China so as to supply the newly risen money-lenders with capital.[31] Of ancient coins dug up in various places in modern Japan, the greatest number are Song coins.[32]

Chinese coins also flowed into Vietnam during Southern Song times. An edict to the Guangxi Pacification Office in chunxi 1 ordered the ready cash of the Annam Commissioner and his deputy

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to be converted into silver or heavy silk at the market prices[33] so as to stop their outflow.

Naturally, Song put great stress on this leakage of copper coins. During Northern Song there were stern prohibitions on export of copper coins. In shaoxing 13 [1133] of Southern Song, orders were issued to strictly examine the shipping from Guangdong and Fujian to make sure no copper coins were being carried. In Emperor Xiaozong's qiandao 7 (1171), 3rd month, regulations were set up concerning the private shipping of copper coins from the

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silver utensils and objects, and bolts of cloth."

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[28]A Danish archeological team found two pieces of Song silver money in Bahrein. Cf. the Hongkong *South China Morning Post*, February 27, 1958. This silver money was probably silver ingots.

[29]*Essential Record of the Years Since Jianyan*, 186, shaoxing 30, 9th month, renwu, Wang Huai said: "Lianghuai suffers many abuses from private trade . . . to a terrible extent in such things as treasure in coin. Short cash is used when approaching the borders. Southern guests find that when they cross the Huai, 1 string of cash has the efficacy of several strings. Moreover, several dozen people per day cross the Huai with official sanction by handing over strings of cash. The extent of the leakage is evident."

Song Collected Statutes Compiled Draft, "Food and Money," 38.42, qiandao 3, 7th month, 12th day, Tang Yuan said: "At the customs barrier in Xiangyangfu, whenever one guest crosses to the north to trade, the north first collects 1 string 300 cash from him before allowing him to cross the barrier. For the goods he carries, he must also pay tax in cash, and have enough more for his food and lodging, for which ready cash is required. Probably each person coming to trade requires 3 strings of ready cash. As the months and years go by, who can estimate the amount of cash lost thereby? And yet, not one northern merchant crosses the barrier to Xiangyang. I have heard that when private traders come to Guangzhou and Ceyang, much ready cash is desired, and the hundred continues to be reduced so as to attract them. Those who leak out cash in the search for profit are numerous. With the coin famine as severe as it now is, how can they be permitted to go out like this?"

[30]*Outline of the Nine Encyclopedias by Topics*, quoting Fan Chengda, *Record of Grasping [Pei?]. Song History*, 373, "Biography of Hong Gua": "In qiandao 1 . . . 8th month . . . the Lin'an houses were bringing many copper coins across the border to the north, and it was requested to ban this. Iron coins were brought from Shu to circulate along the Huai."

[31]For Japanese sources on the circulation of Song coins in Japan during Southern Song times, cf. Honshō Eijirō and Kuroshō Inei, "Economic History of Japan" in *Modern Economic Studies Complete Collection*, 6, pp. 197 & 214. Kenzo Akiyama, *The History of Nippon*, p. 158. The outflow of Chinese copper coins is also discussed in Kuwabara Tozo, *Circumstances Surrounding the Shipping of Goods By the Western Frontier Person Pu Shougeng During Late Song*. Wang Jiwu, *History of Sino-Japanese Communications*, chapter 8, section 2, "Song Era Trade With Japan."

[32]Of a hoard of coins dug up in 1712 at the Seisoji Temple in Mito City, Song coins constituted more than 83 percent. Of a coin hoard excaved in Meiji 35 (1902) in the Zenshoji Temple at Kobumura village, Song coins constituted 89.6 percent. Of ancient coins excavated in Hitachikuni, Yimura, Song coins constituted 84 percent. Cf. section 7.1.2, note 1, below.

[33]*Song Collected Statutes Compiled Draft*, "Frontier Clerks: Annam," 4.49.

districts of the seacoast. In Emperor Ningzong's qingyuan 5 (1199), 7th month, Korean and Japanese merchants were specifically forbidden from dealing in copper cash.

There were also many schemes to hinder the Jin from sucking in copper cash. In qiandao 2 [1166], 8th month, Lianghuai was ordered to circulate iron cash. Copper cash were prohibited north of the Yangtze, so as to prevent their falling into Jin hands. In chunxi 7 [1180] Jingxi was also ordered to use iron coins and Account Notes. Copper coins held by the public had to be brought in to the officials and exchanged for iron coins and Account Notes within two months. In chunxi 9 [1182], 11th month, Account Notes were issued to draw in the copper cash of Lianghuai. By Emperor Guangzong's shaoxi 2 (1191), even the iron coins of that region were to be replaced by Account Notes.

It is, however, doubtful if any of these prohibitions had any great effect, since where there was a prospect of profit, not only would merchants flout the prohibition, but even officials in charge of the trade monopolies would send metal coins overseas to obtain goods, and the local government inspectors naturally would not dare to hinder them.[34]

The high cost of production prevented the replacement of coins which had flowed abroad. For this reason, some localities had no choice but to mint iron coins. The cost of production of iron coins was lower, and their producers could obtain a profit. Normally, 10 cash of iron coins only cost 4 cash to produce. Even when iron and coal were expensive, it only cost 6 cash to mint 10 cash of iron coins.[35] During the several decades between qiandao and kaixi [1165-1208], the Tongan and Qichun Inspectorates annually minted from 200,000 to 400,000 or 450,000 strings of iron coins. The annual figures steadily decreased,[36] probably as a consequence of the Account Notes' continued inflation, and so minting of iron coins became less worthwhile.

Because of the inflated amounts of Account Notes, Southern Song prices were several times higher than during Northern Song.[37]

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[34]*Essential Record of the Years Since Jianyan*, 150, shaoxing 13: "At first, there was proclaimed a strict prohibition of copper coins between the Huai and the sea, but the localities of Min and Guang for the most part did not observe it. A merchant of Quanzhou promptly by night loaded 100,000 and more strings of copper cash onto a small boat, and went out to sea. The boat was heavily laden and the wind high, and so it sank into the sea. Though the officials knew about this, they made no inquiries."

Song History, 180, "Treatise on Food and Money": "Ever since markets for ships were set up in Zhe, Min and Guang, merchant ships have come and gone, and as a consequence Treasure coins have leaked out. It is for this reason that there have been prohibitions everywhere from Lin'an on down the river to the sea. In chunxi 9, an edict blamed the officials of Guang, Quan, Ming and Xiu for leakage of copper coins. In jiading 1, the Three Ministries said: 'Recently, in the ports private foreign vessels have not been allowed to depart.' At the end of shaoxing, the ministers said: 'At the two mercantile shipping offices in Quan and Guang, and the two coin offices of the southwest, ships have gone off to trade all loaded with metal coins. Since the four offices are themselves breaking the law, how could the local government inspectors interfere? As for the Huai and Chu garrisons, their monthly expenses of 500,000 are half met with strings of cash. We do not know the degree to which strings of coins are entering the enemy's borders in the course of north-south trade.' Thereupon the border regions all used iron coins."

[35]Zhang Shinan, *Things Heard by a Travelling Eunuch*, 2: "The Qichun Iron Coin Inspectorate, from the 5th to the 7th month is called the iron freeze. The piston bellows boxes for the furnaces are ranged in rows. For a cost of 4 cash they can mint 10 cash. When iron and coal are more expensive, 6 can mint 10. This includes the wages of the laborers. There are three stages to the work: First, make a sand mold; second, press the coins into it; finally, polish them. In one inspectorate, 300 laborers per day can mint 10,000 strings in 10 days. In a year, work is carried on for 9 months, and this can yield 270,000 strings."

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[36]In his *Medieval Oriental History*, part 3, chapter 3, Hino Kaisaburo calculates the annual iron coin production of the Tong'an and Qichun Inspectorates as follows (in units of 10,000 strings):

Date(Ch.)	Date(W.)	Tongan Insp.	Qichun Insp.	Total
qiandao 6	1170	20	10	30
chunxi 5	1178	30	15	45
8	1181	25	15	40
9	1182	15	15	30
12	1185	20	20	40
shaoxi 2	1191	10	10	20
jiatai 3	1203	no minting	no minting	0
jaixi 3	1207	10	10	20

[37]Yue Ke, *Kuiyan Record* (written in the jiading period), 15, "Value of Fields and Rice in the Ancestral Founder's Court Fields": "When we examine the period of only a little over a hundred years from taiping/xingguo [when rice was 10 cash per *dou*] and xining [8, when a *dou* was 50 cash], and from xining to the present, which is also about a century, the prices of agricultural land and of rice have gone up nearly a hundred fold." Zhou Mi, *Rustic Words from East of Qi*: "[In the time of Emperor Xiaozong] Lord Zhou Yi said . . . and to just mention

For example, ordination certificates were the basis for Buddhist and Daoist clergy to legally hold their positions. In ancient times, monks and priests were tax exempt. Those who took holy orders were numerous, and so there was a very large demand for ordination certificates. During Song times, ordination certificates were bought and sold like government bonds or treasury certificates.

At the beginning of Northern Song, the fixed price per certificate was 130 strings. Because their issue was limited in yuanfeng 6 [1084], some local governments jacked up the price to 300 strings, but before long the price fell back to 190 strings. After the crossing to the south, they began to be issued again, and at first the price was 60 strings. Later it was increased to 100 strings, and at the beginning of chunxi to 300 strings. Later they oscillated in value,
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with a certificate ranging from 500 to 700 or 800 strings.[38]

This inflation no doubt was related to the supply of ordination certificates, but there is no doubt that it was mostly influenced by the state of the money supply, since there were procedures then for exchanging ordination certificates for rice, and the quantity of rice specified in such exchanges had a tendency to decrease. In chunxi 9 [1182], one ordination certificate could be exchanged for 300 piculs of rice in Guangdong and Fujian. Later, one certificate only fetched 200 piculs in Shaoxingfu. Before long, the amount was again reduced to 50 piculs.[39]

As no one was any longer willing to purchase ordination certificates, the authorities finally adopted the surtax method, and extorted funds for ordination certificates in proportion to the size of a household's land holdings.[40] They then based it on the cost of rice:

Prior to xining and yuanfeng [1068-1086] this was 600-700 cash per picul. During chongning and daguan [1102-1111], it rose to 7-8,000 per picul. During zhenghe to xuanhe [1111-1126] it fell back to 1-2,000 per picul, but shot up again during jingkang and jianyan [1126-1127]. At about the time of the crossing to the south, a picul of rice was generally upwards of 10,000 cash, and it was still 8-9,000 cash per picul during the first decade of shaoxing. Later, because of the coin famine, it fell back to around 2,000. During the qiandao years [1165-74], it was 500-600 cash per *dou* in some places,[41] but in other places it took more than 600 cash to buy 1 picul.[42] In general, it remained around 2,000 cash per picul.[43] During chunxi [1174-90], it was about the same.[44]

During shaoxi [1190-1195], the officials in Chenzhou fixed the discount of grain into cash for paying taxes at 1 picul to 2 strings 150 cash full.[45] Because there was a surcharge added to the cash equivalent in qingyuan 5 [1199], 7 strings had to be paid in lieu of each picul. Some said this was more than double the market price of rice then.[46] When

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Pingjiangfu, prior to shaoxing times, the various officials might each use 50,000 strings per annum. Later they needed over 200,000 strings, and this year they have added three times that latter number."

[38] *Swallow Wing Bequeathed Plans Record.*

[39] Dong [?], *Relief of the People Book*, 2, "Ordination of Monks." Dong was a metropolitan graduate of shaoxi 5, and had served as magistrate of Ruianxian.

[40] *Collected Works of Mr. Xishan, Duke Zhenwenzhong*, 17.

[41] *Song History*, 178, "Treatise on Food and Money," first part, 6: "During qiandao, there were some localities with a *dou* of rice valued at 500-600 cash." *Rustic Words from East of Qi*: "A picul of sprouted rice was worth 3,000. When prefectures collected it, they were ordered to add a surtax to it, increasing 3,000 to 5,000, and 5,000 to 7,000."

[42] Lu You, *Entering Shu Record*: "In Gong'an . . . the urban areas are complex and rich. A *dou* of rice is 60-70 cash."

[43] *Song History*, 175, "Treatise on Food and Money," first part, 3: "In qiandao 4, official purchases were made in Account Notes, coins and silver. A picul was 2 strings 500 in cash." *Song Collected Statutes Compiled Draft*, "Food and Money," 40.14, qiandao 8, 12th month, 13th day, the Secretariat-Chancellery said: "We have learned that the harvest this year is abundant in Jiangxi, Hunan, Guizhou and Hanyangjun. The price of rice is only 1 string 400 cash per picul when purchased for price management."

[44] *Collected Works of Civil Duke Zhou*, 88, "Epitaph for Liu, Duke Shendao": "In chunxi 2 . . . cash amounting to 300 million was borrowed from various offices, and sent to the officials for purchase of rice to send up the Yangtze. In this fashion 149,000 *hu* were obtained." *Song History*, 386, "Biography of Liu Qi," contains the same account, but the quantity of cash borrowed from various offices is given as 30,000. This must be a misprint. *Song Collected Statutes Compiled Draft*, "Food and Money," 40.14, chunxi 12th year, 1st month, 28th day, edict: "During chunxi 5, a *sheng* of rice was 19 cash. In chunxi 9 it was 23 cash. This Autumn, upon the completion of the early and late rice harvests . . . the price of a picul of rice varied from 1 string 600 cash to 2 strings 50 cash."

[45] *Song Collected Statutes Compiled Draft*, "Food and Money: Miscellaneous Record of Taxes," shaoxi 2, 4th month, 20th day, edict: "The Chenzhou annual discount of taxes into cash was permanently fixed at only 2 strings 150 cash full per picul."

[46] *Song Collected Statutes Compiled Draft*, "Food and Money," 70, "Miscellaneous Records of Taxes," qingyuan 5, 4th month, 29th day, the ministers said: "Now, in addition to the

Dong [?] discussed official purchases for relief purposes, a market price of 30 cash per *sheng* involved an official purchase price of 15 or 16 so that official sale could be made at 20 cash per *sheng*.[47] Evidently there had been no great change in price.

From the time warfare began again during kaixi [1205-8], prices again rose. From jiading to duanping [1208-37], a picul of rice was probably around 3 or 4 strings.[48] In times of famine, it was 10 or 20 strings.[49] A picul reached 100,000 in Xiangyang at the end of shaoding [1234].[50] Between the capital and Ezhou, a picul cost 60 to 70 strings of Hu Account Notes.[51] A drought on the left side of the Zhe in jiaxi 4 caused the price of rice to become very unstable. At first its price was 36 strings per picul, but it then steadily rose,[52] until it reached 100 strings,[53] and eventually peaked out at over 340 strings.[54] Such increases, though partly the con-

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cash equivalent of rice and wheat, there is a change when paying the price in cash. A picul of wheat is discounted into 5,000 cash, and a *dou* of rice into 700 cash. When we reckon the actual prices, how could these be less than double that amount?"

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[47]*Relief of the People Book*, 2, "Relief Purchases." This probably happened during the qingyuan period.

[48]*Collected Works of Mr. Xishan, Duke Zhenwenzhong* contains several rice prices. Chapter 6, "Memorials Requesting Establishment of Famine Administrations at the Prefectural Level and Other Matters," says that during jiading 8, in 9 commanderies of Jiangdong: "market purchases jumped. A *dou* was several thousand cash. . . . The amount sufficient to provide for several days in normal times could not provide provisions for even one day." Evidently in normal times the price was 3 strings per picul at most. Chapter 12, "Memorial Requesting the Dismissal of the Magistrate of Ningguofu, Zhang Zhongshu, for Accepting Gifts," speaks of jiading 8, when "a picul of non-glutinous rice was 1 string of cash full." Chapter 7, "Third Petition to the Ministry," possibly of jiading 9, says: "A picul is 3 strings." "Fourth Petition to the Ministry," says that because of a natural disaster in Guangde "the price in the city of rice for a diminished *sheng* is more than 40 cash full." At first relief purchases by the government were at 24 cash full per *sheng*, and were later reduced to 18 cash. Chapter 17, "Several Petitions to the Secretariat-Chancellery on Complete Abolition of Harmonious Purchase," says that in jiading 17, "each picul reckoned in official Account Notes was 3 strings 750 cash." Chapter 15, "Request to the Secretariat-Chancellery to Stop Sales of Ordination Certificates to Aid Imperial Princes," contains a rice price which may date to duanping 3: "Reckoning by the median price, a picul was 3 strings of cash." The same document states that an ounce of silver was the equivalent of 3,460 cash. This would make a picul of rice equal to 0.869 ounces of silver.

[49]*Song History*, 67, "Treatise on the Five Agents," jiading 1 [1208]: "There was great famine among the people of the Huai. People were eating grass and treebark. A million refugees flowed into Jiang and Zhe. Previously, the Huai localities suffered military alarms, and agriculture had long been disrupted. A *dou* of rice was 2,000. Thirteen or fourteen died. Human flesh was cooked and horse archers ate it. . . . This year there was also famine in the Travelling Capital. A *dou* of rice was 1,000 cash." In the Spring of the following year "there was great famine in Lianghuai, Jingxiang and Jiankangfu. A *dou* of rice was several thousand."

[50]*Goose Grove Collection*, 19, "Letter on the Opportunity in the Central Plain Not Being Easy and Requesting that Government Policy First Be Revised," records the situation in shaoding 6, 8th month: "In Xiangzhou a picul of rice is as expensive as 100 Thousands."

[51]*Memorials of Advice of State Duke Xu*, 1, "Nine Matters on Which Imperial Edicts Ought to be Issued to Secure Good Government for the State": "Between the capital and Ezhou, the price of a picul of rice is 60 or 70 Hu Account Notes. The people are scattered, and in disarray on the roads."

[52]Yu Wenbao, *Chuijian Record*, additional collection: "In jiading year gengzi, there was a drought. The Overseer of the Capital, Zhao Cungeng, laid a surtax on the great families to purchase rice. At first the official price given was 36 Thousands per picul. Before long, the price shot up four or five fold. Important people of distinguished lineage broke up their families and dispersed their property. Many died of frustration. Even now, the fathers and old are still suffering from its effects." The original note appended to this reads: "The case of a figure of 36 Thousands seems to be a mistake." This is because the annotator did not realize that monetary inflation was under way then. A price of 36 Thousands, if in terms of the 17th issue of Account Notes, would have only equalled something over 7 strings of the 18th issue.

[53]*Works of Qingxian Duke Du*, 10, records a message already seen of jiading 4, 8th month: "Prices have jumped. Of course this had happened before, but for a sheng of rice to reach 1,000, has never happened before. Articles of daily use are ten times more than before. This has never before occurred." *Ibid.*, 11, first part, "Three Matters Already Seen": "I have observed that this year's drought is most severe in the capital region. . . . A *dou* of rice is 10 Thousands, and is increasing by the day."

Pure and Upright Existence Draft, 1, "Memorial Requesting Use of Surtax to Purchase Grain for Relief of Starving People": "Since entering the borders, . . . from Nankang, Chitang and Taiping right up to Jiankang, I have gone through four commanderies. . . Under my very eyes, a *hu* of rice has sold for 60 or 70 Thousands, and even as high as 100 Thousands. People have fled and died to an alarming extent."

[54]Jing Ting, "On There Being Nothing More Important Than Public and Private Purchases as a Policy for Saving Mulberry Paper Money" (jiaxi 4): "In neither ancient nor modern times has a picul of rice's price been 340 Thousands without the state not being impoverished, the people not being in difficulty, and the Empire not being in danger of disorder."

sequence of drought-induced shortages of rice, also were caused to a significant degree by monetary inflation.[55] Therefore, even during the chunyou period [1241-53], a picul still cost 100 strings.[56]

These figures were probably all either calculated in terms of paper money, or in terms of paper and coins intermixed. If they had been calculated in coins, naturally they would not have been that high, since the price of coins rose in parallel with prices in general.[57]

Nevertheless, even if we calculate these prices in terms of copper cash, I suspect they would turn out to be much steeper than those of Northern Song.[58] There are reports of abundant harvests in Jiangxi and Hunan during qiandao 9, and a picul of rice was 1 string 400 cash. For this reason, Li Anguo discounted it into copper cash for only 840 cash full, and said there had never been so low a price.

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I am afraid there is an error in this story. If reckoned in copper coins, it is evident that a picul must have been 1-2,000 cash. Southern Song coins were, however, mainly of 2-cash denomination, small 1-cash coins being very few, and virtually none of the small coins having been minted during qiandao. Therefore, prices expressed in copper coins were actually in terms of 2-cash coins.

When we examine Song rice prices at one decade intervals, though some irregular oscillations appear, we can still discern a secular tendency upward.[59]

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[55] *Works of Qingxian Duke Du*, 10, "First Message Already Seen By the Executive of the Board of Personnel": "Last year, drought was extraordinarily severe on the left side of the Zhe. Though the right side of the Zhe enjoyed a fairly good harvest, and had food in sufficient quantity, rice jumped ten fold in price." *Goose Grove Collection*, 24, "Two Petitions to the Ministry": "Even at a reduction of 30 percent, grain is still expensive. Even if 5 certificates are exchanged for 1, mulberry paper money will not be raised in value."

[56] Li Cengbo, *Ke Pavillion Miscellaneous Draft*, 17, "Removing the Huai Threshhold," quotes a memorial written during the chunyou period: "In recent years, I have checked into and spoken of this. . . . In places near the capital, a picul of rice has been 100 Thousands. The dead are everywhere, and it has been cold and bleak both within and without. Natural vicissitudes have been extreme." In the Ningbo region of Zhejiang, however, **[499]** during chunyou 1, a picul of rice was only 40 strings in official Account Notes. Wei Xian, *Beneficial Observation of Four Famous Landscapes*, first part, chunyou 1, 10th month, "I Visit the Government Managed Sand Panning," says that the daily wage of a sand-panner was 500 cash in official Account Notes and 2.5 *sheng* of rice, or 1 string of official Account Notes 500 cash, without rice.

[57] *Song History*, 180, "Treatise on Food and Money," contains the words of Chen Qiulu uttered in chunyou 8: "When coins are expensive, then goods must be cheap. Now, goods and coins are both heavily demanded. This will bring grief to a whole generation."

[58] Dai Zhi, *The Mouse Gem*: "Nowadays our illness lies in the great amount of mulberry paper money, and not in the scarcity of coin. If you wish to make both coins and paper money to be in large supply, then goods will be even more heavily demanded. And when there is no paper money, those things which are numerous will all be cheap. If paper money becomes more numerous, then goods will become that much more expensive. Even calculated in Treasure coins, prices have still doubled."

[59] The table is based on 230 rice prices. Some excessively abnormal prices have been omitted from the calculations, as for example a price of 2,000 strings per picul of jianyan 4 and one of 65 cash per picul in shaoxing 13. Sometimes there are only figures for one or two years during a decade, or as for the '60s of the tenth century, the texts contain no actual prices, but merely say that during jianlong grain was cheap. Hence I was obliged to extrapolate from the records of low prices for the reigns of Emperors Taizu and Taizong, and use 190 cash full per hectoliter as an average price for the '60s.

I also did not succeed in finding rice prices for the '30s of the eleventh century (1031-1040), but *Song History*, 283, "Biography of Xia Shu," records that "at the beginning of baoyuan . . . people were permitted to pay fines in grain. A catty of copper was equal to 5 *dou* of grain." If we assume ten coins to the ounce of copper, then a picul of grain was equal in cash to 320 coins. But because the Song employed a Reduced-hundred, with 77 coins taken for 100, this would make the grain price more than 400 cash per picul. Since rice was more expensive than ordinary grain, I adjusted the price to 700 cash per picul.

As for figures for the last decade of the eleventh century, there was no way to strike a reasonable average, because the figures we have are 770 and 700 per picul for 1091. There are no figures for quite a few years thereafter. It is only when we get to 1099 and 1100 that records again become numerous, but unfortunately these are all in terms of iron coins, which probably then exchanged for copper ones at a rate of 10:1. The figure in the table assumes that the 1091 prices were expressed in copper coins, but that the 1099 and 1100 figures were expressed in iron cash which exchanged for copper coins at 10:1.

The figure for the first decade of the thirteenth century is not an average from contemporary prices, but assumes a price of 3,500 cash for the first five years and of 12,000 cash for the last five years, and averages the two. This is probably not too far from what the actual situation was, since in kaixi, before military moves began, there should not have been much of a difference from the situation during the last decade of the twelfth century. After the war with the Jin began, the cost of rice shot up several fold.

For the '40s of the thirteenth century, there is only one figure, 100 strings per picul, and I had no choice but to take that to

SONG DYNASTY RICE PRICES (1)

Period	Price/ Hctltr (in cash)	Period	Price/ Hctltr (in cash)
961-970	190	1111-1120	1,391
971-980	311	1121-1130	12,209
981-990	192	1131-1140	11,421
991-1000	241	1141-1150	1,420
1001-1010	419	1151-1160	2,626
1011-1020	386	1161-1170	2,881
1021-1030	399	1171-1180	2,484
1031-1040	804	1181-1190	3,001
1041-1050	2,902	1191-1200	4,260
1051-1060	1,034	1201-1210	6,481
1061-1070	525	1211-1220	3,989
1071-1080	1,125	1221-1230	4,348
1081-1090	791	1231-1240	3,480
1091-1100	859	1241-1250	11,594
1101-1110	1,827		

If we take units of fifty years, this secular tendency to increase becomes even clearer.

During the two centuries from the end of the tenth through the first half of the twelfth century, the trend upward in the cost of rice is very clear.

During the last half of the twelfth century, however, the price fell back. This fall was partly a reflection of the end of the many wars of the first half of the twelfth century, which had pushed up prices during some years. It was also partly a consequence of the large scale outflow of copper coins after the middle years of shaoxing, which created a coin famine.

Though prices from qiandao [1165] on are expressed in a mixture of coin and Account Notes, the rise in the purchasing power of copper coins would naturally have influenced prices.

Records of prices are extremely scarce for the first half of the thirteenth century, and all of them are abnormal prices, but reckless issue of paper money must have caused a fall in purchasing power.

Copper

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stand for the price during that decade, since I suspect that prices were actually that high during the '40s.

My method of calculation was to work out simple annual averages, and for time periods of from one year to a decade, a half-century or a century, I struck a median figure. I reckoned cash in terms of a full hundred.

SONG DYNASTY RICE PRICE TABLE (2)

Period	Avg Price/Hectoliter (in cash)
Last 1/2 10th century	229
First 1/2 11th c.	705
Last 1/2 11th c.	839
First 1/2 12th c.	3,506
Last 1/2 12th c.	2,993
First 1/2 13th c.	5,905

cash were reduced in number, and this induced a still more rapid fall in price of paper money in terms of copper cash. In order to limit this fall in paper money's value, the government wanted to mint more coins, but production of copper during Song times reached its nadir during that period.

SONG DYNASTY COPPER PRODUCTION TABLE

Year	Annual Production (in catties)
During huangyou (1051)	5,100,834
During zhiping (1066)	6,970,834
yuanfeng 1 (1078)	14,605,969
qiandao 2 (1166)	263,160

Because copper was scarce, there was no alternative to seeking out old copper utensils from the public. During shaoxing 28, in addition to taking 1,500 copper objects from the imperial precincts to be handed over to the minting authorities, more than 20,000 catties of copper utensils were taken from the public, and the temples and monasteries were forbidden to manufacture additional bells or cymbals. The following year, officials were limited to cash balances of 20,000 strings, and commoners to 10,000 strings. Those holding cash in excess of these amounts were given two years to purchase gold, silver, or tea, salt, incense or alum vouchers with the money. During qiandao 7 [1171], the officials in charge of Shu and Qi were promoted for having minted coins.[60] Probably they took another look at the copper immersion technique.[61]

[60] *Song History*, "Treatise on Food and Money," latter part, 2.

[61] *Sagely Government of the Two Reigns of the Dynastic Revival of Imperial Song*, 12, shaoxing 2, 10th month: "In xin-

The price of cotton also rose during Southern Song. In shaoxing 1 [1131] it was 2,400-2,500 cash per catty. The next year it went up to 9,600, and by shaoxing 18 it was 4,300. In longxing 2 [1164] it was back to 2,400-2,500. All of these prices are in full hundreds. If we say that the average price for cotton during Northern Song was 500 cash per catty, then the Southern Song price was from four to five times higher.

During the chunxi period, though its convenience and lightness was still opening increasing uses to paper money as an instrument for making purchases and paying taxes,[62] generally speaking, people who accepted paper money usually exchanged it for copper coins as soon as possible[63] so as to not lose purchasing power,

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because the purchasing power of copper coins was rather higher.[64] To increase the velocity of circula tion of paper money in this way is to cause its value to fall still more rapidly.

By the beginning of jiading [1208], Account Notes had been discounted to the point that they could no longer circulate.[65] Although the government continued to issue them for a time, people were mostly unwilling to accept them, and those already held by them could only be used to pay taxes.

Various other local paper currencies, like Sichuan Vouchers, Hu Account Notes and Huai Exchange Notes, were still being issued in increased amounts up to jiading times [1208-25], and their values were falling by the day. Sichuan's Coin Vouchers, for example, were worth less than 400 iron cash by the beginning of jiading (1208), and some advocated using 13 million in gold and silver ordination certificates to redeem half the issue, but a time limit was placed on the redemption. Some places were over a thousand *li* away from the central

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mao the court advised . . . that the copper authorities of Raozhou and Xinzhou . . . both produce copper by immersion of iron in gallwater. During yuanyou, there was first established the Xingli mint in Raozhou, which annually turned out over 50,000 catties. In shaosheng 3, the Qianshan [Lead Mountain] mint was established in Xinzhou, with an annual production of 380,000 catties. The method used was to place plates of iron into troughs of gallwater, take them out after several days, and smelt them three times to turn them into copper."

[62]*Record of Barbarian Strength*, Collection J, first part, "Record of Things Heard from People": "I have heard of a man named Bofeng, who was a Yao from Jiaxing. In chunxi 6, he hurried to Chuzhou to be registered. . . . In the course of three months, he accumulated 100 Thousands of cash. He bought mulberry paper certificates with it to send with a servant back to his mother."

[63]*Record of Barbarian Strength*, Collection D, latter part, "Wang Seven-six": "A merchant of Lishui, Wang Seven-six, normally took cotton to sell between Qu and Wu. In shaoxi 4, when he arrived in Quzhou, he went to the establishment of the market horse broker Zhao Ten-three. What he brought was worth 300 Thousands. Zhao . . . killed him. He put the corpse into a bamboo basket. . . . He waited until the middle of the night,

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and was going to throw it into a deep ravine. . . . A butcher who lived nearby, Qiang Yiya, was roused by the disturbance, grabbed Zhao by the hand, and wanted to be shown what had happened. Having no other choice, Zhao told him the facts, and offered him five mulberry certificates. Qiang would not listen to him, and said, 'I ought to inform on you to the officials.' . . . Then Zhao increased his offer to ten certificates. Qiang was satisfied, and went off with them. That day he did not buy a pig, but carried the notes back to exchange for cash."

Song History, 395, "Biography of Li Daxing": In the time of Emperor Guangzong, "Jiangling of old used copper money, but coins were heavy and mulberry paper light. When people brought their capital into the market, by the end of the day, not a single coins was to be had. Daxing memorialized to ask that iron coins be circulated as in Xiang and Cheng. Thereupon coins circulated and the people began to return to their trades."

[64]*Record of Barbarian Strength*, Collection J, first part, "Xue Xiangtan": During chunxi, "an old woman said, 'In this village, wine is 24 cash a *sheng*. There is none in my house.' Xue took out 100 cash and sought to buy two *sheng*. The old woman, having won a profit, carried a jar off, and after a while brought some wine she had obtained. He drank together with the old woman, who was greatly pleased, and gave him a plate of beef."

Correspondence from Beyond the Southern Mountains (preface date chunxi 5), 4, "Ever Normal Granaries": "Moreover, in Guangzhou a *dou* of rice was 50 cash, and ordinary grain was never before so cheap. The reason it is cheap is not because there is so much grain, but because new teeth are not flourishing, and food is no longer plentiful. . . . Even when we encounter bad harvests, a *dou* of rice only reaches 200 cash. If as a consequence the people have to flee, the local helpers have no plans for finding room for them."

[65]*Song History*, 39, "Annals of Emperor Ningzong, 3": "In jiading 4, 12th month, guiwei. Because Account Notes had been discounted to the point where they no longer circulated, officials were dispatched to make inquiries in the prefectures of Jiang and Zhe." In his *Collected Works of Mr. Xishan, Duke Zhenwenzhong*, Zhen Xishan frequently mentions this as occurring at the beginning of jiading, as in chapter 2, guiyou (jiading 6), 5th month, 22nd day, "Second Memorial on Prices," chapter 3, "Reply to Memorial by Yue Jiaye" (drafted during 12th month, 11th day) and chapter 5, "Old Matters" (submitted in jiading 7, 7th month, 11th day).

authority, and their vouchers could not make the deadline. There were also abuses by the officials, which caused the value of a voucher to fall to 100 cash.

The government later announced that unredeemed vouchers could continue to circulate. Only then did their value recover to 500 iron cash.[66] In places using copper coins outside the passes in the northwest, a voucher was only worth 170 cash.[67] Even this must be reckoned the consequence of good management. The Jin invasion of jiading 11 (1218) provoked an increased printing of 5 million to meet military expenses.

Silver Account Notes were issued in baoyou 2 (1254), with 1 equal to 100 of the old notes. This caused a sharp drop in the value of Coin Vouchers, so that a picul of rice cost 2,000 in vouchers. The price later increased to 5,000 vouchers.[68] In Emperor Duzong's [xian?]chun 5 [1269], a limit of 5 million strings per annum was set.

Hu-Guang Account Notes were redeemed with capital Account Notes at the beginning of chunxi, but seem to have been issued again later. By the jiading period [1208-25], their value had again fallen.[69] An increased printing of 3 million strings worth of Lianghuai Exchange Notes in jiading 15 could not maintain their original purchasing power.[70]

The efforts of the authorities to support Account Notes did not enjoy much success during the reign of Emperor Lizong [1225-65] either.[71] An inspection official was placed in the Hangzhou Account Note Treasury in shaoding 3 (1230). Seaborne export of copper cash was again banned in duanping 1 (1234), and strings of coins were brought out of the inner treasury to exchange for mulberry paper money.[72] By then Jin had already

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[66] *Universal Statutes Continued. Song History*, 412, "Biography of Chen Xian": "Shu Coin Vouchers of old circulated in two terms simultaneously, totaling 50 million, half kept by the officials. From the beginning of military operations, all the vouchers were scattered among the public, and the General Finance Office kept three issues in simultaneous circulation to the amount of 80 million. Their price fell lower by the day. Xian used 12 million strings to redeem half of the 19th term [should be 90th term], and advised the Tea and Horse Offices to redeem the 91st issue with the ongoing 93rd issue. Thereupon the price of vouchers rose again, and the cost of official grain purchases declined."

[67] *Investigation of Literary Remains*, 9.

[68] Li Cengbo, *Ke Pavillion Miscellaneous Draft*, 3, "Secret Memorial on Saving Shu's Mulberry Paper Money." *Essentials of the Administrations of Three Song Reigns*, 2, "Lizong," says that in baoyou 4, new Sichuan Vouchers were issued. This probably refers to the silver Account Notes.

[69] *Investigation of Literary Remains*: "An edict of jiading 14 had 200,000 of Hu-Guang Account Notes made to redeem damaged Account Notes. Thereafter they continued in circulation." *Song Collected Statutes Compiled Draft*, "Food and Money: Water Transport of Grain, 4," jiading 15, 3rd month, 25th day: "In terms of their present market value, 2 strings 700 of Hu-Guang Account Notes can only be exchanged for 1 string of copper denominated Exchange Notes." I do not know what is meant by the term copper Exchange Notes used here.

[70] *Song Collected Statutes Compiled Draft*, "Food and Money," 28.48, jiatai 2, 12th month, 18th day, edict: "In paying salt cash to the Huaidong Salt Intendancy, 20 percent need not be paid in Exchange Notes. . . . The old regulation was to pay 40 percent each in coin and Account Notes, and 20 percent in Exchange Notes. This has been changed because of complaints as to its inconvenience by visiting merchants." *Investigation of Literary Remains*, "Investigation of Coins, 2": "In jiading 15 increased printing [of Huai Exchange] reached 3 million. Their amount was increasing daily, and their value was also being harmed by the day. Proper technique was not being applied."

[71] *Collectanea of Ancient and Modern Books and Illustrations*, quoting *Miscellaneous Knowledge of the Year Guixin*: "Zhen Wenzhong [i.e. Zhen Xishan] was virtuous, and for a time had some hopes, but the duanping era changed people still more. How could he come like an old man from the yuanyou flood? At this time, mulberry paper was lightly demanded and goods heavily demanded. The lives of the people were difficult. It was said that once a true scholar like Zhen was employed, things were sure to be strengthened. In the midst of the move, good government could be established. Thereupon it was said among the people that if it was desired to have low prices for goods in general, it was only necessary to await Zhen's arrival in office.

"When he arrived at court with a single retainer, he first applied himself to expounding studies of the Dao, rectification of the heart and making sincere his intent to act righteously. He then presented his *The Great Learning Explicated*. If stupid people are without knowledge, take what they say as not corresponding to the responsibilities of the times. He repeatedly used rustic sayings, such as 'drawing up the water of West Lake to cook a bowl of noodles.' Little children on the streets chanted these aphorisms without understanding them. A scholar once sent a letter to the authorities which said, 'The master's methods penetrate the Way, are addenda to the Sages' classics, set up the mind for Heaven and Earth, and set up their destiny for the working people.' Stupid people without knowledge nevertheless desired

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to bring petty clerks' affairs for his judgment. Nevertheless, those who accept the name of rulers of the Empire, must undertake responsibility for it. At a time when mulberry paper money was extremely debilitated, how could a single scholar change the situation? Is not such a hope excessive?"

been destroyed by the Mongols, and it would have been reasonable for there to have been a turn for the better. In fact, however, this was not the case.

With the fall of Jin, the Mongols had to be faced, and so the 16th and 17th terms of Account Notes were issued. During the year before that, a 1 string old Account Note was still worth 500 cash in some localities. After the new Account Notes had been issued, a string of the old was only worth 330 cash, and at the same time 1 string 300 of the old notes could be exchanged for a 1 string new Account Note, which means that a 1 string new Account Note was only worth 429 cash. That was less than the price of an old note before the new ones had been issued.[73]

Preparations were made during duanping 2 and 3 [1235-1236] for the manufacture of 18th term Account Notes. In the Spring of jiaxi 4 (1240), there was a regulation that 5 strings of the 17th term of Account Notes would be the equivalent of 1 string of the 18th term, and that the 16th term was also to be redeemed. At that time the 16th and 17th terms of Account Notes alone contained 500 million strings,

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and so how could their price not have fallen?[74]

That year there was a drought within the country. Prices shot up, and the goverment bought rice from the great families, paying 36 Thousands per picul. Originally that was high enough, but before long the market price had increased four or five fold, causing well-off people and great families to break up their families and disperse their property to avoid selling at the old price. A great many suicides occurred.[75]

The authorities sent down orders that, as was formerly the case, taxes could be paid half in Account Notes and half in cash. Of the Account Notes, half could be the notes of the 18th term, accepted at par, and half the notes of the 17th term, accepted at a discount. In chunyou 5 (1245), a million strings of Account Notes were used to reward the naval and land forces. The next year, the total for all terms extant of Account Notes was 650 million strings.[76] Regulations issued during chunyou 8 [1248] removed the expiration date from the 17th and 18th issues of Account Notes.[77]

Rewards were mostly made in cash and in gold and silver during the period after chunyou 4 and 5. During two decades, more than 190 million strings of cash were paid out, as well as 50 million ounces of silver and 1,000 ounces of gold.[78] Southern Song reduced the number of coins minted, but during the kaiqing and jingding periods, minting occurred, and Account Notes were used in various places to exchange for copper coins, and so the quantity involved could be impressive.

During this same period, heroic efforts were made to try to bring the Account Notes under control. Ordination certificates or copper cash were exchanged for worn or damaged Account Notes on several occasions. In jingding 1 [1260] alone, the government ordered Lin'an Prefecture to use

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[72] *Essentials of the Administrations of Three Song Reigns*, 1.

[73] In duanping 1, Wu Qianying, discussed nine matters necessary for establishing good government in an addendum to an edict. *Investigation of Literary Remains Continued*, 7, jiaxi 4, 9th month: "Arrangements were made to put out the 18th term of Account Notes to redeem the 16th term. Five of the 17th term notes could be exchanged for one of the 18th term. If any among the people circulate them at a lower price, or if any offenses are committed in the official bureaus, they will be subject to prosecution."

[74] Yuan Fu, "Communication on the Account Notes": "At present [jiaxi 4] the 16th and 17th terms of Account Notes total 500 million. Their quantity increases daily, and their price falls daily. A strategem for rescuing us from this abuse fortunately lies in the 18th term of new Account Notes. If we do not employ it well, then abuses surely will be abundant. Now an open directive calls for the 18th term of Account Notes to be printed and issued. It says that the value of 1 new note may be equated with 5 or 6 of the old ones. Hence it is desired to halt the old and make the new. Nevertheless . . . once the 18th term has come out, then new and old, three terms' worth, will circulate intermixed, and the regions will have expended still more effort. Though according to the directive, the new Account Notes will be used to buy up the old as their term expires, and they will then be secretly destroyed, this will, however, pose us a predicament. If we say it is not necessary to make new Account Notes, then how will we be able to buy up a third of the old Account Notes each month? There would have to be three terms in circulation simultaneously. The more numerous they are, the cheaper they will be."

[75] Yu Wenbao, *Chuijian Record*, additional collection. For the text of the note, cf. note 52 above. *Song History*, 419, "Biography of Xu Rongchou": "In jiaxi 4 . . . entered for audience, and said that since mulberry paper money had not been circulating, prices had doubled, and the people were becoming resentful. Since the transport of rice has mostly become obstructed, food has become scarce, and the people have been made even more resentful. This has even become evident in the capital district."

[76] Sun Mengguan, *Snowy Window Collection*, 1, "Audiences of Year Bingwu," second directive.

[77] *Essentials of the Administrations of Three Song Reigns*, 2, "Lizong."

[78] According to the *Song History*, "Annals of Emperor Lizong," for the last twenty years of that reign.

3,047,859 strings of copper coins and 10,952,100 strings worth of 17th term Account Notes, for a total equivalent to 14 million strings of 17th term Account Notes, to buy 400,000 piculs of pearl rice.[79] That was a price of 35 strings per picul, or 40 strings full per hectoliter.

By this time the Song empire was virtually in eclipse. Though there were still no small number of "loyal and righteous" scholars ready to yield up their lives and fortunes,[80] to retrieve the situation, most surrendered as soon as they saw the enemy, without offering any resistance.

In jingding 4 (1263), Chen Yaodao proposed to limit the size of land holdings. He estimated that of the official and private land exceeding the limit in Liangzhe, Jiangdong and Jiangxi, one third could be taken and bought to serve as public fields. Ten million *mu* of such land could be obtained, providing an annual income of 6 or 7 million *hu*, which could be used to provision the army, defer the purchase of grain, increase the value of paper money, make the distribution of wealth more equitable and pacify the rich. One act would yield five benefits. He did not, however, realize that to buy land in excess of the limits set would require daily increases in the number of Account Notes printed of 150,000 strings.

The next year, Jia Sidao issued gold and silver and ready cash Communicating Medium. With 77 cash to the 100, 1 string of this was equated with 3 strings worth of 18th term Account Notes. He also completely abolished the 17th issue. The value of money continued to fall. Though the government made every effort to carry out countercyclical sales so as to raise prices, most rich people hoarded grain and would not sell it.

Only paper money, and not rice, was to be seen on the market, and so food shot up in price.[81] The price of silkworms of "300 turned into 3,000."[82] Two hundred strings worth of the 18th term of Account Notes was not enough to buy a pair of grass **[491]** shoes.[83]

Someone then wrote an antithetical couplet depicting the severity of social life, saying that "people are like ruined temples; Of ten rooms, nine are empty. Grand Protectors are like mendicant monks, Begging two of congee and one of rice."

In xianchun 10 (1274), 11th month, Bayan led the main Mongol army to Fuzhou. The Song house issued another 10 million strings of Communicating Medium, and called on Jia Sidao to bring out the army to resist, but he could not get there in time.

Because Song's paper money used fixed periods of issue, they could not discern the truth about the effect of monetary inflation on prices. We can illustrate this with the late issues of Account Notes. In jiading 3 [1210], because the old 16th term Account Notes had fallen in price, they were exchanged for the new ones at a rate of two for one. Later, the 17th term credit notes fell further in price. When redeemed, 1 string's worth of the 18th term Account Notes was equated with 5 strings of the 17th term.

If we calculate prices in terms of the 18th term notes, we can approach the normal level of prices then, but their value later fell further, and 1 string of copper cash denominated Communicating Medium was equated with 3 strings of the 18th term Account Notes.

If we assume a rice price of 1 string of copper cash Communicating Medium per picul, prices do not appear high. Actually, though, this was the same as 3 strings of 18th term Account Notes, 15 strings of 17th term Account Notes, and 30 strings of jiading period Account Notes. The further back we extend our calculations, the more fully we understand the severity of the rise in prices.

If we talk in terms of the coin price of paper money, then 1 string of copper cash denominated

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[79] *Song History*, 178, "Treatise on Food and Money."

[80] *Song History*, 44, "Annals of Emperor Lizong, 4," baoyou 6, 12th month: "Xiang Shibi, without waiting for the court's orders, advanced his army to Guizhou, and took along a million in money to supply the army. Ma Guanzu did not wait to memorialize a request, but recruited 10,000 soldiers, and expended 10,000 ounces of silver to recruit ablebodied men." In kaiqing 1, 4th month: "The magistrate of Shizhou, Xie Changyuan, personally provided a million strings of cash and 1,000 piculs of grain to complete building the commandery walls, and for this he was raised one step in rank."

[81] Zhang Peiren, *Magic Incense Dwelling Collected Words*, 1, "Note of Thanks for the Canon of the Huai Commanderies" quotes the original Song text of "Note of Thanks to Jia Sidao." Zhou Mi, *Rustic Words from East of Qi*: In jingding 5 . . . 10th month, yichou, we suddenly heard that the Sagely Person was indisposed, and an edict was sent down seeking medical assistance. On day dingmao, a posthumous edict was sent abroad, and the order for gold and silver Communicating Medium was for the time being promulgated. Mulberry certificates of the 17th term were to be exchanged. From then on, prices jumped up, and the people's livelihood was thrown into distress."

[82] Gao Qide, *Extant Drafts of the Humiliation Hall*, 6, "Feelings on the High Price of Silkworms."

[83] *Tong River Collection*, 6, "Complete Collection of Letters Sent Up Before Year Yihai," contains a letter condemning Jia Sidao: "Since even more of the Communicating Medium has been exchanged, 200 of the 18th issue is insufficient to trade for a pair of grass shoes, or to meet the requirements of a soldier for one day."

Communicating Medium was equal to 770 cash, an 18th term Account Note was equal to 257 cash and a 17th term Account Note was worth 51 cash.

Thus, a jiading period 1 string Account Note was only equal to 25 copper cash. If we extrapolate back to the 1st term, I suspect a 1 string Account Note could not even be worth a single cash coin.

Therefore, the fixed term issue method had the effect of disguising the rise in prices, and for that reason even though Southern Song inflated its currency for nearly a century, there were no price figures which would have alarmed people. Only those who were themselves affected at the time understood the suffering of the people.

By just what percentage did Song's paper money undergo inflation? There is no way to tell, because we lack detailed records of the redemption ratios for all the terms of issue. Even from those incomplete materials which we do possess, we can tell that it was no small number.

When the Mongols occupied the south in 1276, they used their zhongtong era notes to redeem the old vouchers. The old notes are described in the history texts as Account Notes, but in fact they must have been Jia Sidao's ready cash Communicating Medium. The exchange price then was 1 string of zhongtong notes for 50 strings of the old vouchers. That is to say, 100 strings of ready cash Communicating Medium was only worth 1 ounce of silver.

If we extrapolate our calculation backward, then 2,250 strings of 16th term Account Notes were only worth 1 string of zhongtong notes, and it took 4,500 strings worth of them to equal 1 ounce of silver.

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If we go back to the 1st term of Account Notes, there is no telling by how many multiples of ten-thousand a depreciation had occurred.

The salaries of Southern Song officials must have been lower than those of Northern Song because the price level had risen.

If a single tenant farmer cultivated a field of 30 *mu*, and the average yield per *mu* in the south was 2 piculs of rice, and at least one picul was required as rent to the landowner, the tenant's annual real income was 30 piculs, or 20 hectoliters. For a family of five, that would be 4 hectoliters per capita. Sixty percent of this was consumed inside the family itself. The rest was exchanged for oil, salt, incense and candles, medicine and cakes.[84] This is for a rice producing region at a time of peace, but in fact the landlords' coffers were large, and sometimes 70 or 80 percent of the crop reverted to them.

Wages of laborers could not have been much better.

The Northern Song wage could purchase 1 hectoliter of rice per month. During kaibao [968-976], a chief weaver could buy 2 or 3 hectoliters of white rice per month, and an ordinary female worker could buy more than 1 hectoliter. During yuanfeng [1078-1086], a teamster could lay hands on more than 3 hectoliters a month.

The best wage during Southern Song, however, could only buy a little more than 1 hectoliter of rice, and in general, a month's wage could only buy a small fraction of that. For example, in qiandao 7 [1171], in the several districts near Shaoxingfu, a driller was only given 2 *sheng* per day.[85] That would make a monthly wage of only 0.4 hectoliters. In chunyou 1 [1241], sand panners in Ningbo, Zhejiang got a daily wage of 500 cash in 17th term Account Notes and 2.5 *sheng* of rice, or 1 string 500 cash in Account Notes, and no rice.[86] At that time the cost of rice was 40 strings of 17th term

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[84]Fang Hui (a Southern Song figure), *Ancient and Modern Investigations Continued*: "I have often been in the household of Wang Wenzheng of Weitang in Xiu, and have observed the countryside of Wunong, the smoke rising from kitchen fires in thatched houses, without poverty, and without extremes of wealth. All are tenant households. One peasant can now cultivate 30 *mu* of land. If each *mu* yields 3 or 2 piculs, and we take 2 as the median, 1 picul returns to the landlord's household. The manor rotation rate is 5 or more piculs. In addition, 30 piculs are paid in to the landlord, the tenant retaining 30 piculs. In a 5 person family, a person daily consumes 1 *sheng*, which comes to 18 piculs annually, leaving a surplus of 12 piculs. I have often seen tenant farmers carrying a picul of rice, or 5, 7, 3 or 4 *sheng* to market to exchange for more than one of the following: incense, candles, paper, horses, oil, vinegar, flour, sauces, bran, wheat flour, pepper, ginger, medicine and cakes. Several dozen piculs of rice are obtained in the course of a day. A boat can transport 100 piculs to Hangzhou, Xiuzhou, Nanxunzhou, Guzhou or Suzhou to be sold for cash, which is then used to buy goods to bring back for sale. The situation of the tenant households in the water townships is like this, but the situation in the hill townships is different. If we wish to learn a tenant household's

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annual food consumption, that which is planted in the hill fields, outside of the 30 paid to the landlords, there is an unknown amount of military and labor service which can make bitter a whole generation's life."

[85]*Song Collected Statutes Compiled Draft*, "Food and Money," 8.11, qiandao 7, 12th month, 8th day, a minister said: "In the districts near Shaoxingfu . . . some 681,500 was used for drillers. Each was given 2 *sheng* of rice per day. Some 13,630 piculs of rice were used."

[86]Wei Xian, *Beneficial Observation of Four Famous Landscapes*, first part, chunyou 1, 10th month, "I Observe the Government Managed Sand Panning."

Account Notes. Therefore, such a worker could only lay hands on 0.75 hectoliters of white rice per month.

Moreover, the practice of raking off payment of wages and materials flourished during Southern Song.[87] This reduced the amount working people actually got to put into their own hands.[88]

SOUTHERN SONG WORKERS INCOMES

Year	Type of Work	Monthly Equiv. Hctltrs Wh.Rice	Source
1127	diver	1.00	Song Coll. Stat.
1132	lower workman	0.81	" " "
	misc. labor service military worker	0.95	" " "
1135	soldier provisions	0.78-0.97	Song History
1171	driller	0.4	Song Coll. Stat.
1190-	soldier-worker	1.16	Attacking Shame Collection
-1195	in army weapons factory		
1196	sea-wall worker	0.73	" " "
1241	sand panner	0	Beneficial Observation of Four Famous Landsc.

[87] *Song Collected Statutes Compiled Draft*, "Official Ranks," 29.3, shaoxing 26, 12th month, 3rd day, and 29.5-6, chunxi 13, 3rd month, 10th day, both mention skimming of wages.

[88] The original figure for 1132 in the following table is 2 piculs per month for lower workers, with 800 cash added, 120 cash per day for meals, and loans for Spring and Winter clothing. Miscellaneous labor service soldier workmen got 2 piculs 5 *dou* per month, plus 120 cash per day for meals, and loans for Spring and Winter clothing. Cf. *Song Collected Statutes Compiled Draft*, "Official Ranks," 16.5, shaoxing 2, 12th month, 7th day.

6. *Silver's Purchasing Power*

Prices were expressed in terms of copper and iron coins during Song. Southern Song also expressed them in terms of paper money.[1] Silver was only used for large denomination payments, and was not used to denominate prices.

The regions which, during Southern Song, circulated silver denominated Account Notes could have been exceptions to this rule. There is an example during qiandao 9 [1173] of using silver to make a payment corresponding to a price in copper. Four catties of copper were paid for 1 ounce of silver.[2]

Over the whole country, however, silver was not used among the people for making everyday monetary exchanges. As a consequence, it cannot be said to have been a full money. It was only for payment of taxes that silver was frequently used.[3]

Still, records of silver prices are more numerous than for any earlier epoch.

Because the purchasing power of copper and iron coins fell steadily during Song, and inflation of paper money was even more severe, there was also a tendency for the coin and note prices of silver to rise as well. At the beginning of Song, an ounce of sil-

[1] *Song Collected Statutes Compiled Draft*, "Food and Money: Payment of Taxes": "In shaoxi 2, 3rd month, 22nd day, an edict to the prefectures of Tong and Chuan's . . . districts. Tax rice being sent to the three granaries in Longqingfu may be converted to the equivalent in coin for transmittal. For each picul, taking wastage into account, there may be paid 8 Coin Vouchers."

[2] *Song Collected Statutes Compiled Draft*, "Food and Money," 43.40: "In qiandao 9, 1st month, 6th day, Jiang Liao said . . . to stabilize copper, it should be sold officially, and used to set wages. I request that one ounce of official silver be commuted from 4 catties of copper in paying taxes."

[3] *Song Collected Statutes Compiled Draft*, "Food and Money," 40.14, shaoxing 3, 4th month: "The Board of Revenue was ordered that in receiving in payment of up to 15,000 bolts of Korean heavy silk, each bolt should be priced at 6 strings. The price for 20,000 bolts should be 5 strings apiece. Amounts of less than 3,000 strings may be commuted to silver, with each ounce of silver priced at 2 strings 200." Under "Miscellaneous Records on Taxes," qiandao 5, 1st month, 20th day, edict: "Henceforth commutation of cloth tax into silver should be in accordance with the Left Treasury price. When commoner households make such commuted payment, there should not be sudden reductions in price. . . . Prior to this, over the course of the years, commoners who paid taxes to the officials in silver did so at the rate of 3,200 cash per ounce, but when paying to the Left Treasury, did so at the rate of 3,300, each ounce yielding to them a silent profit of 100 cash. The ministers spoke of this, and so this order was issued."

ver was probably around 1,000 cash. Later, it rose to over 3,000. Though official and market prices diverged, and prices also differed between copper and iron cash using regions, a long term trend toward a higher price may be discerned.

By and large, during the latter half of the tenth century, an ounce was equal to 700-800 cash. Exchange prices of over a thousand cash were probably reckoned in Sichuan iron coins. During the first half of the eleventh century, the price of silver began to rise. An ounce went from 700 or 800

SONG DYNASTY SILVER PRICES

Date	Price per Ounce	Notes
936-965	680	W. Shu official estimate
	1,700	W. Shu market price in iron cash. Cf. Chengdu Record
977	1,000	Jiannan bribe
[503]		
982	1,700	Market price, perhaps iron coin
998-1003	800	Bianjing official price
1007	750	Official estimate
	1,000	Hedong Circuit market price
1027	11,300	Sichuan tax price using small iron coins. Cf. Song Coll. Stat.
	20,000	Yizhou market price using small iron coins. Cf. Song.Coll.Stat.
1040	2,000	Bianjing official price (Song His. 183), iron or large cash price
1046	3,000	Qiungzhou official price in iron or large coins (Inv.Lit.Rem.)
	3,000+	Xinzhou Circuit market price, in iron coins
1075	1,600	Sichuan, Shuzhou, maybe iron coin
1076	1,400	" " " " "
1104	1,250	Official price (Song Coll.Stat., "F&M," 43.80
1126	1,500	Bianjing official price
1127	2,300	" " " "
	2,500	" " " "
1127 (jk2/1)	2,500	" " " "
1127 (jk2/2)	2,500	" " " "
1128 (jk3)	2,500	" " " "
1133	2,200	Hangzhou official price (Song Coll.Stat.,"F&M" 40.17
1134	2,300	Hangzhou official price (Yue Ke, Jintuo Continued Compil.,5)
	c.3,000	Guangdong market price (Song Coll. Stat."F&M" 26
1156	less than 3,000	Hangzhou market price (Mis.Rec.In & Out. Court)
	3,300	" " " " " "
1160	3,000-4,000	Guangxi Circuit official price (Song Coll.Stat. "F&M" 27)
	2,000 ful	Ibid., market price
1164	3,300	Zhenjiang official price (Song Coll.Stat."F&M" 27.9
	3,000	Ibid., market price
1169	3,200-3,300	Hangzhou market price (Song Coll. Stat."F&M" 9.11)
[504]		
1172	3,600	(Song Coll.Stat.,"F&M" 51.48
1175	2,363 full	Guiyang official & market price (Mister Zhi zhai's Coll.Works,44)
1183	2,949 full	Guangzhou (SongCollStat "F&M"28.23
1195-1200	3,300	Hangzhou official price
	less than 3,000	Hangzhou market price
1226 ?	3,300	Hangzhou official price
1228	3,300 & less	Hangzhou official price (SongHis, 179,"Tr.F&M"
1236	3,460	Quanzhou price (Coll WorksMrXishan Duke Zhenwenzhong, 15)
1260-1264	3 million	Sichuan, in Coin Vouchers (Li Cengbo, KePavilMiscDraft)
next year	7.5 million	Ibid.

up to more than 1,000 cash. The figure for tiansheng 5 [1031] is, however, calculated in small iron coins, 10 of which equalled 1 copper coin. The high prices for kangding and qingli [1040-1049] are also in terms of large coins and iron cash, and are not comparable to the other figures.

During the last half of the century, the figures from Sichuan are also only around 1,000 cash per

ounce. During the first half of the twelfth century, an ounce ranged from 1,200-1,300 to 2,500, and during the latter half from 3,000 to 3,300. An ounce was also around 3,300 during the first half of the thirteenth century. All of these were calculated in Reduced-hundreds, probably with 77 cash to the 100, but this could have varied by locality. Official prices were also generally higher than market prices.

If the Song had calculated its prices in terms of silver, it would certainly have had much more stable prices than was the case with coin denominated prices.

If we take rice as an example, and calculate its prices in silver, then during the several centuries of the Song dynasty, although there were constant oscillations, over the long run there was a three-fold rise. At the end of the tenth century, a picul was worth around 0.2 ounces of silver, making a hectoliter worth 16 grams of silver. By the last half of the twelfth century, a picul averaged around 0.8 ounces of silver, or 46 grams of silver per hectoliter. During the early years of the last half of the thirteenth century (during the baoyou era), in Sichuan, a picul was worth 0.666 ounces of silver, or 37-38 grams of silver per hectoliter.[4] Even so, compared to the coin prices of rice, the situation was much more stable.[5]

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SONG DYNASTY RICE PRICES (3)

Period	Avg Price per Hectoliter (in ounces of silver)	Silver:Cash Exchange Rate (copper cash/oz)
961-970	0.329	750
971-980	0.505	800
981-990	0.312	800
991-1000	0.391	800
1001-1010	0.604	900
1011-1020	0.313	1,600
1021-1030	0.324	1,600
1031-1040	0.522	2,000
1041-1050	1.256	3,000
1051-1060	0.446	3,000
1061-1070	0.682	1,000
1071-1080	1.461	1,000
1081-1090	0.856	1,200
1091-1100	0.930	1,200
1101-1110	1.582	1,500
1111-1120	1.204	1,500
1121-1130	7.044	2,250
1131-1140	6.449	2,300
1141-1150	0.801	2,300
1151-1160	1.137	3,000
1161-1170	1.169	3,200
1171-1180	0.977	3,300
1181-1190	1.181	3,300
1191-1200	1.677	3,300
1201-1210	2.550	3,300
1211-1220	1,209	3,300
1221-1230	1.318	3,300
1231-1240	1.006	3,460
1241-1250	1.006[6]	
1251-1260	1.004	

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If we calculate the price of rice in terms of silver over the whole course of the Song period, a hectoliter had an average price of 0.8-0.9 ounces. The price was still low during the eleventh century, the

[4]Li Cengbo, *Ke Pavillion Miscellaneous Draft*, 3, "Secret Memorial on Saving Shu's Mulberry Paper Money": "Since baoyou 2, still more silver Account Notes have been printed, with 1 equal to 100 of the old notes. This was temporarily effective in helping them to be used by making mulberry paper money more heavily demanded, but from now on, the mulberry money will become still more lightly demanded. . . . To give one or two illustrations: Last Spring, the price of silver was only 3,000 vouchers per ounce. Now an ounce fetches 7,500 vouchers. Last Spring the price for official grain purchases was only 2,000 vouchers per picul. Now, the price is 5,000. Other goods have jumped in price proportionately."

[5]These are calculated in terms of the Reduced-hundred. Hence the figures in the SONG RICE PRICE TABLE (1) must first be reduced by 77 per 100 before calculating the exchange price. However, the rice prices for the '20s and '30s of the twelfth century seem too high, since we do not know if they were denominated in copper or iron cash, or in 2-cash coins. A certain number of the silver prices in the table are arbitrary in that they are not nationwide average silver prices, but rather were determined after examining the sources of various rice price figures of the time and drawing up baseline prices. If a majority of the rice prices for a particular decade were from Sichuan, then the Sichuan silver:cash exchange rate was mainly employed. If the rice prices were expressed in iron cash, then the silver price could only be expressed in terms of iron coins as well.

[6]If we calculate the price of rice for the '40s of the thirteenth century in terms of coin Account Notes, then though it was 100 strings per picul, the silver price must still have been higher than in the example. (Cf. note 4 above.) It is even possible that the price of silver was rising faster than the price of rice. The estimate here is that the price level of the previous decade was maintained.

most glorious time for the Song, when both production and the money supply increased. However, prices were especially high during the first half of the twelfth century, because men like Cai Jing were in charge of the administration then and minted large coins, causing the value of coins to fall. Disasters from abroad and domestic uprisings also began then, and these constrained and reduced production. Nevertheless, during the latter half of the twelfth century, the price of rice in the south cannot be considered too high.

SONG DYNASTY RICE PRICES (4)

Period	Avg Price/Hctltr (oz silver)
Last 1/2 10th century	0.377
First 1/2 11th cent.	0.526
Last 1/2 11th c.	0.815
First 1/2 12th c.	2.337
Last 1/2 12th c.	1.208
First 1/2 13th c.	1.327

The rise in the silver price of heavy silk was more moderate. The copper cash price of heavy silk rose from its early Song level of 1,000 cash per bolt to 2,000 during jianyan, and after the crossing to the south to 3,000, 4,000 and 5,000, and it finally peaked at 10,000 cash per bolt. If, however, we convert these to silver, then except for the oscillations of the shaoxing years, there are practically no large rises or falls. At the beginning of Song, a bolt was 1.2 or 1.3 ounces of silver, and at the end of the dynasty it was still only 1.2 ounces.

SONG DYNASTY HEAVY SILK PRICE TABLE (1)

Period	Avg Price per Bolt (oz of silver)	Silver:Cash Exchange Rate[7] (in cash)
961-970	1.20	-----
971-980	1.25	800
981-990	----	-----
991-1000	1.28	800
1001-1010	----	-----
1011-1020	0.65	1,600
1021-1030	0.85	-----
1031-1040	----	-----
1041-1050	1.00	-----
1051-1060	1.30	1,000
[507]		
1061-1070	1.44	1,000
1071-1080	1.30	1,000
1081-1090	1.10	1,200
1091-1100	1.00	-----
1101-1110	----	-----
1111-1120	----	-----
1121-1130	0.81	2,250
1131-1140	2.35	2,300
1141-1150	3.20	2,300
1151-1160	1.71	3,000
1161-1170	1.48	3,200
1171-1180	1.51	3,300
1181-1190	1.51	3,300
1191-1200	1.56	3,300
1211-1220	1.21	3,300

[7]There are several places where the commuted prices given here do not correspond to those given in the table of rice prices. This is because the prices here are based on copper cash.

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The average silver price per bolt of heavy silk over the several centuries of the Song Dynasty was around 1.3 ounces. Except for the shaoxing era of Southern Song, the silver price of heavy silk remained about the same.

What was the reason for this? Was it because silk was an export item, for which Europeans and Central Asians paid in silver, thereby subjecting the silver price of heavy silk inside China to the stabilizing influence of the international market? It would seem not, since the price of silk does not appear to have been more stable during Song than during other dynasties.

The price of heavy silk was much lower during Tang. During both early and late Tang, a bolt of silk was only 0.5 to 0.6 ounces of silver. The only exception to this was during the aftermath of the An-Shi disorders, but we do not know the price in silver at that time. Later, during Ming, the price of silk was also lower than during Song. This cannot be explained on the basis of influences from abroad.

SONG DYNASTY HEAVY SILK PRICE TABLE (2)

Period	Avg Price per Bolt (oz silver)
Last 1/2 10th century	1.24
First 1/2 11th cent.	0.81
Last 1/2 11th c.	1.22
First 1/2 12th c.	1.83
Last 1/2 12th c.	1.55
First 1/2 13th c.	1.21

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Though silver's purchasing power was more stable than that of coins, its tendency to decline is still very evident. This decline must have been caused by silver's fall in price.

The quantity of silver also increased: On the one hand, domestic production increased, and on the other, either foreign silver flowed in, or the outflow of domestic silver was diminished.

Tang Dynasty silver production was only 10,000 or 20,000 ounces per annum.[8] The quantity produced during Northern Song greatly expanded: By the end of the zhidao period [998], it was over 145,000 ounces, by the end of tianxi [1022] it was in excess of 883,000 ounces, during huangyou [1049-1054] it was 219,829 ounces, and in yuanfeng 1 [1078] it was 215,385 ounces.[9] It is said that at its highest point it reached more than 18,600,000 ounces.[10] After the crossing to the south, many silver mines were closed.[11] Production difficulties and the outflow of gold, silver and copper cash kept silver's purchasing power from falling further.

There were very many places producing silver during Northern Song. Nearly 30 prefectures were involved. Of these, Xinzhou (in Jiangxi) produced the most, its annual production coming to over 100,000 ounces. Production in other places, like Guozhou, Longzhou, Nanjianzhou and Danzhou, reached several dozen thousands of ounces per annum.[12]

The price of gold in terms of cash was especially high during Song. By late Tang, an ounce of gold reached a price of 8,000 cash, and at the beginning of Song it shot up to 10,000, but then fell to some degree. During the xianping era [993-1004] it fell to 5,000. It was probably for this reason that some people transported gold across the borders.

In dazhong/xiangfu 1 [1008], Emperor Zhenzong inquired as to why gold and silver had jumped in price in the capital city. Someone said it was because the Uighurs were buying specie up to transport to foreign countries.[13] Others said it was because of domestic extravagance.[14]

From the time of Emperor Renzong, the price of gold probably rose faster than that of silver. In tiansheng 5 [1027], the price of an ounce of gold rose to 1 string, while that of silver apparently remained unchanged.[15] The price of an ounce of gold in Guangnan was only 8,800 cash.[16] That was the official purchase price in a gold mining area, and was cheaper than the general price, and so cannot be used as a benchmark.

In mingdao 2 [1033], the authorities issued an edict classifying precious objects. All things made of gold were now to be made of silver and plated with gold.[17] In daguan 3 [1109], the 10-cash coin

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[8] *Tang History*, 54, "Treatise on Food and Money": "At the beginning of yuanhe, smelting of silver in the Empire had halted for 40 years. Gathered were 12,000 ounces of silver. . . . By the time of Emperor Xuanzong [Ming Huang] . . . the Empire's annual rate of silver production was 15,000 ounces."

[9] Cf. *Song History*, 185, "Treatise on Food and Money," latter part, 7, "Mines and Smelters." *Song Collected Statutes Compiled Draft*, "Mines and Smelters." *Investigation of Literary Remains*, "Investigation of Taxes and Tolls, 5, Mines and Smelters." *Searches into a Multitude of Books*, latter collection, 62, "Mines and Smelters."

[10] *Miscellaneous Record In and Outside Court Since Jianyan*, 16, "Fiscal Policy, 3, Gold and Silver Mining and Smelting": "During the time of the founding ancestors, in addition to gold produced by panning sand and stones, the amount of silver annually offered in tribute reached 18.6 million and more ounces."

[11] *Ibid.*: "After crossing the Yangtze, 142 gold mines and 84 silver mines were closed."

[12] *Song Collected Statutes Compiled Draft*, "Mines and Smelters."

[13] *Searches into a Multitude of Books*, latter collection, 62, "Mines and Smelters."

[14] *Song Collected Statutes Compiled Draft*, "Food and Money: Miscellaneous Prohibitions," 162: "In dazhong/xiangfu 1, because the price of gold and silver had become high, the Emperor inquired about it of the Finance Commissioner, Ding Wei. Wei replied that much had been bought up by the Uighurs of the western frontiers, and taken across the borders by them. An edict set restrictions on this."

Swallow Wing Bequeathed Plans Record: "When the Ancestors first established the state, they venerated frugality, and those who wore garments with gold and silver were few. Rarely did the members of the official class compete in wasteful practices. Hence the high ranking officials placed purity and frugality in the highest position, and the price of gold and silver was extremely low. To the east and the west, the borders were marked and worshipped, Heaven's messages descended, Heaven's spirits were visible, but profligacy spread more broadly. The higher officials took this as their model, and as a consequence the prices of gold and silver increased. Therefore, in dazhong/xiangfu 8, 11th month, day yisi, Emperor Zhenzong inspected the memorial of the Finance Office on wasteful expenditure of silver, and inquired of the officials at his side, 'During xianping, an ounce of silver was 800, and an ounce of gold 5,000. Why have they now shot up like this?'"

[15] *Searches into a Multitude of Books*, latter collection, 62, "Mines and Smelters."

[16] *Song Collected Statutes Compiled Draft*, "Food and Money: Miscellaneous Records on Mines and Smelters," 34.15.

was changed to a 3-cash coin, and this evoked a wave of gold buying.[18] The price of gold certainly rose. In jingkang 1 [1126], the prices of gold and silver skyrocketed, particularly gold.

SONG DYNASTY GOLD PRICES

Year	Price per Ounce (in cash)	Notes
977	10,000	Jiangnan W.Circuit official Estimate (Long Draft Continued)
977 rev.	8,000	Ibid.
998	5,000	Jingdong official price (SongCollStat,"F&M" 34.13
[509]		
998-1003	5,000	Bianjing market price (Long Draft Continued)
1015	10,000	Bianjing market price
1086-1125	10,000	Bianjing market price (New Discourses on Belt Ornaments)
1126	20,000	Bianjing official price (Three Reigns' Northern Compact Compendium)
1126	30,000	
1127	32,000	Bianjing official price (Annals of Things Heard During Jingkang)
1127	50,000	Bianjing official price
1127	35,000	Bianjing official price (Annals of Things Heard During Jingkang)
1127(jk2/2)	32,000	Bianjing official price
1127(jk2/2)	35,000	
1134	30,000	Hangzhou official price
1164	30,000	Hangzhou official price
1164	35,000	Market price (SongColl Stat,"Official Ranks")
1209	40,000	Hangzhou official price (SongHis,"TrF&M")

During the period from chongning to shaoxing [1102-31], the coin prices of gold and silver rose, especially gold. There were other reasons for this in addition to the fall in the price of coins: The first was the fall in gold production. During huangyou [1049-54], production was only 15,095 ounces per annum; during yeping [1064-68], it fell to 5,439 ounces, and in yuanfeng 1 [1078], it was only 10,710 ounces.[19]

The second was that there was increased popular demand to hoard the metal, because the years from chongning to shaoxing was Song society's most unstable period. The demand for specie, and for gold in particular, increased both in regions affected by war and in those not involved in war. People in war-torn areas regarded gold as the form of wealth most convenient to carry with them as refugees. Since the situation was so volatile, people in areas not affected by war also demanded gold to hoard.

The third reason was that the Jin were attempting to engross nearly all of it. For example, when Bianjing was about to fall to them at the end of xuanhe [1126], the Jin made as one of their preconditions for negotiating peace a payment of 5 million ounces of gold and 50 million ounces of silver. The Song confiscation of these metals from the public only yielded something over 200,000 ounces of gold and 4 million ounces of silver.[20]

[18] *Investigation of Literary Remains*, "Investigation of coins," quoting *State History Supplement*.

[19] *Song History*, 185, "Treatise on Food and Money: Mines and Smelters."

[20] *Events of Great Song Handed Down from Xuanhe*, former collection, xhuanhe 6: "Just as the capital city was being crushed . . . Now to negotiate peace there was needed a reward of 5 million ounces of gold and 50 million ounces of silver. . . . At this time the amount the Jin were extorting to make peace was extravagant. Wang Xiaodi put up placards establishing the quantities being demanded. Gold and silver were sought out among the capital garrison, people, officials and clerks. Those who did not obey were to be beheaded. Some 200,000 ounces of gold was obtained, and over 4 million ounces of silver. The public's hoards of wealth were emptied out."

Li Gang, *Record of Transmission of Honesty During Jingkang*, first part: "In the Winter of xuanhe 7, the Jin broke the treaty, and sent their soldiers to intrude along two routes. . . . By the middle of the 12th month, the bandit cavalry was pressing us closely. . . . The ministers collected gold and silver, including the Imperial Temple ornaments and sacrificial vessels, and the utensils from the Six Palaces, and confiscated the possessions of officials' households, but the gold only came to 300,000 ounces, and the silver to only 8 million ounces. The next day, at audience in the Funing Palace, the ministers repeatedly bowed in fear and condemned themselves because the quantity of gold and silver was inadequate. I was the only one not to do so. Thereupon, Xiaodi recommended confiscating all the gold and silver held in the capital by officials, clerks, soldiers and commoners for the avowed purpose of rewarding the soldiers of the army of Great Jin. Long placards were posted in the streets ordering that all up to the established amounts be handed over to the officials.

In jingkang 1 [1126], 12th month, the Jin again sent emissaries to demand 10 million ingots of gold and 20 million ingots of silver. The authorities once more made a great show of collecting gold and silver, and the price of gold thereupon shot up to 50,000 cash per ounce, and silver rose to 3,500 cash per ounce.[21] Actually, there was still quite a lot of gold and silver in the palace, which they were unwilling to hand over,[22] and yet

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they were bent on taking away that small amount being hoarded by the common people.

The fall in silver's purchasing power produced a great change in the gold-silver exchange ratio. During the tenth and early eleventh centuries, the ratio was still 1:6.25, and there had probably been very few changes over the course of the preceding millennium. I daresay changes had already begun during the '20s of the twelfth century, since the price of gold had already risen by tiansheng 5 [1027], which alone could have changed the price ratio between the two metals, perhaps to 1:7.5. In chongning 3 [1104], silver was 1,250 cash per ounce, and during the reigns of Zhezong and Huizong [1086-1126], gold is said to have been 10,000 cash per ounce.[23] This comes to an exchange ratio of 1:8.

This sort of calculation is not altogether reliable, since the gold and silver prices are not from the same source. They could have been from different places, and could have been based on different standards, since at that time there were copper coins, iron coins, small and large coins, all with different values. In daguan 3 [1109], the 10-cash coin was revalued to 3-cash. Those who heard this was happening fought each other to purchase gold. Gold's price must have risen, and the exchange ratio of gold with silver would naturally also have changed.

In any event, however, this ratio changed greatly during the jingkang period from 1:12.8 to 1:14.25. By shaoxing 4 [1134], it was still 1:13. Later it seems to have subsided. In longxing 2

Those who did not reach these amounts were to be beheaded. Serving maids, relatives and dependents, as well as all classes of people, were allowed to inform on violators, and to be rewarded with half the sums thereby obtained. The capital city was was greatly shaken, and the quotas of over 200,000 ounces of gold and 4 million ounces of silver were fulfilled, but as a consequence hoards of wealth among the people were emptied."

Record of Great Jin's Campaigns, 1, tianhui 4 (i.e. jiankang 1), 1st month, 9th day, letter of reply to Song: "In future the annual payment is to be increased to equal 7 million strings. Now it is reduced 5 million strings. In addition to the silver and heavy silk which have been agreed on to be delivered, only 2 million strings per annum are to be paid, along with the goods to reward the army enumerated in our letters, including the following five items: 5 million ounces of gold, 50 million ounces of silver, 1 million bolts of various colors of satin, 1 million bolts of heavy silk, 10,000 head each of horses, oxen and mules, and 1,000 camels." (*Historical Compendium of Chinese Domestic Disorders and Foreign Disasters.*)

Comprehensive Mirror for Illumination of the Prince Continued, 96: "Jingkang 1, 1st month. The army of the Jin Zongwang was northwest of the capital. Li Zhuo was appointed Reception Commissioner. . . . Zongwang agreed to see

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him. . . . He demanded 5 million ounces of gold and 50 million ounces of silver. . . . There was an edict to confiscate the gold and silver of private familes . . . and 200,000 ounces of gold and 4 million ounces of silver were obtained, leaving the people empty."

[21] *Comprehensive Mirror for Illumination of the Prince Continued*, 97: "In jingkang 1, 12th month, day guihai, the Jin sent emissaries to extort 10 million ingots of gold, 20 million ingots of silver and 10 million bolts of cloth. Thereupon there was a general levy of gold and silver. Gold's price reached 50 Thousands and silver's 3,500."

[22] *Great Jin State Record*, 32: "When Jin inspected Great Song's Treasury, there were 3 million ingots of gold and 8 million ingots of silver." *Essential Record of the Years Since Jianyan*, 2, quoting *Xuanhe Record*: "When the Jin entered the Inner Palace, they went to empty the various treasuries. . . . There were 141 leaves of gold brick, Mr. Wang's burned gold, Chen Tuan burned gold, newly mined gold presented by Korea, 6 suits of gold armor with helmets, gold saddles, gold horse bridles, gold pestles and knives, 425 gold seeds . . . In the Retired Emperor's chambers were 40 strings of gold coins and 80 strings of silver coins. In the Emperor's chambers were 20 strings of gold coins and 40 strings of silver coins. In the Empress's chambers were 11 strings of gold coins and 22 strings of silver coins. There were 120 silver stoves, 4 gold stoves, 120 gold tables, 20 silver chased chairs, 40 large and small gold alloyed ones, 4 gold-washed buckets, 800 gold pans, 20 gold decorated bowls, countless gold and silver spoons and chopsticks, and 20 gold soup bowls."

Ibid., 3rd month: "The Protector's Office sent letters to the army to demand the original quantity of gold and silver. Subsequently quotas were distributed among the 23 wards, with each ward responsible for 445,000 ounces of gold and 2,814,150 ounces of silver. . . . The lower households were assigned quotas of not less than 100 of gold and 1,000 of silver."

[23] Kong Pingzhong, *New Discourses on Belt Ornaments*, 2: "There are now instances of an ounce of gold being worth 10,000, and thus a catty of gold during Han was the same price as an ounce is now." Kong Pingzhong lived during the reigns of Emperors Zhezong and Huizong. During Huizong's reign, he commanded Qing, Yan, Qiong and Qing, and later was in charge of the Jingling Palace.

[1164], it could have been around 1:11, but at the beginning of jiading [1208], it seems to again have reached 1:12. These two ratios were, however, calculated indirectly, and are not necessarily reliable.

SONG DYNASTY GOLD-SILVER EXCHANGE PRICES

Period	Value in oz of silver of 1 oz of gold	Notes
998-1003	6.25	ComprMirrorLongDraftCont
1015	6.25	" " " " "
1126	13.33	Xu Mengxin, ThreeReigns NorthernCompactComp, 32
1127	13.04	Record of Things Seen and Heard During the Two Reigns of Jingkang and Jianyan, first part
end 1127	12.8	
" "	14.25	ComprMirrorCont, 97
jk2/1/13[1128]	14.0	Ding Teqi, AnnalsThings Heard DuringJingkang
jk2/2/21[1128]	14.0	Record of Things Seen..During Two Reigns..first pt
jk2/2/24	14.0	ThreeReignsNorth..83
1134	13.04	

The fall in value of silver relative to gold can be explained solely in terms of the domestic production of gold and silver, and in terms of

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the relative demand for the two metals.

As for the supply side, during the huangyou period [1049-54] of the first half of the eleventh century, the production ratio of gold to silver was 1:14.56. During yeping [1064-68] in the last half of the century, it was 1:57.95, and in yuanfeng 1 [1078] it was 1:20.11.

On the demand side, at the end of the xuanhe period [1126] during the first half of the twelfth century, the proportion between the two metals in the Jin demand for rewards was 1:10, in the demands the made at the end of jingkang 1, it was 1:2, but the ratio between the metals extorted from the people to meet these demands was 1:20. The annual purchase made in longxing 2 [1164] by the mine and smelter inspecting officials to rise in rank was 4,000 ounces of gold and 100,000 ounces of silver.[24]

Obviously, at that time gold was still scarce and silver plentiful. These circumstances were more than sufficient to account for the appearance of changes in the gold-silver exchange ratio.

These changes were produced by circumstances peculiar to China, and were not influenced by changes in the ratio emanating from abroad. This is because, although there were then places in Europe where the ratio was from 1:11 to 1:12, China had no direct contact with these places, whereas in the Arab world, with which China maintained close contact, the ratio remained at around 1:6.[25]

Nevertheless, there is a possibility that inflow of foreign silver could have influenced the price of silver in China. We cannot produce concrete figures for the international movement of gold and silver for these several centuries, but judging from the situation in Europe and Central Asia, it is possible that silver flowed into China.

During Tang and Song, East-West trade flourished to an extraordinary degree, with the Arabs as its intermediaries. Particularly from the ninth century on, relations between the Carolingian Emperors of the Frankish state and the Arab Empire had been very good, and Chinese silk was brought to Europe by the Arabs. European production then was backward, they had no goods in demand by the Orient, and so could only use specie to pay for this silk.

In the tenth century, the European gold-silver price ratio was 1:11 to 1:12, while China's was 1:6.25, and the Arabs' was 1:6. Hence it would have been profitable for both sides to employ silver to buy the other's goods. Though there were limitations on Europe's production of silver during the tenth century, Central Asia was a silver-producing region, and it is strange that this region felt a general shortage of silver at the end of the tenth century, even to the point of halting the minting of silver coins and substituting the baser metals for silver. Where had their silver gone?

Some people[26] say that it flowed into Russia in the north, and to the Arctic Sea region, but it is also

[24] *Song History*, 185, "Treatise on Food and Money: Mines and Smelters."

[25] Concerning the gold-silver exchange ratio in Europe from the sixth to the fifteenth century, J. L. Laughlin, *Money, Credit and Prices*, Vol. I, pp. 95-96, makes the general statement that it was 1:15. According to Alexander Del Mar, *Money and Civilization*, p. 199, the ratio in France in 864 was 1:11.5; in 1113 it was 1:11.25. During the thirteenth century, it was mostly at 1:12 or more. W.A. Shaw, *The History of Currency, 1252-1894*, p. 40, states that during the thirteenth century, Italy's gold-silver exchange ratio was 1:10.75 to 1:10.84, and England's was 1:9.25. Up until 1432, it was only 1:5.822 in Spain. Obviously, this was the ratio among the Arabs.

[26] Robert P. Blake, "The Circulation of Silver in the Moslem

possible that it flowed into China to buy silk cloth. Apparently the gold-silver exchange ratio in China remained unchanged right down to the beginning of the eleventh century. Silver production in Europe increased significantly during the twelfth and thirteenth centuries. Hence, if European silver was coming east, it should have done so to the greatest extent during this time. Coincidentally, Chinese silver's fall in price occurred during this period.

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The ratio in Arab lands probably remained at 1:6.[27]

Because the purchasing power of both coins and silver was tending to diminish, the coin and silver prices of gold rose, and gold's purchasing power was the most stable of the three. If we take the gold-silver exchange ratio as 1:6.25 for the last half of the tenth century and first half of the eleventh century, as 1:8 for the last half of the eleventh century, 1:13 for the first half of the twelfth century, and 1:12 for the last half of the twelfth and first half of the thirteenth centuries, then the rice purchasing power of gold had fallen by around 66 percent during these three centuries.

If we calculate the gold price of heavy silk, then not only was there no rise, there was actually a decline from 0.2 ounces of gold per bolt during the last half of the tenth century to 0.13 ounces per bolt by the latter half of the twelfth century. Material on heavy silk prices is, however, even more scarce than for rice, particularly for the latter half of the tenth century, for which we only have three prices which are mutually inconsistent, ranging from 600 to 1,800 per bolt. This data is not, therefore, suitable for making comparisons with the eleventh and twelfth centuries. Nor is the material on gold prices, rice prices and the gold-silver exchange price sufficient.

SONG DYNASTY RICE PRICE TABLE (5)

Period	Avg Price per Hctltr (in oz gold)
Last 1/2 10th century	0.060
First 1/2 11th cent.	0.084
Last 1/2 11th c.	0.102
First 1/2 12th c.	0.179
Last 1/2 12th c.	0.101
First 1/2 13th c.	0.098

After the Song crossed to the south, there was a tendency for gold to gradually fall again relative to silver. Aside from the fact that Song no longer had to respond to Jin extortion, the reason for this decline was that gold was still being imported from foreign countries. Japan, for example, was a gold exporting nation.

During the Song and Yuan Dynasties, the price of gold was lower in Japan than in China. In yuanyou 1 (1086, which was otoku 2 of the Japanese Tenno Shiroka), the Japanese gold-silver exchange price was 1:5.[28] In China, during both the xianping [993-1004] and dazhong/xiangfu [1008-17] periods, it was 1:6.25. There are no materials for the yuanyou [1086-94] period, but it is possible that the ratio increased then to 1:7 or 1:8, since it was 1:13 to 1:14 during jingkang [1126]. Therefore, it would have been profitable for the Japanese to have exported gold to China.

During the latter years of Japan's Heian

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period, placer gold production flourished, with the producing regions under the control of the Fujiwara family, in whose hands Japanese political authority then rested. The Hikarito Hall in the Chusonji Temple founded by Fujiwara Kiyohira was clad in gold. The copies of the sutras in his Hall of Classics are said to have cost Kiyohira 150,000 ounces of gold dust when he purchased them from a Song Emperor. In fact, gold dust was nearly in the first position among Japanese exports to China, though it only reached at most 4,000-5,000 ounces per year.[29]

East Down to the Mongol Epoch," *Harvard Journal of Asiatic Studies*, II (1937), 291.

[27]Cf. note 25, above, third item.

[28]Katō Shigashi, "Medieval Gold and Silver Prices in Sino-Japanese Trade," *Studies in Social and Economic History* (Shōwa 8), [1933].

[29]Katō Shigashi, *Studies of Gold and Silver During the Tang and Song Periods*. *Record of Four Brilliant Things of Baoqing* mentions gold seeds and gold dust. Fujiwara Katakara, *Leaves of Jade*, 12: "In chyoan 3 [qiandao 9], the Retired [Cloistered] Emperor acquired a painted box for 100 ounces of gold dust, and it was used as a gift for Song." *Record of Four Brilliant Things of Kaiqing Continued*, 8: "The Wa people braved the dangers of the ocean waves to form into a flotilla to bring their goods to sell. An office was set up to market the foreign goods, but the amount registered was broad, and to supplement the amount there was only sulphur and wooden beams. Gold was not profitable. Wa gold does not amount to much to carry. How much does a few grains or ounces come to? The extortions of the officials and clerks, the controls put on by the middlemen, are sufficient to dry it all up. It is not that the dynasty harbors long range ideas. The High Commissioner and Chief Minister, Lord Wu, energetically spoke to the Ruler to request loosening the prohibition, and to not tax the gold, so that it may be imported. The Ruler assented to his memorial."

In Emperor Lizong's shaoding 5 (1232), the price of gold in Japan was 650 cash per ounce. The Chinese authorities adopted a policy of placing a low tariff on Japanese goods, which were broadly purchased. Beginning with Empeor Lizong's baoyou 6 (1258), Japanese gold was permitted to be freely traded to China.

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5.3 Monetary Studies

1. Monetary Theory

The Song was a dynasty during which bureaucratic culture was especially well developed. The Northern Song in particular gave rise to a high tide of culture, but one which, unlike Southern Song, induced neglect of monetary theory. This neglect was not without a reason.

To begin with, bureaucrats are ashamed to speak of profit. Confucians feel that they ought not to know about coins or grain, supposing that plowing and weaving ought to be left to slaves and servants. Second, during the third quarter of the eleventh century, when this high tide of culture was running, the remuneration of the official class was at its peak. They had money in their hands, and it made not the least difference to their prodigal style of life whether this money was in iron coins or Exchange Notes. In their view, there was no monetary problem.

By Southern Song times, circumstances had changed somewhat: First of all, paper money was something novel, which readily evoked curiosity. Second, the remuneration of Southern Song officials fell below that of their counterparts during the most flourishing period of Northern Song. The depreciation of paper money to some degree affected their standard of living.

Among those who discussed monetary questions during Northern Song were Li Gou, Sima Guang, Shen Gua, Su Shi and Su Che.

Li Gou (1009-1077) was a quantity theorist. In his "Strategies for Enriching the State," he wrote:

> Generally speaking, when coins are numerous, they are lightly demanded. When coins are lightly demanded, then goods are heavily demanded. When coins are few, they are heavily demanded. When coins are heavily demanded, then goods are lightly demanded.[1]

Naturally, there is nothing very original in this explanation. Ever since the *Guan Zi* over a thousand years previously, every age had produced writers who made this point. An edict of daguan 4 [1010] had also stated, "Coins are like commodities. When scarce, they are expensive. When abundant, they are cheap."

During Northern Song, when a monetary economy was already especially well-developed, there were still people who inclined toward objectivism. Perhaps one ought to say that it was just because the money economy was especially well developed that the anxiety of intellectual conservatives was aroused.

Sima Guang (1019-1086), revealed such ideas in his opposition to Wang Anshi's Avoidance of Labor Service Cash Tax. In yuanyou 1 [1086], he said:
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> Now the court has established a law which says: We do not need your labor. Pay Us coins, and We will Ourselves hire men. It is simply not understood that for the peasants, putting out coins is harder than putting out labor. Why is this? Coins are not minted by the people. They all come from the officials. What an upper level peasant household has most of is no more than land, grain, cloth, oxen and and their appurtenances, mulberry and three-bristle cudrania. There are none who amass as much as several hundred strings of cash. Ever since antiquity, abundant harvests have cheapened the price of grain. This in itself is enough to harm agriculture. If the officials go further with the Avoidance of Labor Service and other taxes in cash, then grain will be made even cheaper.[2]

Lu Zhi and Bo Juyi had already said this sort of thing during Tang. Whatever the merits of the Avoidance of Labor Service Tax, it was an example of the natural tendency to monetize taxes. It was precisely this tendency that people like Sima Guang and Su Shi were opposing. They were not really putting themselves in the shoes of the peasantry, but rather were speaking from the perspective of the landlords.

Shen Gua (1030-1094) clarified the idea of the velocity of circulation of money. He once said to Emperor Shenzong:

> Coins yield profit through being circulated and lent. If in a town of ten households there is a sum of 100,000 cash, but it is concentrated in one person's household, then though a century passes, it will still be 100,000. If it is traded and exchanged so that people consume 100,000 cash of profit distributed among each of the ten households, then there will be a profit of 1 million. If it does not keep moving, then the coins cannot multiply.[3]

He recognized that the more times money circulated, the greater was its usefulness. In the history of European economic thought, a great contribution

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[1] *Collected Works of Li Zhijiang*, 16, "Strategies for Enriching the State," number 8.

[2] *Song Collected Statutes Compiled Draft*, "Treatise on Food and Money: Avoidance of Labor Service Cash," 13.2-4.

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[3] *Comprehensive Mirror for Illumination of the Prince, Long Draft, Continued*, 283, xi'ning 10, 6th month.

was made to the theory of money's velocity of circulation by the seventeenth century Englishman John Locke. Locke said that if a coin circulated a hundred times, this was equal in its effect to issuing one hundred coins. This position had already been made clear in principle by Shen Gua six centuries previously. It was already current by Tang times, but was not expressed as clearly as it was by Shen Gua.

Su Shi (1036-1101) was a bullionist. In his "The Reasons for the Private Casting of Coins by the Wandering People of Guanlong and the Making of Profit by the Water-Transport Soldiers of the Jiang and Huai,"[4] he states:

> The fraud involved in private coining originates in the coins' lightness. If coins' value is equal to the value of the metal they contain, then even if you reward people for doing so, they will not make them. Now, in Qin and Shu [i.e. Shaanxi and Sichuan], paper is cut up to make money. To put trust in such a token is to mistake a clod of earth for gold or jade. This cannot but cause the people to hurry to trade away these things.

He called for parity of value between the face value of a coin and the value of the monetary metaterial it contained, and he opposed paper money.

His younger brother, Su Che (1039-1112), was something of a Legalist. In his "Strategy for Putting Money into Circulation and Filling the Granaries" of xining 2 (1069), he states:

> Coins are made by the state, and then issued and dispersed among the people.[5]

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This sentence is virtually identical to the statements of modern state monetary determinists. In his "Letter Upon Returning From Qizhou to Discuss Contemporary Affairs," he goes on to state:

> Coins are made by the officials. Grain and cloth are produced by the people. In ancient times, those above put forth coins to regulate the commodities of the Empire. Those below put forth grain and cloth to remedy deficiencies. Those above and those below made exchanges with each other, and hence neither was without profit.[6]

This was identical to the views of Lu Zhi and Bo Juyi of Tang and Sima Guang of his own dynasty. These men were not true objectivists. It is merely that a residue of objectivism remained in their ideas because they were spokesmen for the landlords.

By Southern Song times, more people turned their attention to monetary questions, including such figures as Luo Bi, Yu Chou, Xin Qiji, Yuan Xie, Yuan Fu and Ye Shi.

Luo Bi was a student of ancient history. In his *History of the Circuits*, there is a chapter called "On the Origins of Money," but what he wished to verify was during what specific period money originated, or in other words, during the reign of which emperor. This is an historical problem. Evidently he was not interested in whether money was made by the monarchs or whether it appeared spontaneously, since he is not entirely clear on this point. He wrote:

> The people knew the use of food, drink and clothing; but the making of money, its making and circulation through the Empire, was guarded by the Sage, and was used by him to establish good government. Hence the coming of its influence lay in its giving rise to the people's goods.

Judging by these few sentences, he considered money to have been made by the people and guarded by the Sage. Translated into modern language, he was saying: The appearance of money was spontaneous, but only after it appeared could the commodities of the Empire get to be circulated. In addition, the monarch used it to promote his control. One might also say that the monarchs protected this money which had appeared spontaneously among the people, and thereby brought good order to the nation.

Because the circulation of paper money during Southern Song was accompanied by the steady depreciation of the currency, and this had a very great affect on the livelihood of the people, a number of opinions on paper money were expressed then. Most of those at court, like Yu Chou and Xin Qiji, approved of it. In a written directive, Yu Chou stated:

> When, in former years [in the time of Emperor Guangzong], I was favored with command of Huaixi, I was moving east, and whereever I stopped, I never saw or heard of anyone who did not consider the Exchange Notes convenient. . . . Bronze and iron coins, Exchange Notes and Account Notes, each had a definite value. There was little difference in price among them. This was always derived from the desires of the people. At first the paper notes were not forced to be made by the government offices. For example, the Sichuan iron cash Coin Vouchers have been circulated for over two centuries. Both public and private parties have circulated

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> them, and no one has advised that they are inconvenient.

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[4] *Dongpo Collected Works Continued*, 9.

[5] *Memorials and Messages of Famous Officials Down Through the Ages*.

[6] *Luan City Collection*, 35.

He is here merely adopting the point of view of the rulers to defend paper money. He expresses no opinion on the question of money's basic nature.

Xin Qiji (1140-1207), in his "On Account Notes," says:

> For generations custom has viewed only copper as expensive and mulberry paper as cheap. People did not realize that in not being able to clothe you when cold or feed you when starving, copper and mulberry paper are identical. . . . In the past, the people have been obliged to pay their taxes with a greater proportion of ready cash than of Account Notes. And yet when the government offices pay out money, ready cash is smaller in proportion than Account Notes. It is for this reason that among the people a 1 string Account Note exchanged for 610 to 620 cash. . . . In recent years people have paid their taxes half in Account Notes and half in ready cash . . . and so Account Notes exchange for a little over 700.[8]

In this passage, Xin Qiji is expressing two opinions: First, he considers copper coins and paper money to be alike in that both are objects without any intrinsic use value. Second, he says that paper money fell in value because too much had been issued, acknowledging the influence of paper money's quantity on its value as money.

Hence he adopts a rather pragmatic attitude, or even, one might say, neutral attitude, unlike some nominalists, who would issue money in indefinitely large quantities because neither coins nor notes can in themselves feed the hungry or clothe the cold. Xin simultaneously views coins and paper money as identical, and yet also acknowledges that paper money's value depends upon the backing of copper coins. Theoretically he has fallen into a contradiction.

Because the Song Dynasty circulated too much of it, the value of paper money fell. In view of this evident fact, a number of people wanted to use the quantity theory as the principle for stabilizing the value of money.

For example, Yuan Xie (1144-1224), who served as Intendant of Jiangxi during the jiading period [1208-1225] of Emperor Ningzong, proposed "A Plan for the Convenience of the People." He wrote:

> Considering mulberry paper as a commodity, if it is numerous, it is cheap; if it is scarce, it is expensive. If collected, it will be made scarce. If it is cheap, then it is impeded. If it is expensive, then it is circulated. If you collect it, then circulate it.[9]

What he is discussing here is paper money, not copper coins or gold and silver. This cannot be considered quantity theory. Ever since the *Guan Zi*, however, everyone had applied the words "when numerous, it is cheap; when scarce, it is expensive" to commodities in general, including monetary commodities. Naturally, Yuan Xie echoed the words of his predecessors, but he did not enunciate the differences between paper money and metal moneys, and so we can only view him as a quantity theorist. **[520]**

His statement "if it is cheap, then it is impeded. If it is expensive, then it is circulated," contradicts the principle that most modern people generally acknowledge. Contemporary monetary theorists believe that the more money falls in value, the more will people want to use it to buy commodities, and as a consequence money's velocity of circulation will speed up. Conversely, the more money's value rises, the more will people desire to hoard it, and so its velocity of circulation ought to diminish.

Under special circumstances, however, what Yuan Xie said could occur. For example, when the price of money falls, merchants may not be able to sell their goods, and money would have no way to circulate, producing the phenomenon of a stoppage. Conversely, if the value of money rises, merchants will sell goods at reduced prices. At first this may not increase the people's propensity to consume. This was precisely the situation in ancient China, especially when during the Song Dynasty the value of paper money fell.

Yuan Xie also mentioned the phenomenon of bad money driving out good money. In his "A Plan for the Convenience of the People," he states:

> Nowadays the local government areas for the most part circulate both mulberry paper and coins. Everywhere the former is supplied, but coins are insufficient. There are places which only use copper coins, not admixed with other moneys, and invariably coins are in surplus. From this we can know that mulberry paper can harm copper, and that it cannot help in situations where there are not enough copper coins.[10]

The views of Yuan Fu (a man of Emperor Lizong's time) were almost the same as those of his father (Yuan Xie). In his "Petition on Account Notes" he says:

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[7]Wang Liu, *Simple Words on Coins*.

[8]Wang Liu, *Simple Words on Coins*.

[9]Wang Liu, *Simple Words on Coins*.

[10]*Investigation of Literary Remains Continued*, 7, "Coins."

> I wish Your Majesty to vigorously maintain four abstentions: First, avoid simultaneous use of three terms of new notes. Second, avoid light demand by exchanging coins for Account Notes at par. Third, avoid emptily piling up excess profits. Fourth, avoid issuing new Account Notes without establishing limits to their term of issue.[11]

On the other hand, many literati outside of court opposed paper money, as did, for example, Lü Zuqian and Ye Shi.

Though Lü Zuqian (1137-1181) did once put out an essay on monetary problems,[12] its contents were very muddled, one might almost say incoherent.

First of all, he believed that during antiquity, money was only manufactured during years of bad harvest to save the people from starvation. Money was not the basis of the wealth of the Former Kings. That lay in grain and cloth. Without these, no matter how much money there was, it would be of no help. This is correct, as far as it goes, but he on this basis gives his approval to the ancient practice of paying salaries in kind, and does not advocate allowing money a very large scope.

Nevertheless, he is not an objectivist. He says that if coins are needed, the Five-grainer and Inaugural were best, that Song's Taiping coins were not bad, but not any of those which came later than that. Paper money was, he said, acceptable in Shu, since Sichuan's iron coins were really inconvenient. It would not, however, be proper long-term policy to put paper money into general circulation. This sophistical literateur simultaneously "makes war" and retreats. He speaks one sentence, and retreats one step.

Finally, it seems as though anything is possible. His self-contradictory conclusion is:
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> At heart money is a commodity which will neither feed one if hungry, nor clothe one if cold. As for the affairs of the various crafts, they all avail themselves of it to make a living.

Ye Shi (1150-1223) stated the disadvantages of using paper money in his "The Principles of Wealth":

> The Empire has suffered disaster from coins for twenty years. The various goods have all been used as commodities, and coins have regulated their relative values. Coins have been heavy and light, large and small; and they mutually regulated each other so that the deficiencies of each were compensated for.
>
> With the three types of coins jointly circulating, the techniques for this mutual regulation were exhausted. But since these were still not sufficient, making of mulberry paper money was resorted to so as to control them. All of what are now called coins, take their orders from mulberry paper money. Mulberry paper money is circulated, and coins become increasingly scarce. . . . In the large markets of the capital, where those from all sides are gathered, metal coins are no longer used, and all exchange is done with mulberry paper. It has carried all before it.
>
> The strength of one man is sufficient to carry the equivalent of several millions in coin. Those who journey to the capital all slight other goods to buy up mulberry paper. The schemers of the Empire cannot overcome this.
>
> Hence given all the current abuses, how can one cause still further reduction in the quantity of coins, while other commodities correspondingly depreciate? . . . After ten years, on all sides coins are hoarded and no longer used. Empty certificates are exchanged wildly and without any way for them to be redeemed. . . .
>
> It has not been realized that it is the abuses from making mulberry paper that have driven out the Empire's coins. Within, they accumulate in the prefectural treasuries. Without, they are hoarded by rich houses. If it is desired to ban coins, can you encourage minting of them to increase?
>
> The reason why coins are honored by people of all classes is that their power is far greater than that of all other commodities, because coins can be used to exchange for all other commodities. If they are accumulated and not issued, they are no different from any other commodity. . .
>
> It is pointless to know that coins ought not to be accumulated, if you do not know that they are being blocked up and not circulated. It is pointless to know that in accumulating coins, they ought not to be few, if you do not know that those already concentrated are not being dispersed. . . . Why did there used to be a surplus? Why are there now not enough?
>
> It is clear, however, that what we are now suffering from is that coins [*sic*; perhaps Ye intends *qian* here to mean money in general. EHK] are many and goods are few. That coins are cheap and goods expensive is also clear. . . . Thus coins and commodities jostle in the marketplaces, but cannot proceed from the earth in quantity.[13]

Ye Shi blamed everything bad on mulberry paper money. In principle this was incorrect, since the bad

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[11] *Simple Words on Coins*. From chunyou 7 [1247] on, the 17th and 18th terms of Account Notes had their expiration dates removed and were put into perpetual circulation. (Cf. *Universal Statutes Continued*.)

[12] *Investigation of Literary Remains*, "Investigation of Coins, 2."

[13] *Memorials and Messages of Famous Officials Down Through the Ages*.

things he hated were all the result of monetary inflation, and were not intrinsic defects of a paper money system as such. In fact, however, the circulation of paper money and monetary inflation were intimately linked. It was merely that Ye Shi, owing to the limitations of his epoch, was unable to use actual historical examples to add force to his words.

He concentrates his emphasis on the circulation of money.

First of all, he provides a very clear explanation of the phenomenon of bad money driving out good. Of course this was not his own discovery. Over six centuries before this, Emperor Wu of Southern Dynasties Liang had already emphasized this point. Because his new good coins were being driven out by old bad coins, he finally minted iron cash. Ye Shi did, however, expound the point clearly.

He also recognized that circulating a coin one hundred times gave that coin the usefulness of 100 coins. If, after obtaining that coin, someone kept it from further circulation, it could only be reckoned as one coin. Therefore he said that the cause of a retrenchment was not necessarily that coins were few. Sometimes it was because the velocity of circulation had declined. That is what he
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meant by the phrases "blocked up and not circulated," and "those already concentrated are not being dispersed." What he meant here was almost the same as what Shen Gua of Northern Song had written.

Second, he recognized that money's usefulness lies primarily in its use as a medium of circulation, what he calls its "use in exchange for all other goods." He even acknowledges that money originated in exchange:

> Coins arose from the circulation of merchants. They comprise a system for making exchanges to the four quarters, both near and far. Goods cannot move of themselves. They are moved by metal coins.[14]

Much of what Ye Shi wrote was in close agreement with the arguments of Lü Zuqian. Lü said that little use was made of coins during the Three Ancient Dynasties of Xia, Shang and Zhou, since

> in those times the people had abiding occupations. A household's needs, from grain to cloth, vegetables, fish and meat, were all provided by its own labor, and there were hardly any occasions calling for the use of coins. Only the trading of merchants, and what the court used to regulate the goods of the Empire later on came to depend on the use of coins.

He adds, "later generations differed. The multiplicity of goods arose from coins." He says that this was because in high antiquity each locality was self-sufficient. Each state's goods were sufficient to supply its own needs. In later generations, all under Heaven became one state. Though there were prefectures and districts with different names, the people of the Empire made exchanges in all directions, and so there arose many demands for money.

The points of difference between Ye Shi and Lü Zuqian were as follows: First, Ye did not yearn for the ancient natural economy as much as Lü did. He merely described it objectively. Second, he linked the development of the circulation of money to the exchange of goods. He makes the following brief statement on the circumstances of the circulation of money then:

> But money is a most mysterious commodity. It is only when it circulates and turns over, and not when it is kept accumulated in hoards that its efficacy is seen. In these times, rich men seem obliged to hoard coins, and the court also draws through taxation all the coins of the Empire into the royal treasuries, and does not allow those coins which have entered its coffers to depart.
>
> Instead, mulberry paper is established outside to substitute for coins. It is not understood that coins are made profitable by being circulated throughout the Empire. No matter how many coins are accumulated, they will then be no different from other goods. Men do not investigate the basic reason why, but say that because coins are few, there is no choice but to use mulberry paper.
>
> When mulberry paper is circulated, coins become even more scarce. As a consequence, not only does one not get to see goods, one does not even get to see coins either. . . .
>
> If Exchange Notes are abolished, the coins now hoarded will reappear. The road to wealth and power lies in making goods numerous. If goods are numerous, they will be cheap. If goods are cheap, then coins will be expensive. If coins are expensive, then the lightness and heaviness of demand can be regulated, and exchange can be facilitated. In our times coins have become cheap. Coins are cheap because goods are few. Only a Sage can change the mode of circulation.[15]

This passage contains the following ideas:

First, Ye sees that money can only develop usefulness in the course of circulation. If it is kept in dead storage, it is of no significance.

Second, the reason for the scarcity of both goods and coins on the market is the issuing of paper

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[14] *Investigation of Literary Remains*, "Investigation of Coins, 2."

[15] *Investigation of Literary Remains*, "Investigation of Coins, 2."

money. If coins are to be returned to circulation, use of Exchange Notes must be abolished.

Third, the road to wealth and power lies in there being many goods and not in there being an abundance of money.

Fourth, he explains the prices of commodities and money by way of their quantities. He says that when goods

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are numerous, then they will be cheap. If goods are few, then coins will be cheap. If goods are cheap, then coins must be expensive. If coins are cheap, then goods are expensive. What he wanted was for goods to be numerous and coins expensive. He says that once coins are expensive, supply and demand can be regulated, and exchange can be facilitated.

There were also some who brought an objective attitude to their criticisms of paper money.

For example, in shaoxing 4 [1134], one writer distinguished the advantages from the disadvantages of paper money:

> I have heard that in the affairs of the Empire, where there are advantages, there must also be disadvantages. Those who now analyze Exchange Notes enumerate two advantages and four disadvantages of using them.
>
> One advantage is that in sending provisions to the frontiers the expense is reduced. The second is that a small number of coins can have many uses in circulation. These are the advantages of Exchange Notes.
>
> As for disadvantages, one is that there are two prices in the market, and goods become more expensive. Second, there is much counterfeiting, and lawsuits proliferate. Third, when men acquire Exchange Notes, they cannot use them for small transactions, or if they take them in exchange they worry that there will be no one to sell them to. Fourth, both coins and goods become more heavily demanded, and most of them are certain to be hoarded by the people. Exchange Notes all return to the hands of the officials, and hence become hard to pay out. These are the disadvantages of Exchange Notes.[16]

I suspect such an attitude could only have have prevailed early in Southern Song, before paper money inflation had become extremely severe.

Officials and merchants of the commercial ports grew wealthy through foreign trade during Song. Hence they approved of foreign trade, and at times somewhat influenced the government's attitude toward it.[17]

The attitude of the intelligentsia in general toward international trade was, however, exactly the opposite of that of the men of Tang. Especially during Southern Song, there were hardly any among them who did not regard external trade with hostility.

Underlying this hostile attitude toward external trade was bullionism. This aspect of Song Dynasty thought came somewhat earlier than European bullionism, but the arguments used-were almost entirely identical.

During Northern Song, Emperor Zhenzong had asked, "During the xianping era [993-1004], an ounce of silver was 800, and one of gold was 5,000. Why have these prices now jumped to double those levels?" Wang Dan replied, "The peoples from the two borders and the South Seas come annually to trade. There is an outflow, but no return."[18]

I suspect that the monetary inflation of Southern Song times accelerated the outflow of gold and silver, and so the anti-trade bullionist position became especially strong. For example, Chen Liangyou, who lived during the reign of Emperor Xiaozong, considered that inviting foreign merchants in to conduct trade was a waste of metal coins.[19]

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[16] *Sagely Government of the Two Reigns of the Dynastic Revival of Imperial Song*, 19.

[17] *Gazetteer of the Canton Maritime Customs*, 2, quoting *Song Collected Statutes Compiled Draft*, Emperor Taizong, yongxi 4 [987]: "Eight Inner Counsellors carrying credentials, gold and silk, and divided into four parties, were sent to the foreign states of the South Seas to invite them to come and pay tribute, and to buy incense, rhinoceros horns, pearls and Borneo camphor. Each group carried decrees with the names left out, to be presented wherever they arrived."

Song History, 185, "Treatise on Food and Money," latter part 7: "In shaoxing 6 [1136], the prefect of Quanzhou, Lian Nanfu, memorialized to ask that the heads of the shipping interests of the various markets be enabled to invite vessels so as to draw in goods. Accumulated goods with prices from 50,000 to 100,000 strings would make up for official lacks."

The *Gazetteer of the Canton Maritime Customs*, quoting *Song Collected Statutes Compiled Draft*, Empire Gaozong's shaoxing 7 [1137] proclamation: "The profit of commercial vessels is exceedingly great. If suitable arrangments were made, 1 million might be obtained. This would be better than taking it from the people." A proclamation of shaoxing 16 [1146] states: "The profits of commercial vessels may aid the state's expenses. The old methods ought to be followed to invite in men from a distance with goods and wealth."

[18] *Comprehensive Mirror for Illumination of the Prince, Long Draft, Continued*, first part.

[19] *Song History*, 388, "Biography of Chen Liangyou": "I also say that if Your Majesty follows a policy of personal frugality, you will not try to gain profit from goods. If imperial intimates go out into the markets, and gain noble rank thereby, they will usurp the profits of the merchants, occupy fields, and usurp the mountains and marshes. They will even send out ships,

In Emperor Ningzong's jiading 15 (1222), a government official displayed a representative attitude toward external trade. He did not oppose external trade. He merely wanted this trade to employ Chinese goods to exchange for foreign goods, and only opposed using Chinese gold, silver and copper cash to buy foreign commodities. He said:

> The state has established merchant marine officials in Quanzhou and Guangzhou to invite in the island barbarians, to accumulate and exchange goods and wealth. The things which they lack, like porcelain, tea and wine, are what they all wish to obtain. Therefore, if we exchange goods which we do not need for their useful goods, I cannot see that any harm will come from it. Now, as the habits of accumulation become familiar,
>
> **[524]**
>
> and comings and goings become complex, such goods as gold, silver, copper cash and copper utensils are all being supplied to foreign states. In recent years, the supervising officials in Quanzhou have seized over a thousand catties of copper ingots. Shining like gold, they were all made of pure copper. If coins had not been melted, how could these have been obtained?[20]

He goes on to say:

> When the "barbarian" ministers gain Chinese coins, they divide them up among their treasuries to use as their state treasures. Therefore, only copper cash are acceptable to the "barbarians," and the "barbarians" will only sell their goods for copper cash. The sources of profit open generously, and those who rush after such profit daily increase in number.
>
> Hence nowadays all those who reside along the seacoast, whether in places large or small, engage in this trade if they have the strength to do so. The official bureaus dare not inquire into who is doing so, nor guard against their going beyond the frontiers.
>
> Copper coins daily grow scarcer, perhaps giving rise to abuses. If strict prohibitions are not enforced, and bad practices not remedied, the coins of the Central Realm will all melt away abroad.[21]

This is a clear example of bullionism.

In Emperor Lizong's chunyou 4 (1244), the Right Policy Critic Liu Jinzhi said:

> If the great families are stopped from hoarding, it is possible for coins to leak back into circulation. If copper utensils are melted down, it is still possible to halt such practices. But once they enter the sea-going ships, coins depart, never to return.[22]

In chunyou 8 (1248), the Investigative Censor Chen Qiulu said:

> Those who give advice say that mulberry paper is more convenient than transporting cash. Hence coins disappear into dormant hoards. Because of the numerous advantages of promissory notes, the round cash becomes useless.
>
> Those who are alarmed by the promotion of mulberry paper spur on bandits to pry into the inner parts of men's houses, and apply harsh laws to bring forth their hoards. They do not, however, realize that the evil lies in the famine of coins, and not in their being accumulated.
>
> When coins are expensive, goods must be cheap. Now, both goods and coins are heavily demanded and expensive, and this is the grief a single generation has brought about.
>
> "Barbarian" ships and great vessels shaped like mountain fortresses breast the winds and ride the waves. They enter deeply into the most far-off corners. What they sell to China are all strange goods which are useless and wasteful, but what leaks out to the foreign barbarians of the east are the instruments of national wealth. What is obtained is trifling. What is lost is incalculable.[23]

Chen Qiulu's statement may be divided into two parts.

The first part clearly states that the current situation was not the result of hoarding by the people, but rather of the short supply of coins. He seems not to realize that the real reason was the monetary inflation. Observing that both coins and goods were expensive, he supposes that this was strange. He does not understand that prices then were expressed in terms of paper money, copper coins having virtually become a kind of commodity.

In the last section he blames the coin famine on the outflow of coins, and ascribes this outflow to external trade. As a consequence, he opposes external trade.

The doctrines of European local specie theorists or believers in bullionism are fully congruent with his thesis.[24] Their views differed from those of the

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and invite 'barbarian' merchants in to engage in trade involving precious goods, which is a waste of metal coins."

[20] *Song Collected Statutes Compiled Draft*, "Punishments: Prohibitions," 2.144.

[21] *Song Collected Statutes Compiled Draft*, "Punishments: Prohibitions," 2.144.

[22] *Song History*, 180, "Treatise on Food and Money," latter part, 2.

[23] *Song History*, 180, "Treatise on Food and Money," latter part, 2.

[24] *The Libelle of Englyshe Polycye*, 1436. In 1549, Hales in his *A Discourse of Common Weal of this Realm of England* (London, 1581; edited by E. Lammond, Cambridge, England, 1893), warned Englishmen against using expensive articles ("sub-

Han Dynasty Legalists. They did not stress that money could not feed the hungry or clothe the cold, but instead treated bullion as an incomparable treasure. This was because goods in general had the function of being consumed. Once consumed, they no longer existed. Coins, however, were eternal. Coins could not be destroyed through consumption, and

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hence were regarded as genuine wealth.

Naturally, they did not go a step further to notice that if the whole store of goods was exchanged for money, human life could not be maintained. They reasoned that since everyone thought coins more important than commodities, then as long as one possessed coins, they could be exchanged at any time for necessary commodities.

The stress placed on coins by Chinese bullionists seems not to have been as exaggerated as that of their European comrades. Their own attitude was rather more negative. They sought only to preserve their own country's coins. They had no thought of taking away other countries' coins.

As the views of China's and Europe's bullionist theorists were similar, so too were their policies, even on the management of external trade and on the banning of the export of gold, silver and copper cash.[25]

Bullionism has been criticized by later generations, but these critics have not necessarily understood the circumstances of the period when bullionism flourished. The foundation of bullionism was the veneration of instruments for preserving value. The implicit precondition for bullionism was the desire of everyone to exchange goods for money. In a world in which men were normally in search of money, the bullionist's viewpoint was very practical.

Specie money was convenient to hold, unlike commodities in general. The commodities of a feudal age were especially inconvenient to hold, since they were mainly agricultural commodities. Why would people not take those agricultural commodities which they could not completely eat or use, or which were easily spoiled, and exchange them for money, which never spoiled and could be exchanged for any other commodity at any time?

People only lost faith in money at times when they could not use it to buy commodities. At such times there might even appear the phenomenon of the rush to purchase goods. In this respect, a nation's domestic trade and interstate trade are alike.

For the bullionists of China's Song Dynasty to have emphasized specie and yet oppose external trade was self-contradictory. This would have been like a person within a single country selling off all of his own commodities for money, and simultaneously advocating the banning of commerce. One might ask him what he proposed to use his money for?

Song Dynasty China did not have to seek abroad for most of its consumer goods. The bullionists of that time thought that if they kept all the specie within the nation, they could buy commodities with it at any time they pleased. They also thought that the paper money of the time depended on such specie for its stability.

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stantiale wares") to trade off for useless goods, thereby causing dissipation of the wealth of the nation. Cf. *Encylopedia of the Social Sciences*, vol. III, "Bullionism."

[25] *Song History*, 186, "Treatise on Food and Money," latter part, 8: "At the beginning of the taiping/xingguo year period [976-984], private individuals were subject to punishment for giving more than 100 cash to foreigners engaged in trade. For giving up as much as 15 strings, they were to be tatooed and transported to an island in the sea. For amounts greater than this, they were to be handed over to the court."

Song History, 35, "Annals of Emperor Xiaozong," chunxi 9 [1182], 9th month: "An edict was published forbidding foreign ships from trading for gold and silver."

During the sixteenth and seventeenth centuries, English bullionists also advocated limitations on imports of luxury items, and a ban on export of gold and silver. By law, the amount used to buy imports was to be determined and then diverted to purchase domestic products and government securities. *Encyclopedia of the Social Sciences*, "Bullionism."

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2. *Monetary History*

Song Dynasty scholarship was relatively well developed, but there were no works dealing with monetary history in particular.

The *Old Five Dynasties History* contains a one chapter "Treatise on Food and Money," which includes some material on money, but it is haphazardly organized, and we do not know if the text is intact. Ouyang Xiu's *New Five Dynasties History* has no treatise on food and money at all. This scholar who laid the foundations for the study of stone and bronze inscriptions, turns out to have paid no attention to money or coins. Probably this is to be blamed on his Neo-Confucian ideas. The "Treatise on Food and Money" in his *New Tang History* was not written by him.

The *New Tang History* has a five chapter "Trea-

tise on Food and Money," of which only a little more than a half chapter deals with money. These 3,301 characters run from the White-cash Five-grainer of late Sui through the last years of Emperor Zhaozong. Its contents are even more abbreviated than those of the "Treatise on Food and Money" in the *Old Tang History*. Though the new treatise was not copied from the old one, its contents are essentially the same, and there are places where the new treatise is not up to the level of the old one.

First, the old treatise assembled more historical material than did the new one. For example, on coin-minting inspectorates, the old treatise states that in wude 4, 7th month, coin inspectorates were established in Luozhou, Bingzhou, Yuzhou and Yizhou, and that in wude 5, 5th month, another one was established in Guizhou. The new treatise merely lists the coin inspectorates in these five places.

Concerning the way to read the inscriptions on Inaugural coins, the old treatise says they are read from top to bottom and then from left to right. It also states that it is also appropriate to read them circumferentially, adding that they are popularly read as Opening Circulation Original Treasure [*kaitong yuanbao*]. It also quotes an edict of qianfeng 2, 1st month, which clearly states that "Inaugural Circulating Treasures are designed for the ages." This is a clear explanation of the situation. The new treatise does not put two words together on this topic.

Second, some statements in the new treatise are doubtful or mistaken.

For example, the matter of the White-cash of late Sui would be doubtful without the testimony of the old treatise. Concerning the weight of the heavy wheel Qianyuan coins, the old treatise says a string weighed 20 catties, and the new treatise says they weighed 12 catties. The old treatise must be correct.

The only place where the new treatise adds to the historical materials used in the old one concerns Shi Siming's coins, which the old treatise does not mention. The new treatise, however, gives the inscription on Shi's Obtain-one Original Treasure with the short rather than the long form of the character for "one." In addition, the new treatise's discussion of Flying Cash is somewhat clearer than that of the old treatise.

At the beginning of Southern Song, Zheng Qiao's (1104-1162) *Universal Record* included a two chapter "Outline of Food and Money." This was broken down into fifteen subdivisions, of which only one, containing a total of something over 6,000 characters, dealt with coins.

Zheng Qiao opposed

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the writing of separate dynastic histories, and so it was natural for him to use the methods of universal historiography to write on the history of money from its origins down to the late Tang changqing year-period.

However, his strength of judgment concerning historical materials was not as high or clear as that of his predecessors. On the contrary, he makes some statements which have misled his successors.

For example, although Sima Qian had placed money's origins prior to Emperor Gaoxin, and had talked about three types of monetary metal during Xia, he also acknowledged that no record of these had survived. Ban Gu had also acknowledged that no details had been recorded for the period prior to Xia and Shang.

And yet over a thousand years later, Zheng Qiao dogmatically stated that coins had been in existence ever since the times of Fuxi. He even says that Fuxi and Gaoyang had called it "metal" [*jin*], the Yellow Emperor and Gaoxin had called it *huo*, Emperor Yao had called it "spring" [*quan*], the Shang and Zhou had called it "spades" [*bu*] and the Qi and Lü had called it "knives" [*dao*].

These far-fetched addenda were probably based on the inscriptions on some pre-Qin knife and spade coins excavated during that period, since Dong You's *Coin Catalog Continued* of Northern Song had said that coins had existed ever since the times of Fuxi on down through Yao, Shun, Yu, and the Xia and Shang Dynasties.

Zheng Qiao's treatment of the [supposed] Nine Offices Round System of Duke Tai, the minting of coins by Yu and Tang, the large coins of King Jing of Zhou and the use of small coins in place of large ones by King Zhuang of Chu was naive, and also committed some new errors:

He says that the inscription on King Jing's large coin read "Great Spring Fifty" [*daquan wushi*], which shows that he had not even read the *Han History* "Treatise on Food and Money" carefully. For the Qin and Han coinages, he obviously copied out that section from the *Han History* "Treatise on Food and Money," and so perpetuated Ban Gu's mistakes.

For example, on the matter of early Han free coinage, he does not follow Sima Qian's correct treatment, but rather adopts Ban Gu's incorrect statement that the people were ordered to mint Pod-cash. Elsewhere, he copies from other writers, and contributes nothing new. Therefore, on money at least, if one reads Du You's *Universal Statutes* and the two *Tang Histories*, one might almost not bother with the *Universal Record*.

Zheng Qiao himself said he had devoted effort to the study of inscriptions, but the explanations of ancient coin inscriptions in the "Outline of the Six Books" in the *Universal Record* are for the most part confused. For example, his explanation of the char-

acter *yuan* on ring coins is almost impossible to make out through the fog of his language.

Later historians have paid no small number of compliments to Zheng Qiao,[1] but at least in terms of monetary history, the *Universal Record* is not as good as the *Universal Statutes*. First, the *Universal Statutes* is rather more substantial in content. Second, in its selection of materials, the *Universal Record* is far less rigorous. Third, the *Universal Statutes* is arranged by dynasty. Though the *Universal Record* is also actually arranged the same way, it is not divided up into sections.

People who praise Zheng Qiao say that he contributed to historiography. There are even those who make his praise of universal history and opposition to separate dynastic histories into a kind of
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contribution, which is very problematical. This judgment of his merely represents one point of view, and cannot be turned into a scholarly accomplishment to be graded. It is also rather one-sided.

First of all, every epoch requires universal histories, monographic histories and limited period histories, the latter also being a kind of monographic history. As scholarship progresses, the more writers of monographic history there must be. On the other side, no matter how much progress there is in the techniques of scholarship, all three types of history are still needed.

Second, the definitions of all three types of history are relative. There is in this world no truly universal history. Nor is there a purely specialized history.

In every age there will always be people who will take a comprehensive view of things, and so will like universal history. There will be others who want to take a detailed look at one aspect or one period of time, and so will like monographic history or the history of a discrete period.

From the point of view of someone concerned with world history, the universal history of a single nation is still a form of monographic history. From the perspective of modern man, the *Historical Records* is a period history rather than a universal history. What contemporary Euro-American historians write is clearly European history, though they themselves call it world history, in a fit of provincial-minded exaggeration.

Zheng Qiao's *Universal Record* calls itself universal history, but retains some monographic elements. Its contents are not all at the same level. In many respects, it merely copies from other works. This is true of its sections on monetary history.

Sima Guang's *Comprehensive Mirror for Illumination of the Prince* was designed solely as a history textbook to teach a feudal ruler how to be an emperor, and so only deals with the large principles involved in good government and disorder, and does not emphasize systems of institutions. As a consequence, it does not have much material on monetary history.

The *Comprehensive Mirror for Illumination of the Prince, Long Draft, Continued*, by Li Tao of Southern Song does, however, contain a good deal of material on Northern Song money and prices. Unfortunately, almost half of the work has been lost, and the surviving material is scattered through the text, rather than being concentrated as in the *Universal Statutes* and *Universal Record*.

This is also true of the *Song Collected Statutes Compiled Draft*. Though this work has a food and money section, and contains much valuable material, it is in extraordinary disorder, and cannot be considered to be a work which was composed by a writer.

In addition there is Li Xinchuan's *Essential Record of the Years Since Jianyan* and *Miscellaneous Record In and Outside Court Since Jianyan*, which contain a great deal of material concerning the Southern Song monetary system. The first of these is in annal form. The latter is organized into separate accounts of important events.

None of the above works is solely devoted to monetary history. At most, monetary history forms a small part of them.

There were, however, monographs on monetary history written during Song. For example, Du Gao's *Stories of Casting Coins*, in two chapters, was one such monograph, but unfortunately it has not survived. We know from the *Song History* that Du Gao was a man conversant with anecdotes about money

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[1]Zhang Xuecheng's *Clarification of Literary History*, "Section on Explaining the Universal Treatments of History," says: "Mr. Zheng's *Universal Record* is lofty in its erudition, renowned for its principles and unique for its judgment. The men of ancient times were unable to make use of his brilliant beginnings; later generations have been unable to go beyond the standards he set. Although the facts are not clearly distinguished in the old records, the meanings of the various masters are housed in the historical data."

Liang Qichao's *Chinese History Research Methods*, p. 38, states: "Zheng Qiao of Song was born a thousand years after Sima Qian, and he took a great leap upward with his *Universal Record*, for which he may be said to have been a great scholar." Liang also, however, acknowledged that he could not find much of value in the book except for the twenty outline sections, and that not even all twenty of those sections were necessarily of value either. Zhang Xuecheng also conceded that detailed investigations were not the long suit of the *Universal Record*.

at that time.

Emperor Taizong once asked him why Western Han imperial gifts were always made in gold,

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but by Song times gold had become a commodity hard to obtain. Du replied that gold had been squandered on Buddhist temples. Whether or not this answer was correct, this story does show that Emperor Taizong treated him as a specialist.

His *Stories of Casting Coins* was probably written in xianping 2 [994], and may not have been written by him alone.[2]

In addition, there was Zhang Qian's one-chapter *Essentials of Immersion Copper*[3] and Ye Nan's one-chapter *Essential Knowledge of the Chizhou Yongfeng Coin Inspectorate*[4] which were both concerned with the history of the Song Dynasty's monetary system. Neither is extant.

[2]*Sea of Jade* states: "In xianping 2, 8th month, bingzi, the Migexiaoli, Du Gao and others who had accepted the edict to collect the *Stories of Casting Coins*, presented it.

[3]Cf. Chen Zhensun, *Exposition by Topic of the Zhizhai Letter Record*.

[4]Cf. *Mr. Qiao's Register of the Classics* and *Jiangnan Gazetteer*.

3. Numismatics

The Song Dynasty's monetary economy developed by leaps and bounds. Its monetary system was extraordinarily complicated. The artistry of its coins reached a high level. The number of kinds of coins was unprecedented. It is probable that the practice of collecting coins was rather common.[1] Wang Shipeng wrote a poem mocking his two sons, which runs "broadly they collect the Han Five-grainer, Afar they reach the Zhou Nine Offices Round Cash."[2] Therefore, those who studied coins were also numerous. Unfortunately, the great majority of their works have been lost.

Northern Song works on money which I have seen mentioned in the records include Tao Yue's *Monetary-spring Record*,[3] Jin Guangxi's *Coin Treasure Record*, Du Gao's *Stories of Casting Coins*,[4] Yu Gongfu's *Ancient and Modern Spring-money Illustrations*[5] and *Mr. Qian's Coin Catalog*.[6]

Tao Yue's *Monetary-spring Record* specialized in recording all the details of the coins minted by the states of the Five Dynasties, as well as the coins of Yuzhou, Lingnan, Fujian, Hunan and Jiangnan.[7] Jin Guangxi's *Coin Treasure Record* was, in Hong Zun's opinion, a work which "gives quotations in its narrative, but has rather many omissions." There are no details available on the other works.

Of the numismatic works of Northern Song, probably Dong You's *Coin Catalog Continued*, in ten chapters, and Li Xiaomei's

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Historical Coin Catalog, in ten chapters, were the most important. Both were completed during the shaosheng period [1094-1098].

Dong You's alternate name was Yanyuan. He served as Professor of the School of Writing during the reign of Emperor Huizong. His work *Colophon to the Paintings of Canton and Sichuan*, in six chapters, is still extant. He is also said to have written *Record of Myriads of Coins* and *The Zhao Family's Thousand Family Coin Catalog*.[8]

Some say[9] that his grandfather had acquired one hundred ancient coins, had him verify their inscriptions and compose a coin catalog with a preface on the successive generations of kings and emperors. There were supposedly coins from every ruler from Fuxi through Yao, Shun, the Xia and Shang. Obviously, he must have made forced readings of the coin inscriptions.

The material on coins in Luo Bi's *History of the Circuits* was mainly drawn from Dong You. Hong Zun's *Record of Coins* cites eleven items from it.

Aside from the Thousand Autumns Ten-thousand Years coin, all were coins in formal use, and most of them were coins not very often encountered, like the Yongping Original Treasure, the *Tianci fubao*,

[1]*Qingpo Notes*: "Master Hong of our faction collected nearly 100 ancient coins, dating from Yu's Xia Dynasty on down, without omitting a single dynasty. Whenever he brought them out to show guests, he would speak of them, always on the basis of evidence. When Hong died, I often visited his son, who said they had all been placed in the coffin. Someone said that his family worried that the coins would be taken by someone with power, and so the son said this as an excuse."

[2]*Plum Blossom Stream Former Collection*.

[3]*Song History*, "Treatise on Arts and Literature."

[4]*Universal Record*, "Outline of Arts and Literature."

[5]*Song History*, "Treatise on Arts and Literature."

[6]*Qingpo Notes*.

[7]Chao Gongwu, *Scholar's Notes of the Jun Studio*.

[8]*Complete Investigation of Monetary Springs*. This work was completed in 1761 by Cai Zhongbo. It exists only in a manuscript copy. Cf. Weng Shupei, *Collected Investigations of Ancient Coins*. Its contents deserve no discussion.

[9]*Scholar's Notes of the Jun Studio*.

the Tiande Heavy Treasure, the Yingtian Original Treasure with the character for ten-thousand on its reverse, the Two-*zai*, the *yuan*, the Tianfu Tranquil Treasure and the Yingli Heavy Treasure. There are two versions of a Vietnamese *Taiping xingbao*, one with a large and one with a small *xing*. I do not know the origins of either.

Dong supposes that the Tianfu Tranquil Treasure was a coin of the Shi-Jin Dynasty, and reads the *yuan* coin as a 1-cash coin. He does, however, clearly identify it as a ring coin, which none of his predecessors had done. His explanation of the Two-*zai* coin is also unsuitable. Hence, except for the Five Dynasties coins, he had not contributed any new material.

Li Xiaomei's *Historical Coin Catalog* is said to have been an expansion of *Gu Xuan's Coin Catalog* and *Zhang Tai's Register of Coins*. Hong Zun says it is careless, but quotes extensively from it, his *Record of Coins* citing over fifty items from it.

Judging from these citations, it provides some supplementary emendations to the work of his predecessors, but makes no great contribution.

For example he reads the Tianfu Tranquil Treasure as *tianzhen fubao*, reversing the two middle characters and says that it does not resemble the Tianfu coin of Shi-Jin. He may well have seen Dong You's book. He mentions a *Dachao jinhe*, and says it is a foreign coin. Though he could not determine its period or who made it, during the millennium since then no one has been able to get any further with it. Up to now, numismatists have said it was minted by the Mongols prior to the establishment of their Yuan Dynasty, not realizing that at the time Li Xiaomei lived, even Temujin's grandfather had yet to be born.

Under the article "Lotus-root Heart Coins," the *Record of Coins* mentions "Li Xiaomei's Picture Catalog," but we do not know if this was a reference to a picture catalog appended to Li Xiaomei's *Historical Coin Catalog*.

From Southern Song times, only Hong Zun's (1120-1174) *Record of Coins* is still extant. This is the oldest surviving work of Chinese numismatics.

Hong Zun's alternate name was Jingyan. He was from Poyang in Jiangxi. Born in xuanhe 2 [1120], he was the son of Hong Hao, the younger brother of Hong Gua, and the elder brother of Hong Mai. In shaoxing 28 [1158] he became an Imperial Recorder in the Secretariat, and had discussed problems involving the minting of coins with Emperor Gaozong. Later he held the post of Drafting Official of the Secretariat, and simultaneously served as Consultant

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to the Yongping and Yongfeng Coin Inspectorates. He also served as Vice President of the Board of Personnel, Hanlin Academician for the Transmission of Directives, simultaneously in charge of the affairs of the Bureau of Military Affairs, Pacificator of Jiangdong, and Academician of the Zizheng Hall. He died in chunxi 1 [1174].

The *Record of Coins* was written in shaoxing 19 [1149], when he was just thirty years old. The whole work consists of fifteen chapters, with its contents divided into nine categories: coins formally used, coins issued by false [i.e. non-recognized] regemes, coins of unknown date, Heavenly coins [Bruce W. Smith suggests that these were coinss believed to have fallen from the Heavens. EHK], knife and spade coins, foreign coins, unusual coins, supernatural coins, and amulets [The difference between these last two categories is unclear. EHK]. These categories were nondescript but were not his creation. He was merely following precedents.

For the most part the *Record of Coins* consists of quotations from predecessors. Altogether he quotes from some ninety sources, including dynastic histories, scholars' collections of notes, and coin catalogs. He does not, however, merely copy out the words of his predecessors. He often adds his own comments after a quoted text. Most of these notes concerned coins which he had seen himself.

The *Record of Coins* lists some 348 coins. A minority of these were duplicates. A majority had not been seen by Hong Zun himself. He states in the preface to the work that he only had a little over 100 coins in his personal collection. Evidently he had not seen many of these coins. Nor do his notes reveal much that is new.

For the most part he repeats traditional accounts, like the one making the *baohua* King Jing's coin, or the Hanxing Pod coin. He also commits some errors of his own, as for example when he says in the "Inaugural Coin" section that "in all there are three types, the Eight-*fen*, sealscript and clerkscript." This is a misunderstanding of the passage in the *Song Collected Statutes Compiled Draft* which reads "it embraces three *styles* [italics added], the Eight-*fen*, seal script and clerk script." He also mistakes a Southern Tang Inaugural for the Tang Inaugural.

There are two points worthy of note about the coins in the *Record of Coins*:

First, there are very few knife and spade coins. Hong Zun had probably only seen the Anyi 2-adz and the Liangchong adz 5 equal to *yuan* spades, and had not seen a single knife coin.[10] He is fond of

[10]Instead it was poets and ordinary collectors who emphasized knife coins. Mei Yaochen (1002-1060) of Northern Song has the following in his *Wanling Collection*: "Alone goes the Qi

criticizing Li Xiaomei in his notes, but on this subject his observations are not as good as Li's. This is because he was born in the south, and knife and spade coins were unearthed in the north.

The second point worthy of note is that he includes many Khitan coins like the General Circulation Spring-money, the Tiancan, Chongxi, Qingning, Dakang, Daan, Shouchang, Qiantong and Tianching coins. All of these he was the first to describe. This is hard to explain since Li Xiaomei, who was born during Northern Song, had never seen these coins.

There is, however, a reason for this, related to Hong's family. In jianyan 3 [1129], his father went as Ambassador of Inquiry to Great Jin while serving as Executive of the Ministry of Rites, and remained in Jin for more than a decade, returning only in shaoxing 12 [1142]. At that time the Jin had not yet begun to mint coins. Those in use were Liao and Song coins. Either Hong Hao brought some Liao coins back with him, or he mentioned Liao coins he had seen. Hong Zun was then 22 or 23, and only seven years away from his composition of the *Record of Coins*, so he must already have turned his interest toward coins. The Korean Sea's East coin and Eastern State coin were also first recorded in the *Record of Coins*, and may also have been brought back by Hong Hao.

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The *Record of Coins* has had great influence on later numismatics. After several centuries it was accepted as a classic by many numismatists, but it has also received some criticism.

Some have said that it only began with the coins of Shun, and included no coins from the period of the Yellow Emperor, like the *jin* of the ganyuan period of the Yellow Emperor's reign, or the *zhi* of Fuxi, the *huo* of Shennong and Emperor Shaohao, the *jin* and *huo* of Emperor Gaoyang.[11] Others said that Fuxi's Getian coin was doubtful in principle, and that it was ridiculous for the *Record of Coins* to go so far as to come up with a picture of it.

Actually, the illustrations in the *Record of Coins* were added during Ming times, and were not drawn by Hong Zun. The *Record of Coins* must have originally been illustrated, but because it was not printed immediately and instead circulated for a long time in manuscript, there was not a woodblock printed edition of it until the Wanli reign [1573-1620] of Ming, by which time the original illustrations had been lost.

These criticisms miss the mark, and render the critics themselves the objects of ridicule.

Luo Bi's *History of the Circuits*, produced during the qiandao period [1164-1175], was not solely devoted to coins, but had a definite influence on the numismatists of later ages.

The *Comprehensive Mirror for Illumination of the Prince* compiled by Sima Guang and his associates begins with the Warring States Era. Many people believed that this amputated Chinese history at the waist, and a number of people thought of rectifying its omissions by producing an account of high antiquity.

Luo Bi's *History of the Circuits* probably shared this motivation. He, however, did not say he was supplementing the *Comprehensive Mirror*, but rather the *Historical Records*. He says that the scholarship of men like Liu Shu[12] was narrow and shallow.

That he was able to write a 100-200,000 word history of antiquity prior to the Xia Dynasty, shows that he was truly an unusual man. He was in fact a man of broad learning. There was nothing he did not consult ranging from the five heterodox classics, the *Hundred Families*, the *Mountains Classic* to the books of the Daoists. His narrative and citations all have some source, but his arguments are mostly a matter of chasing the wind and clutching at shadows.

He does emphasize verification and the direct examination of coins, and he makes profitable use of coins as evidence for his statements, but for his material on coins he mainly bases himself on the coin catalogs of men like Dong You.

He says that he has made independent observations. In his essay "On the Origins of Money" he states that "I have broadly investigated ancient coins, collated the writings on the *fengshan* ceremonial, the engravings on basins, and confirmed them with Han bamboo slips."

He concluded that there were such coins as the *Getian*, the Ganyuan and *Zunlu* money, Fuxi's 9 *ji*, Shennong's 1-*jin*, the *huo* of the Yellow Emperor and Shaohao, the *kuhuo* 1-jin, the *quan* of Yao, the Worth-*jin* of Shun and the *cichengma*. Actually he may never have seen these coins himself. The dimensions and weights of the spade coins he mentions are all to be seen in Hong Zun's *Record of*

large knife, Sickle-shaped, a ring at its end; Its Qi inscription half effaced, Its reverse resembling old round coins." He also records the occasion for this poem: "I was drinking in Liu Yuanfu's house, when Yuanfu took hold of two ancient coins with which to toast me. One of them was a large knife of Qi, five and a half *cun* long . . ."

[11]These are the words of Shen Shilong and Sun Zhenqing of the Ming period. Cf. postface to *Record of Coins*.

[12]The author of *Additional Notes on the Comprehensive Mirror*.

Coins, but Hong states clearly that he is quoting from old catalogs, and concedes that he could not read the inscriptions. In the *History of the Circuits*, however, there seems to be nothing Luo cannot read.

For example he reads the character *yuan* on certain ring coins as the "*shen*" meaning "spirit," and calls them Shennong metal. To take another example, he reads the inscription on the []ª 1-adz as making it *huo* of Emperor Shaohao. The Worth-*yuan* spade he takes for either Shun's worth-*jin* or the *cichengma*. In all of these instances his explanations are far-fetched. Sometimes he assigns two attributions to one coin.

He even criticizes other numismatists like Gu Xuan and Feng Yan for not understanding ancient script. Dong You,

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he says, was somewhat more capable of doing so, but should not have placed the *Getian* and *Zunlu* later than the money of Fuxi.

It should be noted that Luo Bi's historical knowledge was, of course, higher than that of previous numismatists, and in knowledge of epigraphy he was not inferior to Dong You or Zheng Qiao.

The significance of the *History of the Circuits* in the history of numismatics lies in its being the earliest extant work to discuss pre-Qin coins, and to record the size and weight of each spade coin with which it deals. Sometimes even the approximate form of the inscription on the coin is recorded so that we can for the most part tell what coin he is referring to. Along with the round coins he cites from Dong You and Hong Zun, Luo Bi also cites spade coins.

Luo Bi came somewhat later in time than Hong Zun. He was a native of Luling in Jiangxi. Practically all of the coins he mentions are to be found in Hong Zun's *Record of Coins*, but Luo may not have just copied them from Hong's work. The two men had similar sources of material. Luo Bi was more audacious than Hong Zun. The interpretations of spade money by numismatists of later ages have echoed those he provided. Luo's *State Names Record* is an important reference work for later numismatists in verifying the place names on and periods of spade coins.

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5.4 Credit and Credit Institutions

Most historians consider Song to have been clearly better developed than Tang in terms of both production and circulation of commodities. In actual fact, this would seem to have been the case. If we believe that the quantity of money is a reflection of the quantity of commodities in circulation, that would be further evidence for this conclusion.

Nevertheless, credit and credit institutions were not developed as well as other aspects of the Song economy. Song Dynasty credit and credit institutions were basically little changed from Tang's, except that the financial center moved from Chang'an to Bianjing [Kaifeng], and then to Lin'an [Hangzhou].

Loans were still divided into unsecured and secured categories. Unsecured loans were called loans-at-interest-cash [*daixiqian*],[1] putting-out-seed-capital [*chuzibenqian*],[2] credit sales [*shefang*],[3] call loans [*chengdai*][4] and sometimes by the old term putting-out-for-rise [*chuju*].[5] Interest rates were generally lower than during Tang, and the amount of interest was not supposed to exceed the amount of the principle. This was mainly because the quantity of money during Song was large, and credit was easy to obtain.

The Market Exchange and Green Shoots systems established by Wang Anshi during Emperor Shenzong's xining period [1068-78] were both government loan schemes.

Market Exchange was a kind of secured credit. When people took out a loan from the local authorities, they put up fields and houses or metal and cloth as security. If they could offer no security, they had to have three guarantors. Annual interest was 20 percent. If interest was not paid on time, there was a penalty of 2 percent per month. This was also called the Guaranteed Loan System [*baodaifa*].[6]

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[1] *Jade Jar Informal History*, 5: "Wenjing Duke Li Hang was at first in charge of the system of grants. Emperor Taizong knew of his poverty, that he was much burdened by interest cash, and said 'When Hang first took over his post, his salary did not amount to much, not even enough to feed his family. How could I neglect to reward him?' He gave him a special reward of 1.3 million."

[2] *Record of Barbarian Strength*, Collection C, first part, "Xu Six the Good": "A townsman named Xu Six from the southern part of Huzhou originally made his living selling smartweed cakes. People called him Xu Embankment-cake. He made a rather handsome daily profit. Because he put out seed capital in the villages and hamlets to those who had emergency shortages of funds, he got more from interest than from his original business, and his family business gradually advanced. . . . In qiandao 6, he sickened and died."

[3] *Record of Barbarian Strength*, Collection H, first part, "The Daoist Zhang Eight's Dog": "Lord Zhang Eight . . . called himself a Daoist, and relied solely on credit sales of rice and millet to take interest for support of his family. Every year he would set up an account book, and when he made a loan, would write it down. When he was repaid, he would check it off. In nearby villages his rule was to lend 500 cash for 2 *dou* 5 *sheng* of wheat."

[4] *Record of Barbarian Strength*, Collection D, latter part, "The Woman Zhou of Jiancheng": "Amidst the jangling of traffic, I happened to run into Ge Wang's son. He had grown rich in finance. He lost extensively in gambling with Wu [Gongzuo]. Wu began with only a thousand cash, but won every throw of the dice. By curfew time he had won 700 strings, and Ge could not pay up. The next day they battled again, and within the twelve hours of the day, he got ten times more than before. At first, in a pawnshop, he took a call loan from an army soldier. Within a few years, it had added up to 10,000."

Record of Barbarian Strength., Collection A, latter part, "The Land of the Sage of Wealth": "A clerk of Kong Mu of Jianchang, a man named Fan Xun, was acquiring a wife for his son, and borrowed 10 Thousands from the Elder of the Sage of Wealth Temple. After 20 years, when the monk had died, Xun repaid the loan, and as a consequence forfeited his reward."

[5] *Song History*, 331, "Biography of Chen Shunyu." In xining 3 he sent up a communication impeaching himself, which said: "Among the people there is putting-out-at-rise of wealth and goods, for which interest heavier than double is taken. It is contracted to be repaid in strings of cash, but grain, cloth, fish, salt, firewood, plows and axes are also taken."

[6] *Song History*, 327, "Biography of Wang Anshi." *Song History*, 186, "Treatise on Food and Money," latter part, 8, "Market Exchange," xining 5: "If they wish to market it with the officials, then their security will be measured, and they will be loaned cash, with the responsibility to repay it within the term set. For half a year they pay interest of 10 percent, and twice this for a full year." In yuanfeng 3, "9th month, Wang Juqing then said there are three ways of handling Market Exchange: The first is to have a guarantor for the loan. The second is to put up gold or silver as security. The third is to sell off goods. Of the three, only the use of guarantors has long been practiced. Those bearing losses as a consequence have become increasingly numerous."

Song History, 355, "Biography of Lü Jiawen": "The next year, Anshi again served as chief minister . . . and those who spoke said that the harm from the Market Exchange regulations was being felt throughout the Empire. No thought was being paid to the 12 million strings of capital. The interest rate was 20 percent. During some 15 years, the interest should have multiplied the capital several fold, but now there was only the original amount of capital. When goods are bought by the officials, they are not resold, and they take the original interest payments as

The Green Shoots regulations constituted a form of agricultural credit, with loans made in Spring, and repayment made in Autumn. The interest rate was 20 percent over the term of the loan, or 40 percent on an annual basis. The goals of the policy were first to mobilize agricultural finances, and second to increase government income, but the measure endured fierce attacks from the opposing faction. Han Qi said that the interest rate was twice the level specified in the *Rituals of Zhou*.[7]

Actually, the rate of interest among the people was even higher than this. In addition to generally well-off merchants, commoners who lent money quite commonly included monks, who were probably still rather wealthy then.

The Market Exchange regulations were still present during Southern Song, but their nature then was somewhat different. A Market Exchange Authority was reestablished in shaoxing 4, but only lent cash in the market at an interest reate of 30 percent.

The government's agricultural credit was not limited to Green Shoots cash. The garrison fields could also obtain agricultural

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loans. All official fields or deserted fields were formed into manors of 5 *qing* in area. Common people were recruited as tenants, with 5 families, making up one *bao* unit, jointly renting one manor. Five oxen were granted to each manor, along with plows and harrows to go with them. In addition, 10 *mu* were assigned as garden plots. Seventy Thousands of cash were lent for five year terms. This occurred during shaoxing 6 [1136].[8]

For secured loans, there were only pawn shops. During Song these were still called *zhiku*,[9] or *zhisi*[10] The pledging of an item was called mortgaging [*dian*] or mortgaging substance [*dianzhi*].[11] The

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their own reward."

Investigation of Literary Remains, "Investigation of Market Grain Purchases": "An edict of yuanfeng 2 proclaimed the old Market Exchange regulations, and allowed people to borrow cash using fields and houses or gold and silver as security. Those without security had to have three guarantors before being granted a loan. All loans had to pay interest of 20 percent. If not repaid by the deadline, a penalty of 2 percent per month over and above the interest was levied."

[7]*Song History*, 15, "Annals of Emperor Shenzong, 2," xining 3, 1st month: "There was an edict to the various circuits to distribute Green Shoots cash."

Wei Tai, *Eastern Porch Jottings*, 4: "When Duke Wang Jing was serving the state, he first recommended establishment of the Ever-Normal cash. The common people were tending to be impoverished during the time before the green shoots of the five grains could mature. If cash were lent to families jointly, it would be certain to yield interest of five fold. The officials thereupon extended their claws to request cash. Interest of 20 percent was charged. This would aid the poor commoners, and open the path to cooperation. The plan was popularly called Green Shoots Cash. Fan Zhen was a Hanlin Academician and in charge of the office for receiving silver. He reviled this policy, saying that, as during the jianzhong period, they were taxing the green shoots right in the fields."

Song History, 176, "Treatise on Food and Money," first part, 4, "Ever Normal and Righteous Granaries": "Su Che declined office from Daming and sent up a letter. He was called to audience . . . Anshi took out the Green Shoots regulations to show him. Che said that 'to lend cash to the people at an interest rate of 20 percent is basically not profitable. During the interval between putting out the loans and collecting them, the clerks will engage in corrupt practices, and no matter what the regulations, it will not be possible to stop them. When the coins enter the people's hands, even though they may be good people, they will not be able to avoid unreasonable expenditures. When the time comes to repay the money, even though they be well-to-do, they will not be able to avoid missing the deadlines.'

"Han Qi said: 'Now they are lending Green Shoots cash. Every Spring they borrow 10 Thousands, and within half a year they are ordered to pay back 2 Thousands in interest, along with the original 10 Thousands in the Autumn. By the end of the year, they are ordered to pay another 2 Thousands in interest. Thus, someone who borrows 10,000 cash, whether he is close by or far away, must put out interest of 4,000 per year. The *Rituals of Zhou* states that even the most distant places were to pay only 2,000 in interest. The interest the Green Shoots is now taking is twice that specified by the *Rituals of Zhou*.'

"Wen Yanbo also said several times that it would not do. the Emperor replied, 'We

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sent two eunuchs to inquire among the people, and both said it was very suitable.' Yanbo rejoined, 'Han Qi, who served as minister during three reigns, you do not believe, and yet you believe two eunuchs?'

"Sima Guang said, 'The paying out of interest for Green Shoots, if done by commoners of middling status, is still capable of consuming their food. For households of lower status, it can drive them to starvation and flight. Moreover, will district officials observe the regulations?' . . . Ouyang Xiu added to Han Qi's remarks on the harm caused by the Green Shoots."

[8]*Song History*, 176, "Garrison Fields."

[9]*Flowery Dreams of the Eastern Capital*, 5, "Popular Customs": "Zhiku business involves taking in black shirts, horns, belts, hats not worn, etc." *Record of a Dream of Liang*, 18, "Popular Customs": "The *zhiku* business involves turbans, black shirts, horns and belts."

[10]Cf. note 4, first item.

[11]*Record of Strengthening Barbarians*, Collection D, first part, "Wu Shengjiu": "In the Spring of shaoxing 2, a Zhuji commoner, Wu Shengjiu, was going to plant his paddy field. He

institution was also sometimes called release-treasury [*jieku*].[12] It is said that northerners called it *jieku* and southerners called it *zhiku*. Song writers say that this had been the case since the Southern Dynasties.[13] Prior to Song, however, the word *jieku* is rarely encountered. Most of those run by temples were called long-life treasuries [*changshengku*].[14] There were several dozen pawn shops [*zhiku*] in and outside of Hangzhou during Southern Song. Their receipts were reckoned in the tens of millions.[15]

During Five Dynasties and early Song, 300-500 strings of cash were sufficient to open a pawnshop.[16] As to whether unsecured loans were made as well as loans secured by pledges, we cannot tell, but for the proprietors of such establishments to have also made such loans would have been perfectly natural.[17] The informal histories [i.e. collections of fictive stories. EHK] vividly describe business activities by Lin'an pawn shops which came very close to being business speculation.[18]

Deposit was still not very well developed. Particularly under the conditions imposed by Southern Song's wartime disorder and currency inflation, people not only were careful of their monetary wealth, they wanted even more to preserve its liquidity. Gold, silver and coins were mostly kept in hoards.[19] When someone bought a house, if the grounds had not already been excavated, then in addition to the price of the house, the buyer also had to pay "excavation cash."[20] Evidently, hoards were quite common.

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borrowed from his mother the black silk long robe which she had embroidered, and said, 'Tomorrow I must mortgage [*dian*] this for cash so as to hire and feed laborers to do the planting.'"

Record of Strengthening Barbarians, Collection E, first part, "Wang Yanmo's Wife": "In year shaoxing guihai, Liang Qidao was an Expectant Executive residing in Fanyang's Miaoguo Temple. He had a business relationship with Wang Yanmo. Those in charge put his wife and child in the back of the temple to serve as mortgage substance [*dianzhi*] for the interest."

[12]*Stories from the Newly Edited Five Dynasties History*: "Murong Sanlang, the Daoist, did not say much. There is a common saying that if you fall down, you gain some convenience; if you experience something, you extend your knowledge. In former times, he was degenerate, and was driven out by me. Now he seemed to have become reliable, and was different than previously. So I had him take this cash [30 strings] to pay for food, to see what he would do. If he could accomplish this task and return, I would give hime 300 or 500 strings to open a *jieku* and get hold of some good food. How could he not have hurried." (*Stories from the Han History*.)

[13]Wu Ceng, *Loose Record of the Ability to Change Studio* (written during the shaoxing era), 1, "Putting Goods in Pawn for Cash in a *Jieku*": "Northerners call pawning goods for cash *jieku*. Southerners call it *zhiku*. This has been the case since the Southern Dynasties."

[14]*Record of Barbarian Strength*, Collection J, latter part, "The Man of Xuqian Mountain": "In the Lohan Hall of the Yongning Monastery, a group of youths gathered, assembled some capital, and began a *zhiku*. They saved their interest earnings to buy ordination certificates. They called it a *changshengku*. In various cities on the frontier, without considering the laws of abstinence, they all did this. In the course of their administration, the monks of the Hall selected acolytes who understood and enjoyed having such things pass through their hands. In qingyuan 3, 4th month, 29th day, they set up a monthly register to record the items obtained. Because of the loss of a single gold hairpin, they locked things up in a cupboard so they could not be gotten. They were overjoyed by poverty."

[15]*Record of a Dream of Liang*, 13, "Shop Mats: Understanding Ghosts: Zhou Bao": "During the chunxi period, a carpenter named Zhou Bao . . . was going around West Lake. As he passed Chi Mountain he saw a soldier trying to redeem his pawned clothing from a pawnshop. Of the required 10 strings of cash, he lacked 6 cash, but the proprietor insisted on the full amount. The two were cursing each other. Bao was going to redeem it for the soldier, but when he looked in his purse, there were only 5 cash to give him, and the proprietor still insisted on getting that last single cash." (*Old Stories*, Collection D, 3.)

[16]Cf. note 12.

[17]Cf. note 4.

[18]*Record of Guests' Departures*, 9, quoting *Record of Barbarian Strength*, Collection E: "Pei Laozhi several times spoke of the great fires of shaoxing 10, 7th month in Lin'an, which burned up several tens of thousands of houses inside and outside of the city. In the ward where Pei lived he had pawnshops, gold and gem emporia. He paid no attention to these, but had his servants go down the river to Xu village, and himself went out the north gate. Wherever they encountered houses with bamboo, timber, bricks, tiles, reeds, beams and rafters, no matter what their number or size, they were to buy them at the normal price. The next day there was an edict removing the tax on bamboo and timber and other such materials. People inside the city rebuilding their houses took all the stuff off his hands, and Pei obtained a profit several times his losses in the fire."

[19]Hong Mai, *Five Pens of the Leisure Studio*. Li Zhong of Beizhou's ". . . wife asked what they had to live off, and he replied, 'I have a crow-black horse and also several tablets of silver buried under the east window. . . . When she examined the place, all was as he had said." This happened during the dazhong/xiangfu period. (*Old Stories*, Collection D, 4.)

[20]Zhang Shinan, *Things Heard by a Travelling Eunuch*, "Zhang Wenxiao": "There was much buried in the house lots inside Luo. Anyone erecting a house on land which had not been dug up, paid out excavation cash. The Left Executive, Zhang Wenxiao, began by paying several thousand strings of cash to buy a big mansion in Luo. The price had already been fixed

Counting houses were still present during Song, but their nature remains hard to grasp. During Tang, the counting house was connected with the deposit of cash or its protection, but we cannot discern such a connection from the Song sources.

The text of an early Song edict of chunhua 2 [991], mentions the unreliable classes in the capital who gather broadly like rushes, who open counting houses, butcher cattle, horses, donkeys and dogs to eat, and recast coins into various utensils.[21] It would appear from this that counting houses specialized in illegal activities, and that those who operated them were all wicked young men, and that they rented quarters from residents to open counting houses.

Later, Su Shi said that in Dingzhou more than a hundred counting houses had been established, and that they openly displayed their signs to attract soldiers and others to come in to gamble.[22] Evidently the counting house had a particular relationship to gambling. The text of a Southern Song edict of shaoxing 3 [1133] also mentions the sons and younger brothers of the aristocracy as mostly earning their livings brewing illicit stillbeer and opening counting houses.[23]

Aside from this, there appear to have been people in Yiwuxian, Wuzhou, who opened counting houses to weave silk privately so as to escape taxes. The government authorities arrested all the denizens of eight such households, and confiscated the cloth they had woven to pay the tax owed to the officials. This evoked popular

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dissatisfaction until in qiandao 4 [1168] an edict came down allowing the trade to continue so long as the legally set taxes were paid.[24] This activity had nothing to do with the credit trade.

During the shaoxing [1131-63] period, the commoners of Guiyangjun were warned of the punishments for hiding things in cabinets [*guitou*, perhaps a diminutive for *guifang* --counting house. EHK].[25] This continued the connection between counting houses and gambling.

Zhou Mi's *Old Times in Wulin*[26] also links counting houses to such things as beauty offices (which used beautiful women as prostitutes to entice young men), gambling offices (which used various forms of gambling to cheat people of their money) and water-labor virtue offices.

The *Laws of Qingyuan* also links the running of counting houses to gambling.[27] It also links them to

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when a very great additional amount was demanded as excavation cash. Wenxiao insisted on obtaining the site. He repeatedly increased his offer until it reached more than a thousand strings. Everyone thought he was wasting his money senselessly. But when construction began, they found a box in the ground one picul in size. . . . and when they opened the box there were several hundred ounces of gold in it. The value of the gold was equal to the purchase price of the mansion. Even if one includes the excavation cash, he was not out a single cash."

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[21] *Comprehensive Mirror for Illumination of the Prince, Long Draft, Continued*, 31, Emperor Taizong, chunhua 2, intercalated 2nd month, yichou, edict: "The class of those in the capital city who have nothing to depend on, gather broadly like rushes. They open counting houses, butcher cattle, horses, donkeys and dogs to eat, and melt down and recast copper coins into utensils for various uses. Kaifeng prefecture is ordered to guard the ward markets and arrest them. Perpetrators are to be executed if they do not take heed. Residents who rent quarters to evildoers to use as counting houses will be considered equally guilty."

Complete Collection of Household Necessities, Collection H, "Administering the Nine Requirements: Fifth Prohibition": "The district office has fixed on the following as activities which may be prohibited: gambling for cash and goods, persistently throwing dice, smashing and buying demons, double-six, elephant chess, reeds, digging boards, opening and inspecting counting houses, helping idlers, smashing good people's homes and turning bandit because of extreme poverty."

Zhou Mi, *Old Times in Wulin* (written during qiandao and chunxi, and providing a detailed account of the customs and morés of Lin'an), 6, "Loafers": "In fertile regions, people are very wasteful. Loafers and evil and crafty fellows multiply and gain followers. There are so-called beauties' residences [The original note reads: They use superior women as concubines to entice youths.], counting houses, gambling houses [Original note: Using gambler's methods to cheat people of their cash.], water-labor virtue houses, among other things."

Mister Zhizhai's Collected Works, 44: "There was an order to those who had opened counting houses requiring them to cease gambling in wealth and goods. Those who had stopped entering army camps in neighboring prefectures were returned to their original cities. Informers were welcomed. People who go to the outskirts of the city to inspect the garrisons and fail in their tasks are to be whipped 80 strokes (shaoxi period, year gengwu)."

[22] *Su Dongpo's Collected Memorials*, 14, "Petition Requesting the Sending Down of Ordination Certificates to Repair the Dingzhou Garrison Buildings."

[23] *Song Collected Statutes Compiled Draft*, "Punishments," 2, latter part, "Prohibitions."

[24] *Song Collected Statutes Compiled Draft*, "Food and Money: Miscellaneous Records on Commercial Taxes," 18.4.

[25] *Mister Zhizhai's Collected Works*, 44.

[26] *Old Times in Wulin*, 6, "Loafers." Cf. note 21.

[27] *Laws of Qingyuan*, 80, "Miscellaneous: Miscellaneous Orders on Gambling": "Those running counting houses who halt gambling will be turned over to a neighboring prefecture for

tea houses, wine shops, brothels, restaurants, horse-teeth, pawnshops [*jieku*], silver shops and hotels.[28] Here the counting house is listed alongside pawn shops and silver shops, and so it could have been a type of credit institution.

Ordinary shops also kept deposits.[29] Checks were used to withdraw money.[30] Of course counting houses could also have carried on this sort of business, especially if they maintained a close connection with gambling. Not only could they have safeguarded money for gamblers, but these deposits could also have provided the basis for developing a loan trade.

Protecting cash being forwarded to friends and relations was even more common. Some people feared that such wealth would not be paid over, and so sent it out under cover.[31]

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management. Those who leave the military garrisons will be returned to their original cities. Informing is also permitted. Intendants making inspections of the suburbs and garrisons who fail to discover them are to be given eighty strokes in punishment." *Laws of Qingyuan*, "Rewards": "Those who inform on people running counting houses, or who go out of army garrisons to halt gambling shall have given to them all of the goods so obtained." *Laws of Qingyuan*, "Reward Regulations: Various Categories of People": "Those who inform so that counting houses halt gambling, or those who go out of army garrisons to halt it, are to obtain 10 strings of cash."

[28]*Laws of Qingyuan*, "Things Administered, Number 8": "When the district chief takes office and investigates wickedness and the details of banditry, conspiracies to do evil and failure to disclose public matters, he must confidentially interrogate the three types of young woman and six types of old lady, and look into the tea houses, stillbeer emporia, brothels, restaurants, counting houses, horse brokers, pawnshops, silver shops and hotels. In each the transients and old inhabitants are to be established, and the goods possessed by and names of all are to be determined. Many details must be obtained and secretly reported, so that nothing remains unknown."

[29]*Record of Barbarian Strength*, Collection A, latter part, "Monk Zhang": "The monk Zhang Yanwen was an elder of the Great Sutra. A Buyi [Bouyei ethnic group] got on well with the priest Zhaoguang of the Jianchang Jingde Temple. Later . . . Zhaoguang died in the township . . . and it was requested that a Buddhist mass be said to smooth the dark path for him. They remembered to have an acolyte carry an ounce of gold to the monk's place, and 20 Thousands in cash was brought to a certain firm in the market. If they kept and used it, they could obtain merit."

Record of Barbarian Strength, Collection C, latter part, "Two Youths and the Li Family": "Li Yuanzuo was from Zainancheng. He once helped his family travel to Magu Mountain. His sons were still young, and so two youths helped them climb up to the Qiyun Pavilion. . . . The youths entered still deeper into the woods, and for a long time did not return. . . . After more than a month, the children saw the youths. . . . They began by saying, 'Before this, while catching a butterfly we encountered a Daoist . . . He threw something to us, and when we caught it, it turned out to be of silver. When we looked back, both man and building had disappeared. . . . We took the silver and sold it at a shop in the market. It weighed 10 ounces, and we obtained 12 Thousands of cash for it, which we then deposited in the shop. From time to time we withdraw some of it to use for food and clothing expenses.' The sons did not believe this, but when they checked at the various shops, it turned out to be true. The year was year guiyou of the shaoxing era."

[30]Ye Shaoweng, *Record of Things Seen and Heard During Four Reigns*, "The Identical Alternate Names of Yang and Wang": "Yang and Wang Qinzhong lived outside the suburbs. They registered the same alternate names. . . . the paper previously registered had entered on it 5 million strings of cash, along with the seal normally used. The one carrying it was ordered to bring it to the office the next day to withdraw the money. The next day, carrying Wang's certificate, he said to the clerk in the office, 'Wang has given me the certificate to collect the 5 milion cash.' The clerk was used to dealing with Wang, took the certificate and examined it carefully, and then said, 'Who are you to dare to come and take our cash with a forged seal of Wang's?'"

Wu Ceng, *Loose Record of the Ability to Change Studio*, 18, "Fifth Student

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Encounters Five Spirits": "During the jiayou period, Wu Eighteen of Linchuan entered Bianjing with good clothes and fine hats. He set up a stall in front of the house of the township chief, Yan Yuanxian, to sell his goods. One day he went to the Baokang Gate where he encountered five youths kicking an air-filled ball. Student Wu had also practiced this, and he began to kick the ball along with the youths. The youths saw how well Wu did this, and so exchanged a few drinks with him. In time the sun descended in the west, and the five youths were about to leave . . . They hurried Student Wu up into a building for the drinks, and he spent 4 *jiao*. They asked him everything about himself, and when they had finished their drinks, took up a pen and wrote out a check to give to him, saying 'Take this to the House of Guo in the Comb Bazaar to withdraw 10 Thousands in cash. We are giving you this to carry on your business.' The student put it inside his belt . . . and when daylight came . . . carried the check to the House of Guo to withdraw the cash. Guo gave him the amount indicated."

[31]*Annals of Things Heard During Jingkang*, 12th month, 12th day, "A Poster in Kaifeng": "Individuals and families are to list their households' gold and silver, and then pay all of it over to the prefecture. If any dare to bury it, persons of any station may inform on them. . . . If any have knowledge of a household which is hoarding or sending off its wealth, they may receive that wealth if they inform on it."

Jingkang Essential Record, jingkang 1, 1st month, 20th day,

The Song Dynasty's money exchange institutions were better developed than Tang's. This was because though in the use of gold, Tang and Song were not far apart, the position of silver had become much more important by Song times. It was almost more important than gold had been during Western Han, and it was circulated more widely.

Management of the money exchange trade would naturally have remained mainly in the hands of the gold and silver shops which had come down from Tang times,[32] or the silver shops.[33] During Southern Song these were sometimes called gold and silver exchange voucher shops,[34] or gold, silver, cash exchange shops,[35] or gold, silver, salt note voucher exchange shops,[36] or simply exchange voucher shops.[37]

In addition to gold and silver exchange, there was also trade in various kinds of notes and vouchers during Song. These notes and vouchers were special sales permit certificates. Merchants received tea vouchers or salt notes when they paid tolls and excises on the way to the capital, and only afterward could these be brought to the tea or salt warehouses to be redeemed.

Sales of tea and salt were both very profitable activities then, and so tea vouchers and salt notes became commodities themselves, and were bought

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Sagely Decree: "Remaining gentry and commoners of various ranks are to hand in to the officials the gold and silver which they possess within two days. If any amount is secreted or sent away and not handed over, any quality of person may receive such funds as reward for informing."

Zhou Mi, *Miscellaneous Knowledge of the Year Guixin*, continued collection, latter part: "Downstream there was a great merchant who had returned from the southern frontiers of the Buddhist and Muslim lands. His family name was Pu, and his given name Xu. His house was extremely rich. He had in all 80 vessels to send out to sea. In the year guisi he died, leaving behind only young daughters and no sons. The officials confiscated his family property. . . . In the ministry there was a poster permitting people to inform on those who might be convicted for sending off wealth surrepetitiously." [This may be a reference to the family of Pu Shougeng, a descendant of merchants from Persia who eventually went over to the Mongols. EHK]

[32]*Flowery Dreams of the Eastern Capital*, 2, "The Official Residence of the Ministry in Front of the Xuanhe Tower": "Southeast of the main street leading from the South Gate was the House of Tang Gold and Silver Shop, the Wenzhou Lacquerware and Sundries Shop and the Daxiangguo Temple. . ."

Investigation of Literary Remains, "Investigation of Coins," quoting the *State History Supplement*: "In daguan 3, Duke Lu was dismissed and the court was advised to change [the 10-cash coin] to a 3-cash. . . . The high officials hastened to sell their coins for gold. The gold and silver shops in the capital did not know of this impending change. In less than two months the order came down, and those who promulgated it sneered and laughed."

Annals of Things Heard During Jingkang, 1st year, 12th month, 14th day: "Those among the elite and masses who paid in metal and cloth were numerous. The court then ordered Kaifeng Prefecture to send officials to the pawnshops and gold and silver and cloth shops, to each and every one of them, to check over their books. As much as 10 million ounces were gotten from one shop."

[33]*Record of Barbarian Strength*, "Qin and Chu Cai": "During zhenghe, Qing and Chu Cai were sent into the capital from Jiankang . . . and agreed to lodge overnight together, and then go out. They met a Daoist with a tatooed face carrying a small basket. Bowing to Qin, he said, 'Gold has been accumulating for some three centuries . . . None has been used to reward you.' Reaching into the basket, he took out a piece of white metal, and handed it to him, saying, 'I'll see you again another day.' . . . They were going to sell it to buy food and drinks. When the man in the shop saw the metal, he blew out his breath and fidgeted with his hands, and asked how many coins they required. The reply was, 'Pay whatever the market price is.' The shopkeeper rejoined, 'My family has run silver shops for generations, but we have never seen an article like this."

[34]*Record of a Dream of Liang*, 13, "Shop Mats": "The market stalls in Hang city . . . ever since the chunyou years had famous traditional places like . . . the Shen and Zhang gold and silver exchange voucher shops, the Liu, Lü and Chen brocade shops . . . the Deng gold and silver shop at Dr. Li Bridge, the Wang gold and paper shop . . . the Ma and Song gold fragment melting down shops . . ."

[35]Tao Zongyi, *On the Suburbs* excerpt from *Capital City Record of Victory*: "From the Five Room Pavillion north to Official Alley and south to Capital Street, most are local people. There are only a hundred gold, silver, and cash exchange shops. Inside are laid out gold and silver, and one can see heaps of coins."

[36]*Record of a Dream of Liang*, 13, "Shop Mats": "On the main street of Hangzhou . . . from the Five Room Pavilion north to Five Officials Alley and South Street, two quarters were mostly made up of gold, silver, and salt note and voucher exchange shops. In front of them are set out utensils of gold and silver and ready cash. It is said one could see mounds of coins. These coins were kept as reserve for goods and to exchange for salt notes and vouchers. Enormous numbers were also broken up for the furnace as well."

[37]*Essential Record of the Years Since Jianyan*, 69, shaoxing 3, 10th month, jihai: "No matter how little a customer pays out, he is obliged to go to the exchange voucher shop. When he paid in coins the previous time, he was given a note with the name left blank. On the day when he is obliged to make a payment, he inserts the family and given name of the payee, and it is paid out without it being made public."

and sold in the gold and silver shops. They could also be exchanged for paper money.

Gold and silver shops were very numerous in Bianjing during Northern Song times. They had names like the House of Tang Gold and Silver Shop or the House of Wang Gold and Silver Shop. Their buildings were imposing, with wide gates framing interiors the many columns of which made them look like forests. Their every exchange involved tens of millions.[38] This sounds just like modern banking districts.

Actually, the term gold and silver guild [the Chinese term *yinhang* here translated as "silver guild" has since late Qing times been used to designate western-style banks. EHK] was already present by Tang times, but it then referred to the gold and silver district or trade, and had the same meaning as gold and silver market.[39] It was a vague term.

During Southern Song there were more than a hundred gold, silver and cash exchange shops in the Five-room Pavillion district of Hangzhou. Among the largest

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were the House of Shen and House of Zhang Gold and Silver Exchange Voucher Shops, and the House of Deng Gold and Silver Shop.

The money exchange trade is far less important in the history of Chinese money and credit than was the case in Europe. This divergence was determined by the specific circumstances of the two places.

Europe was a collection of a great many nations, with an extraordinarily large number of different currencies. Their units of issue differed, the materials of which they were made differed, even the same raw material was found in a variety of degrees of fineness, and the same type of money came in different weights.

These differences in weight and fineness were relatively unimportant in China, where precious metals were relatively little used, but they were very important in Europe, which used gold and silver coins.

These multifarious coins circulated through Europe without regard to national boundaries. Merchants frequently needed to exchange one kind of coin for another, and so the European money exchange trade had always flourished, whether during Greek antiquity, Roman antiquity or Medieval times.

The situation in China was different: China was a large, unified state. Foreign trade had never occupied a very great part of the whole nation's economy. Basically, foreign coins were not used. The native coinage was limited to copper coins. Precious metals were not minted into coins for circulation. Though there was lack of uniformity in the size of coins and in fineness of metal used to make them, since their intrinsic value was low, copper coins generally all circulated at the same value.

By Song times, the situation had changed somewhat. Circulation of money during Song was to a degree regionalized. Different coins were used in each region. In addition to paper money, there were also copper and iron coins, both of which came in large and small versions. These large and small coins were not the result of non-uniform minting standards. Nor were they produced by wear and tear or clipping. They were coins with different face values. These were all preconditions for the development of a money exchange trade.

Song had what were called exchange shops [*duifang*],[40] but there are no detailed accounts of their

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[38] *Flowery Dreams of the Eastern Capital*, 2, "East Horn Pavilion Streets and Alleys": "To the south it joins an alley called Boundary Body, which is the location of the gold, silver and dyed silk exchange business. The buildings are imposing, with broad gates, inside which things look like a forest. Every one of their exchanges involves tens of millions. People are amazed at what they see and hear."

Flowery Dreams of the Eastern Capital, 3, "Streets and Alleys Outside the Dana West Gate's Right Side": "As you cross to the north side of the street, there is the old Yicheng Pavilion. Just west of here are Jinliang Bridge Street, the Western Avenue Jingkuangr Drug Shop and the House of Zi Wang Gold and Silver Shop."

[39] *The Old Man of West Lake's Record of Many Victories*: "The various streets [*hang*] and markets include the market for Sichuan and Guangdong produced medicines, the market for ivory and hats, and the gold and silver market."

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[40] *Nine Essentials for Administration*, 5, "Banning of Shops": "The following should be closed: firms which receive stolen goods, inferior butchers, impoverished shops, stillbeer shops, tea shops, bathhouses, exchange shops, whorehouses, inns, dens of enticement, nunneries, army inns and soldier houses and sailor market houses. As for labor-service abolishing bowman protectors, temple paupers and armed paupers, if you know men of these types, do not let even one in ten-thousand of them get away. Only this will be enough to pacify the people."

Nine Essentials for Administration, "The district authorities put down bankrupt households and dissolute lower officials who frequently slip in to build salt, wine and noodle stalls, kill and butcher cattle and horses, open exchange shops, harbor thieves and bandits, set up competing gangs which distribute wine and food, and have no respect for the state's regulations. All these must be strictly banned so that a long-enduring peace may come about."

Water Margin Chronicle, chapter 39: "There outside the

nature. They were probably a late Song or post-Song type of emporium. When exchange shops are mentioned in the written sources it is seemingly as being used to supplement the activities of or to fill the vacuum left by the counting houses. Perhaps during Song the counting houses had been renamed exchange shops.

The Song Dynasty's money forwarding business was still managed by the government during the early years of of the dynasty, in a way much like that used during the time of the Tang Emperor Xianzong. A number of people in the capital were permitted to place ready money in the Left Treasury, and withdraw cash in various prefectures. This was called convenient exchange.

In kaibao 3 (970), the government set up a Convenient Exchange Authority to specialize in handling this trade. At the same time the prefectural authorities were ordered to pay off any merchant who came bearing such certificates on the day he presented them. There was to be no delay.

At the end of zhidao (997), the amount so forwarded had reached over 1.7 million strings per annum. By the end of tianxi (1021) it had reached a level of 2.8-2.9 million strings.[41]

Later, paper money proved to be more convenient to handle, and could itself be used
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to forward money. As a consequence the specialized Convenient Exchange Authority probably fell into decay.[42]

Eastern Gate was a market at a place called Living Grove, which was the place where guest merchants from Shandong and Hebei all came to buy and sell. There were a hundred plus a dozen or so large guest emporia, and two or three dozen gambling shops and exchange shops."

[41] *Song History*, 180, "Treatise on Food and Money," latter part, 2, "Coins."

[42] *Sagely Government of the Two Reigns of the Dynastic Revival of Imperial Song*, 9, shaoxing 1, 10th month, the Department of Ministries said: "The convenient cash regulations have been in effect in the various circuits since the time of the founders, and both public and private interests have benefitted thereby. In recent years, the authorities have not honored their obligations over long periods, causing loss of credibility among among the people."

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6.0 MONEY OF JIN AND YUAN

6.1 The Monetary Systems

1. Liao's Coinage

Various nationalities arose in the northwest during the late Tang and Five Dynasties periods and exerted great military pressure on the ethnically Chinese dynasties. At first they encroached on a portion of Chinese territory, and finally took complete control of China. These peoples included the Khitan, Western Xia, the Ruzhen (or Jurched) and the Mongols. They were all originally backward in cultural terms, but because they were able to use their military power to take political control over a part or all of China, they absorbed no small amount of influence from China, including influence over their monetary systems.

The Khitan maintained a state for 280 years, if we include the Western Liao, in the course of which their state was known as Liao during two periods (937-982 and 1066-1125). Before they established their state, they were a nomadic people

> with their wealth in horses, their strength in soldiers. They allowed their horses into the wilderness; they let their soldiers loose among the people. When there was an occasion to do so, they went to war, and their armored cavalry drew their bows. If the order was given before dawn, by dawn they had gathered. Their horses sought after water and grass; their people swallowed fermented mare's milk. It was their daily practice to draw a strong bow.[1]

By the beginning of the tenth century, during the time of the Five Dynasties, they came under Chinese cultural influence, set up a bureaucratic system, promoted agriculture and commerce, taught weaving, and gradually entered the stage of having a monetary economy.

The coins they first used were imported from the north China plain. It is said that Emperor Taizu's (Abaoji, 916-926) father, Sanzede, produced much copper and so began to mint coins. Emperor Taizong (Deguang, 927-947), established a commandership for smelting metals so as to set up a Commandant of Smelting of the Five Metals to exert central control over the coins and iron of the realm.[2] It is for this reason that some numismatists[3] have attributed some unverified coins to the early period of the Khitan.

For example, of the Kaidan Sagely

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Treasure, it was said that the character *dan* was a shorthand reference to the name Khitan [Qidan]. This is a strained interpretation. This coin's inscription probably ought to be read as *Kaishen danbao*, and it was likely a Song commemorative coin.[4] There is only one small Spring-money 1-cash coin which resembles the forms of Liao coins.

The earliest year-period coin was the Tianzan Circulating Treasure of Emperor Taizu (922-924), with a clerkscript inscription. It differs in construction from other Liao coins, and some say[5] it is a Vietnamese coin. There is, however, a crescent mark on its reverse, a device rarely employed by Vietnamese official mints. Moreover, Hong Zun's *Record of Coins* mentions it, and Hong is trustworthy on Liao coins. Perhaps it was minted at a different location from other Liao coins, with different personnel involved in its manufacture, and as a consequence its construction also diverged from the norm.

During the reign of Emperor Taizong, there was a Tianxian Circulating Treasure (925-936); under Emperor Muzong there was an Yingli Circulating Treasure (951-968); during the reign of Emperor Yingzong there was a Baoning Circulating Treasure (968-977); under Emperor Shengzong there was a Tonghe Circulating Treasure (983-1011). Hardly any of these coins survive. Moreover, except for the Tonghe coin, there is still debate over the authenticity of the other three coins. There are some variant forms of the Tonghe which resemble the Tianzan.

The *Liao History* states that Emperor Yingzong had a new Qianheng coin minted, and that Emperor

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[1] *Liao History*, 59, "Treatise on Food and Money," first part.

[2] *Liao History*, 60, "Treatise on Food and Money," latter part.

[3] Li Zuoxian, *Coins and Exchange Continued*. Zheng Jiaxiang, *Investigation of Liao Coins*, cf. Ding Fubao, *Encyclopedia of Ancient Coins*, "Summary."

[4] Jin Yuanyu, *Record of Barbarian Strength Continued*, 1, "The Miraculous Empyrian Cinnabar Treasure": "A xuanhe era magus smelted mercury into gold, cast it into coins, and as these had proceeded from the miraculous empyrian realm, their inscriptions were made to read, 'Miraculous Empyrian Cinnabar Treasure.' The Five Riches he called the Five Riches Cinnabar Treasure, and the same was done with the Great One. When Bianliang [Kaifeng] fell, the coins reverted to the prefecture, and King Hailing gave them as gifts to favored ministers. Those who obtained them used them as hat oraments." Wang Shousun, the Inner Treasury Commissioner, said this.

[5] Hirao Shusen, *Words on Coins From Lidezhuang*. Ding Fubao, *Some Small Topics of Conversation on Ancient Coins*.

Shengzong minted a Taiping coin,[6] but up to now it has not been possible to confirm either of these two coins. There are Qianheng Circulating Treasure and Heavy Treasure copper coins, both of which were minted by Liu Gong of Ten Kingdoms times Southern Han. These are not Liao coins. Some numismatic works[7] record a Qianheng Original Treasure with the inscription read circumferentially, the way Liao coins were read, but I have never seen the actual coin. There is an extremely large number of kinds of Taiping Circulating Treasures, but there are none which may be called Liao coins.

The Liao coins of which I have seen the largest number of are the Chongxi Circulating Treasure of Emperor Xingzong (1032-1055), the Qingning Circulating Treasure of Emperor Daozong (1055-1065), the Xianyong Circulating Treasure (1066-1073), the Dakang Original Treasure and Dakang Circulating Treasure (1074-1082), the Da'an Original Treasure (1083-1091) as well as the the Shouchang Original Treasure (1092-1101), the Tianzuo Emperor's Qiantong Original Treasure (1101-1109) and Tianqing Original Treasure (1110-1119) [Cf. Plate lx at end of this subsection].

The minting of most of these coins is attested by the *Liao History*, except for the omission of the Qingning Circulating Treasure and the misprinting of the second character of the Shouchang year-period as *long* [meaning grand or prosperouus]. This omission can be remedied and the error rectified through the evidence provided by the coins themselves.

A Great Liao Tianqing large coin has been discovered in Liaodong, which must have been minted during the tianqing period, but was not necessarily circulated.

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Although the Khitan had their own system of writing, they used only Chinese characters on their coins. There is one large coin, the inscription on which both does and does not look Chinese, which numismatists have suspected is in the Khitan language. Actually it is the four characters "Large Spring Five Grains" [*daquan wuzhu*] written in a very odd way. There is another large coin with the inscription "Thousand Autumns Ten-thousand Years" which has the same style of calligraphy. Probably neither of these is a Liao coin. The latter coin has been attributed by some to the Five Dynasties and Ten Kingdoms period. Its construction closely resembles that of Ma Yin's Tiansong Prefectural Treasure.

[6] *Liao History*, "Treatise on Food and Money," first part.

[7] *Western Qing Ancient Observations*.

None of the Liao coins are finely made. Their reverses are frequently molded unevenly, and their inscriptions are poor. There is even one type which bears two different styles of character. All these things reflect the cultural and technological levels of Khitan culture at that time.

The state of Liao did not mint many coins, but its monetary economy did enjoy a certain amount of development. During the kaitai period (1012-1019), an edict was sent down calling for the mortgaging or pawning of males and females for 10 cash per day.[8] There are also some records of grain prices in the written sources. Because of many years of good harvest, during the chongxi period [1032-1055], the price was only several cash per *dou*.[9] At the beginning of the reign of Emperor Daozong [1055], a *dou* of grain was 6 cash.[10]

In general, however, the Khitan continued to maintain a natural economy way of life. Right up to the Tianzuo Emperor's baoda 5 (1123), when Liao was about to fall, exchanges and payments were still being denominated in terms of livestock.[11]

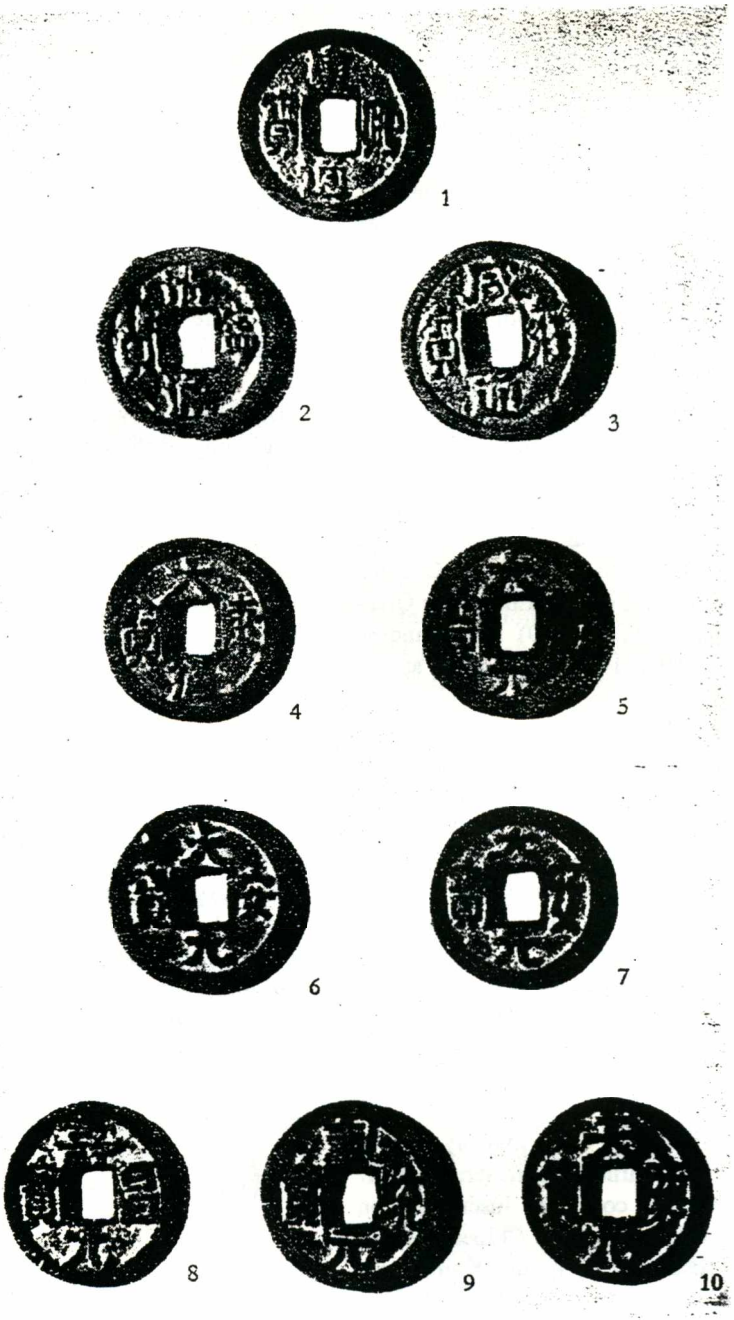
[8] *Liao History*, "Treatise on Food and Money," first part.

[9] *Liao History*, 91, "Biography of Yelü Tanggu."

[10] *Liao History*, "Treatise on Food and Money," first part.

[11] *Liao History*, 30, "Annals of the Tianzuo Emperor, 4": "In baoda 5 . . . they began to order their shepherds to transport salt and grain to the Luo granary, but the people plundered them, and it was advised that a reward be offered. Yali then set a value on it himself, offering a reward of one sheep for each cartload of grain, an ox for three cartloads, a horse for five cartloads, and a *shi*[a] for eight cartloads. Those to the left and right said, 'one sheep exchanges for 2 *dou* of grain, and even then you can't get any. So what use would it be to offer that little for one cartload?'"

[a] 匹



圖版六十　遼的錢幣

1.重熙通寶。 2.清寧通寶。 3.咸雍通寶。 4.大康通寶。 5.大康元寶。6—7.大安元寶。 8.壽昌元寶。 9.乾統元寶。 10.天慶元寶。

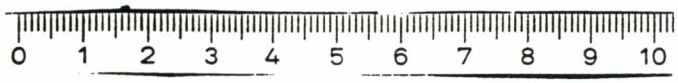


PLATE LX. LIAO COINS

1. Chongxi Circulating Treasure. 2. Qingning Circulating Treasure. 3. Xianyong Circulating Treasure. 4. Dakang Circulating Treasure. 5. Dakang Original Treasure. 6-7. Da'an Original Treasure. 8. Shouchang Original Treasure. 9. Qiantong Original Treasure. 10. Tianqing Original Treasure.

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2. Western Xia's Coinage

The leaders of Western Xia had been enfeoffed as Dukes of the State of Xia at the end of Tang. The family name Li (of the Tang imperial house) was conferred on them. The Song Dynasty conferred their family name of Zhao on them, and during the time of Emperor Renzong, they were enfeoffed as Kings of Xia. Yuanhao, however, proclaimed himself Emperor of Great Xia, and became a powerful neighbor on Song's western frontier. At that time Song made him an annual payment of 250,000. At the beginning of Song the monetary system of Sichuan and Shaanxi was affected to no small degree by military pressure from Xia. Unfortunately, their history has yet to be well studied.

Judging from the coins themselves, there are one or two dozen types of Western Xia coins. In terms of their material, there are copper coins and iron coins. Their inscriptions come in the Western Xia language and in Chinese.

Past numismatists have not deciphered the Western Xia language inscription coins, saying they were some sort of *Wutuo* coin. An ancient stele has been found in modern times at the Great Cloud Monastery in Liangzhou. Its face bears a Western Xia inscription, its reverse a Chinese inscription. It is only because it bears the date tianyou/min'an 5 (1095) that we can tell it is in the Western Xia language.

Western Xia is a dead language, and in addition to the stele inscription, woodblock classics and official seals and belt tablets, coin inscriptions constitute important historical sources for its study.

Five kinds of Western Xia language coins have now been discovered. These are Emperor Yizong's Fusheng[a] coin[1] (1053-1056), Emperor Huizong's Da'an[b] coin (1076-1085), Emperor Chongzong's Zhenguan[c] coin (1102-1114), Emperor Renzong's Qianyou[d] coin (1171-1193) and Emperor Huanzong's Tianqing[e] coin (1194-1206) [Cf. Plate lxi,1-5 at end of this subsection]. Most of the Western Xia language coins were called Cash Treasure [*qianbao*], as in Tianqing Cash Treasure.[f] The Zhenguan[g] coin, however, seems to have been an Original Treasure.[2] It came in broad and narrow edged types, and the strokes of the inscription are relatively thick.

One may discern the language's degree of development solely from observing the appearance of the Western Xia words on the coins. The inscriptions of the fusheng and chengdao periods have simple and plain strokes. By the qianyou and tianqing periods the strokes had become smooth and strong.

Among the Chinese language coins are the Yuande Circulating Treasure and Heavy Treasure (1120-1126), the Tiansheng Original Treasure (1149-1170), the Qianyou Original Treasure, the Tianqing Original Treasure, the Huangjian Original Treasure (1210-1211) and the Guangding Original Treasure (1211-1223) [Plate lxi,2,6-7]. Only the Tiansheng Original Treasures are relatively numerous. Very few remain of any of the others, particularly the Tiande and Tianqing

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coins. Probably few of them were minted in the first place.

Western Xia had iron coins. I have seen Tiansheng and Qianyou ones, with the latter being the most numerous.

The construction of Western Xia coins was generally very fine, with well-formed inscriptions, judging from which their culture would be ranked far ahead of that of the Khitan.

The Great Dynasty Metal Equivalent is a coin which has yet to be dated. Surviving examples are as big as 10-cash coins, are made of copper-nickel alloy, have inscriptions in block script and are relatively carefully made.

Earlier numismatists have said they were minted by the Mongols before they proclaimed the establishment of their dynasty. Before they proclaimed themselves the Yuan, the Mongols did indeed call themselves Great Dynasty, but that label was not used exclusively by them. It had been in use since Tang and Song times.

The enfeoffed states on the borders also called themselves Great Dynasty, even such small dynasties as Latter Tang and Latter Jin.[3] The state of

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[1]On the coin, the characters *fu* and *sheng* are written with *sheng* first. This is because the character *sheng*, meaning "sage," had to be raised above any other character.

[2]In the Western Xia language, adjectives seem to have come after nouns. Hence the order of words for the Zhenguan coin was Zhenguan Treasure Original.

[3]For examples of Tang and Song calling themselves Great Dynasty, cf. Xuan Yugong, "Investigation of Great Dynasty Universal Treasure Continued," *Encyclopedia of Ancient Coins*, latter compendium, pp. 95-97, which gives numerous examples, or as in *Gathered Words of the Tang*,[4] which records Lu Hui's statement that "the term great dynasty was used in literature to designate the brave and distinguished." Lu You, *Southern Tang History*, "Basic Annals of Houzhu," records the text of a proclamation of year jiawu by Emperor Taizu: "'You ought to enter the court at an early time.' Houzhu declined because of illness, saying, 'I have served the Great Dynasty. I had hoped for all of the temples and altars. I had not expected things to be like this.'"

Yudian had called itself Great Dynasty. On the portrait of the King of Yudian in Dunhuang's Mogao Cave is the inscription "Great Dynasty Great Treasure Yudian State Great Sage Great Illuminated Son of Heaven." The Queen's portrait also bears the words "Great Dynasty." Hence the term Great Dynasty need not necessarily be a reference to the Mongols.

Furthermore, it is impossible for the Great Dynasty Metal Equivalent to have have been a Mongol coin. The earliest person to have have mentioned this coin was Li Xiaomei, who lived during the shaosheng [1094-98] period of Northern Song. This was a century before the birth of Chinggis Khan, and the Mongols had likely not yet attained the stage of development where they would have been minting coins.

Some people who emphasize the above point, suspect that this was a Liao coin.[4] In terms of the time frame, this is possible. Liao was already minting coins by then. The Great Dynasty Metal Equivalent does not, however, resemble Liao coins in the calligraphy of its inscription, in the alloy used to make it, or in its construction. Though the majority of extant examples are later copies, they would surely have been modeled on the originals.

They somewhat resemble Jin coins, but the Ruzhen were not yet minting coins. Therefore, unless the entry in the *Record of Coins* is a later interpolation, the Great Dynasty Metal Equivalent can only have been a Western Xia coin. The period and style of inscription fit such an attribution. Western Xia was also fond of hyperbole in coining its year-period names.

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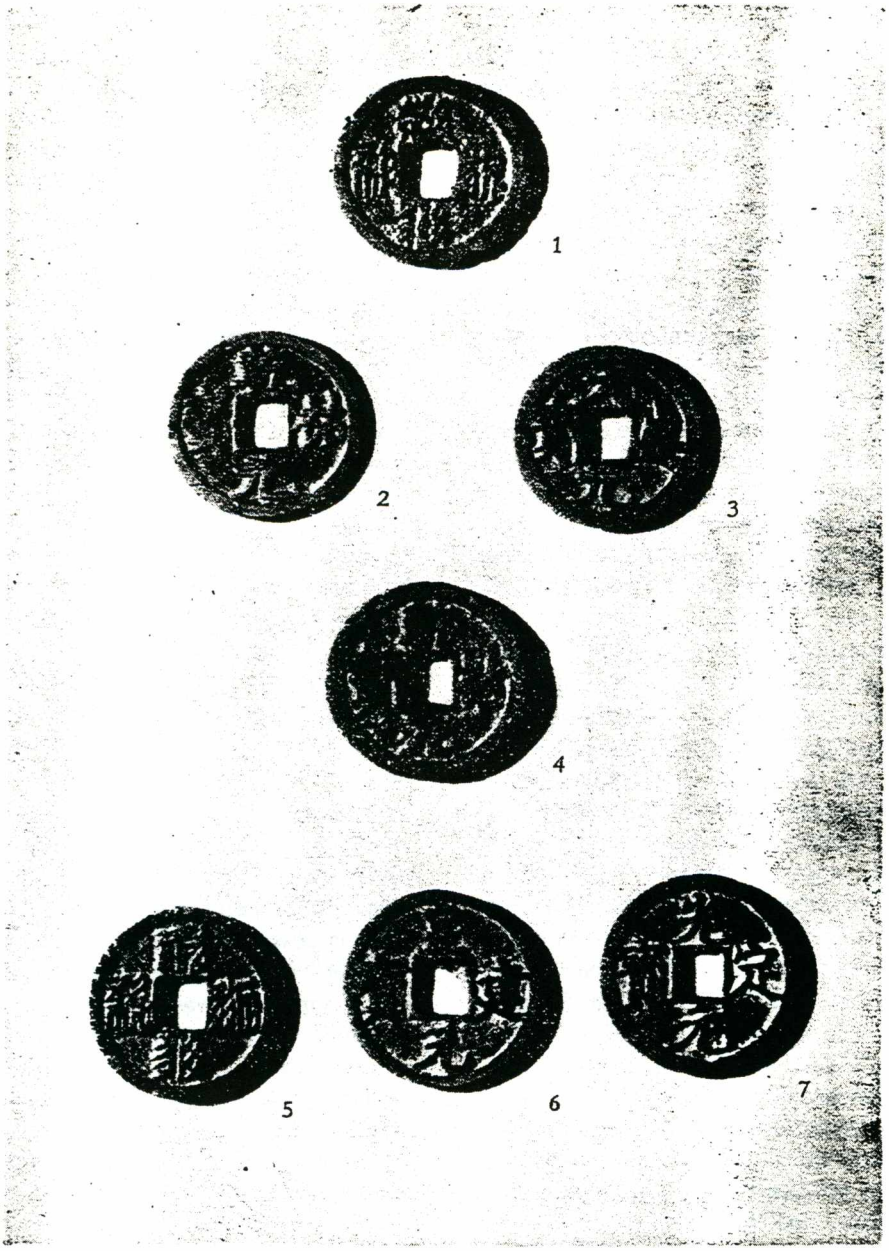
[4]Weng Shupei, *Collected Investigations of Ancient Coins*.

a 衡衍 b 數量 c 德數 d 渦頭
e 酸頭 f 蔽殊數執 g 數品



圖版六十一　西夏的錢幣

1.西夏文大安錢寶。 2.天盛元寶。 3.乾祐元寶。 4.乾祐元寶鐵錢。 5.西夏文天慶錢寶。 6.皇建元寶。 7.光定元寶。

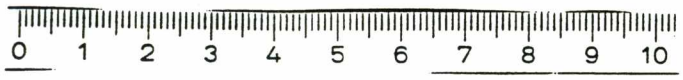


PLATE LXI. WESTERN XIA COINS

1. Western Xia language Da'an Cash Treasure. 2. Tiansheng Original Treasure. 3. Qianyou Original Treasure. 4. Qianyou Original Treasure iron coin. 5. Western Xia language Tianqing Cash Treasure. 6. Huangjian Original Treasure. 7. Guangding Original Treasure.

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3. The Jin Coinage

The period encompassed by the Jin state's existence roughly coincides with Southern Song. That period can be characterized as China's second Northern and Southern Dynasties era. The Jin monetary system was mainly under Song influence, but in a number of respects it was in advance of Song's, as for example, in making formal use of silver and not putting expiration dates on paper money.

At first, the Jin employed copper coins, and later made joint use of coins and notes. Still later, silver and notes were employed. During the inflationary last period, the people exclusively used silver. Therefore, their money may be divided into three types. The first being copper cash, the second silver money, and the third paper money.

For their copper coins, at first they employed the old coins of Liao and Song. At the end of Emperor Taizong's tianhui period [1135], they used Liu Yu's Fuchang coin [Cf. Plate lxii,6 at end of this subsection].[1]

After Liu Yu surrendered to Jin, they set him up as emperor in tianhui 8 (1130, Southern Song's jianyan 4), with the state name of Qi. He minted three types of Fuchang coins, a small one called Original Treasure, a 2-cash coin called Circulating Treasure, and a 3-cash Heavy Treasure, each in sealscript and regular script versions, forming matching sets of very finely made coins.

It was not until the Hailing King's zhenglong 2 (1157) that the Jin minted their own Zhenglong Circulating Treasure, which matched the small Song coin in size [Plate lxii,1]. In Emperor Shizong's dading 18 (1178), they minted the Dading Circulating Treasure in small and 2-cash versions [Plate lxii,2-4]. On the reverse of some of the small version appear the characters *shen* and *you*, which past numismatists have explained in strained ways.

In fact these must be the sexagenary cycle symbols for the years, and their use here must reflect Southern Song influence, as Southern Song had begun to record years on the reverses of coins in chunxi 7, which corresponds to Jin's dading 20 [1180]. The Jin only began to imitate this practice in dading 28, the sexagenary cycle couplet for which is *wushen*. The couplet for dading 29 is *jiyou*.

During Emperor Zhangzong's mingchang era (1190-1195), the Mingchang Circulating Treasure was minted. It was as finely made as the Dading coin, but hardly any have survived. During the taihe period (1201-1208), they minted the Taihe Circulating Treasure and Heavy Treasure [Plate xlii,5]. The Circulating Treasure coin comes in small, 2-cash, 3-cash and 10-cash versions. The Heavy Treasure is a 10-cash coin, and it was the only one to be minted in relatively large quantities. All the others are rare.

By then currency inflation had already begun. Nevertheless, coins continued to be minted even after taihe. Coins from the chongqing, zhining, zhenyou and tianxing periods [1212-17, 1232-33], have come down to us. There is a Chongqing Circulating Treasure small coin and 2-cash coin in regular script. The Chongqing Original Treasure is a 5-cash coin in seal script. The Zhining Original Treasure employed thin-gold-style script, and is a bit smaller than the Chongqing Original Treasure. Probably it too was a 5-cash coin. These two types of coins were minted during the rule of King Weizhao.

During the reign of Emperor Xuanzong, there was the Zhenyou

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Circulating Treasure small coin, in regular script. Hardly any of these are extant. Aside from a handful of Zhenyou coins, the rest survive only as single coins, so I suspect these were trial mintings.

It is possible that there are also coins for other year periods. There is a Tianxing Treasure Account which some say was minted during the reign of Emperor Aizong [1224-1234], but its authenticity awaits verification.

Though the Jin had their own written language, their coins all employed Chinese inscriptions, and they were extraordinarily finely made, displaying an extremely high technical level.

The Dading coins [Plate lxii,2-4] were patterned on the Song Emperor Huizong's Daguan coins, with their thin-gold style inscriptions. The Taihe Heavy Treasure [Plate lxii,5] has a narrow edge and thick body, with its sealscript strokes like jade chopsticks. These coins are more uniform than the machine-made coins of later ages.

The Taihe Circulating Treasure had a regular script inscription, with a touch of the thin-gold style. Coins made from this time on were all quite fine in construction, following the pattern laid down by the Dading and Taihe coins. Probably they got hold of minting equipment and workmen remaining in Shaanxi from Northern Song times. At that time, Chinese minting techniques were best developed in

[1] *Ruzhen-Jin History*, "Treatise on Food and Money, 3": "At the beginning of Jin, the old coins of Liao and Song were used. . . . In zhenglong 2, after the passage of over forty years, some began to advise initiating minting." *Universal Statutes Continued*: "At the beginning of Jin, old Liao and Song coins were used. At the end of Emperor Taizong's tianhui period, the Qi Fuchang Original Treasure and Fuchang Heavy Treasure coins were also used."

Shaanxi.

The Jin always employed silver in ingots weighing 50 ounces.[2] Naturally, however, there were also other denominations. Recently, there was unearthed from a Mongol grave in Inner Mongolia a silver ingot shaped like a steelyard weight. It weighed 354 grams, which would be equal to about 10 of that period's ounces.

On it are eight characters meaning "Longjiang Provisions Silver Manufactured Tianhui Period," written in clerkscript on two lines. The other side also bears eight characters which seem to be in the Western Xia or Ruzhen language, and the meaning of which is probably identical to that of the inscription on the other side. At one end are the three characters "Achouji,"[3] which is probably the silversmith's name.

In Emperor Zhangzong's cheng'an 2 (1197, Southern Song Emperor Ningzong's qingyuan 2), they minted the Cheng'an Treasure Money silver ingot in five sizes, from 1 to 10 ounces, with each ounce equated with 2 strings of cash. This represented the first time since Emperor Wu of Han that silver was formally used as money. Though the Jin valued gold,[4] they did not use it as money, confining themselves to silver as a medium of circulation.

Jin practices had a very great influence on China's use of silver, but no actual Cheng'an Treasure Money has survived. Those Cheng'an Treasure Money pieces seen by numismatists and collectors have all been copper coins of the square-holed round type. Though the history books have not clearly described the shape of the silver version, it must have been ingot shaped.[5] Therefore, these copper coins must be forgeries. If there had really been minting of copper coins then, they would not have differed much in nature from the Tianxing Treasure Account copper coins.

The most important element in the Jin monetary system was paper money. They issued paper money before they had minted copper coins.

In the Hailing King's zhenyuan 2 (1154, the Southern Song Emperor Gaozong's shaoxing 24), they set up an Exchange Certificate Treasury to issue Exchange Certificates, divided into large and small types, and which circulated alongside Liao and Song copper coins. [Plate lxiii] The large certificates came in 1-string, 2-string, 3-string, 5-string and 10-string denominations. The small certificates came in 100-cash, 200-cash, 300-cash, 500-cash and 700-
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cash denominations.

These Exchange Certificates originally had seven year terms, after which they were to be exchanged for new certificates, but in Emperor Shizong's dading 29 (1189, the Southern Song Emperor Xiaozong's chunxi 16), the seven year limit was removed. The removal of such limits from Southern Song's Account Notes only occurred sixty years later, and so this earlier date became an epoch-marking one in the history of the development of Chinese money.

Though Jin paper money did not bear expiration dates, it was frequently called in to be exchanged for new certificates because of currency inflation, and at such times even the nomenclature of the notes was changed.

The first time this happened was during Emperor Xuanzong's zhenyou 3 (1215, the Southern Song Emperor Ningzong's jiading 8), when the Zhenyou Treasure Deeds were issued in exchange. The second occasion for such an exchange was in xingding 1 (1217), when the name was changed to Zhenyou Circulating Treasure. The third occasion was in yuanguang 1, when the Xingding Treasure Spring was issued. In yuanguang 2 (1223) the Yuanguang Precious Money was issued on thin silk. It is said there was also a Yuanguang Heavy Treasure.[6] In tianxing 2 (1233) there was also a Tianxing Treasure Account. Several months later, the state perished.

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[2] *Ruzhen-Jin History*, 48, "Treatise on Food and Money, 3," cheng'an 2 [1197], "12th month, the Department of Ministries advised that official soldiers' wages and frontier army requirements be met jointly with silver and notes. The old standard of 50 ounces of silver per ingot had a value of 100 strings. When some among the people clipped them, their value declined proportionately." *Record of Barbarian Strength Continued*, 1, "Dai Ten's Wife, Mrs. Liang": "Liang was guilty of gambling with a tablet of silver."

[3] Okudaira Masahiro, *Record of East Asian Coins*, 11, pp. 22, 23. Okudaira says there is a Ruzhen text below.

[4] *Ruzhen-Jin History*, 5, "Annals of Hailing": "He often put some gold inside his underclothing. When someone pleased him, he would have the person take it out herself, but if some lewd female favorite did not favor the bone and flesh instead, she would be punished with execution regardless of her guilt."

[5] Weng Shupei, *Collected Investigations of Ancient Coins*, under the heading "Qianyuan Heavy Treasure," quotes the *Yongle Encyclopedia* quotation from *Floating Words of the Jing Studio*: "During the cheng'an period, Jin Daoling used 1 ounce of silver to mint a small silver ingot worth 2 strings. At first both public and private interests were convenienced, but before long, private coiners doubled the officials' abuses, debased it with copper and tin, and did not keep it up to an ounce in weight. The people rejected it. It was made ever less substantial. Heavy punishments were threatened, but its circulation was ever more obstructed, and in the end it was abolished."

[6] *Investigation of Literary Remains Continued*, "Investigation

The names and sequence of issue of the notes given above is based on the *Ruzhen-Jin History*. Liu Qi's *Treatise on Return to Concealment* contains different material. According to the latter work, after the issue of Exchange Certificates, eight new certificates were issued, but the Tianxing Treasure Account was not one of them.

These eight new notes were: Treasure Deeds, Circulating Money, Circulating Treasure, Heavy Treasure, Treasure Spring, Precious Treasure, Precious Account and Precious Money. Some of these names had been mentioned by the *Ruzhen-Jin History*. Treasure Deed, for example, must be a reference to the Zhenyou Treasure Deed, Circulating Treasure to the Zhenyou Circulating Treasure, Treasure Spring to the Xingding Treasure Spring, and Precious Money to the Yuanguang Precious Money. The rest are not mentioned in the *Ruzhen-Jin History*.

Liu Qi was an Academician during the reign of Emperor Aizong [1224-34]. He paid attention to the political events and policies of the age. The defeat and overthrow of Jin occurred during Liu's own lifetime, which must lend credibility to his observations. This credibility is, however, limited to the zhengda and tianxing periods [1224-33], since even a little later, at the time of Jin's fall, he was only 32 years old, and so he may not have recorded events prior to yuanguang [1222]. We can at least learn the general sweep of events from his account.

The *Ruzhen-Jin History* covers very clearly the period from the issue of Exchange Certificates to the Xingding Treasure Spring. For each new issue it gives the exchange price for the old notes, which renders it more credible.

Liu Qi seems to have been altogether unacquainted with the Tianxing Treasure Account. Although the Tianxing Treasure Account was issued in Caizhou, which was only several hundred *li* away from Bianjing. Liu was then trapped by the siege of Bianjing, and so could not learn of it at the time. Evidently, however, he did not pay further attention to the matter even afterward.

The histories contain some information on the form of the Jin Exchange Certificate.[7] Generally, there was a flowery pattern border within which

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there were two sections, one above the other. The top part was smaller, and the bottom larger. In the center of the top part was the denomination in metal. On the right was the term *ziliao*, and on the left the term *zihao*. Outside the former was the statement "Forgers of Exchange Certificates Will Be Beheaded" in seal script. Outside the latter was the offer of a reward to those who informed or apprehended forgers.

Below the ornamental border was the location of the issuing authority, the reward, the date, and the seals of those responsible for the issue. There were also texts above the ornamental border, and to its left and right. At the top was the denomination in metal. On the right side was a notation of the labor and ink fee per note and the handling charge when exchanging old notes for new. On the left side was the oblique seal of "agreement" of the particular locality. This was the region within which it was permitted to circulate.

There were, however, omissions from and additions to these textual features in the Exchange Certificates issued by different localities. For example, a 100-string Exchange Certificate printed during zhenyou 2 [1214] in the Northern Capital Circuit, and discovered in Damingcheng, Rehe[8] and a print-

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of Coins."

[7] *Ruzhen-Jin History*, "Treatise on Food and Money, 3": "The Exchange Certificate has a border of flowery curved lines, above which is written horizontally the number of strings. On the left there is written a certain *ziliao*, and on the right a certain *zihao*. In addition, there is a seal script statement that forgers of Exchange Certificates will be beheaded, and offering a reward of 300 strings of cash to any who apprehend or inform on forgers. Horizontally below the statements on the left and right are the words Central Capital Exchange Certificate Treasury, and the name and seal of the Commissioner of the Board of Revenue authorized by the Department of Ministries and Board of Revenue. There is also a statement that these are printed by Sagely Edict, and that cash may be exchanged for Exchange Certificates at various circuit treasuries, that certificates might also be exchanged for cash at a treasury, and that they were to circulate as equivalent to cash for public and private purposes.

"The certificates circulated without limit as to year and month. If their inscriptions became unclear, or their paper became worn out, old ones could be exchanged for new at the treasury office to which they were assigned. If cash was paid at the treasury, or they were exchanged for new certificates, from each string's worth a certain number of cash were deducted to cover the cost of labor and ink. Each commissioner and his deputy in each issuing treasury put his seal on its notes, and the year, month, and day of issue. Treasuries printing these notes put the seal of the treasury office deputy commissioner on each, and seals from as high as the Department of Ministries and Board of Revenue were affixed. The same held for those locations which printed them and paid out cash. The rest used their seals as normally."

[8] *T'oung Pao* records that in Damingcheng, Rehe, there was discovered an Exchange Certificate with a face value of 100 strings, and which was issued in zhenyou 2. The text on it differed from the one recorded in the *Ruzhen-Jin History*, "Treatise

ing block for a 10-string certificate used in Shaanxi East Circuit during zhenyou 3[9] contain differences in their texts from what was recorded in the histories, and the two of them differ from each other as well.

There is another certificate printing block used in Shandong Eastern Circuit which does not even bear a year designation. If it had not had printed on it the four characters for Shandong Eastern Circuit, there would be no way to tell that it was a Jin Exchange Certificate.[10]

Apparently the sizes of the Exchange Certificates from different localities did not vary much. Measured to the edges of the decorative borders, they were around 0.18 meters long and 0.1 meters wide. Measured to the edges of the note, they were 0.192 by 0.105 meters.

The Zhenyou Treasure Deed[11] was larger than the Exchange Certificate, running 0.3 meters long and 0.185 wide. There are a few other differences from the Exchange Certificate. The top rectangle inside the border sets out the four characters for Zhenyou Treasure Deed horizontally, something not found on the Exchange Certificate. The lower horizontal rectangle inside the border is almost the same as on the Exchange Certificate, clearly delineating the denomination, *ziliao* and *zihao*, along with the seal script on the two sides (on the beheading of counterfeiters and terms of reward).

There are nine lines altogether on the lower part, two more than on the Exchange Certificate. They read as follows: "Memorialized permission to print for various circuits' circulation Treasure Deed, to be circulated alongside ready cash, with no limit of

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on Food and Money." Outside the ornamental border on the upper right corner are the words "For each piece of paper, the labor and ink cash is eight cash full." On the right

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lower part are the words "When paying in old to exchange for new, reduced half." On top, running sidewise, are the expanded numerals reading "One hundred strings." Inside the ornamental border, in the center of the upper portion are the words "One hundred strings 80 to the full hundred." On the left is the *ziliao* and on the right is the *zihao*. The motto on the right reads "Forgers of Exchange Notes are to be beheaded." The motto on the left reads "Reward Cash Three Hundred Strings."

The lower portion is "Northern Capital Circuit Intendant Inspector Transport Office has received the Board of Revenue memorial permitting the printing and issue of Exchange Certificates, under which the Central Capital, Southern Capital Exchange Certificate Treasuries, the Northern Capital, Upper Capital Xianpingfu Ministry Treasury will exchange cash for certificates." Added are the authorization seals of the approving offices and treasury officials. There is then printed the statement that "Counterfeiters of Exchange Certificates are to be beheaded in public, with a reward in cash of three hundred strings." After that is printed "zhenyou 2, month, day. The seals of the treasury and official which printed the note follow, and finally come the words "Department of Ministries Board of Revenue Deputized Official." Overall, the piece of paper is 0.192 meters long and 0.105 wide. Cf. Jos. Mulle, "Une planche à assignats de 1214," *T'oung Pao*, serie II, vol. XXXIII.

[9]The text on the lower portion of the block is divided into seven lines as follows:

Circulation of Exchange Certificates within Shaanxi Eastern Circuit; permitted to exchange with Central Capital, Southern Capital

Certificate treasury, Capital prefecture, Hezhong prefecture, Luzhou prefecture x exchange cash for certificates

Holding Office x Treasury Deputy x Deputy Commissioner

Counterfeiting Exchange Certificates beheading reward x x x strings

Zhenyou 3 x month x day

Printing certificate voucher treasury deputy commissioner

Department of Ministries Board of Revenue authorized official

[10]Luo Zhenyu, *Yong Cottage Daily Notes* records the Exchange Certificate's inscriptions as follows: "Shandong Eastern Circuit Exchange Certificate copper plate, worn out. Collected by Wang Lanji. Length in current *chi*, 5 *cun* and a half. In style, it has an ornamented border on all four sides. Written horizontally above the border is the label One Hundred Strings. Within the border running horizontally are two rectangles, the top one occupying one-third, the bottom one two-thirds of the space. The top one contains three lines: Secretariat △ each string, string 80 full hundred. On the left it reads △ *ziliao*, and on the right it reads △ *zihao*. On the side there are also two lines in seal script. The one on the left reads 'Counterfeiters of Exchange Notes will be beheaded.' The one on the right reads 'Reward in Certificates 300 strings.'

"In the middle of the lower rectangle is written 'For counterfeiting Exchange Notes, beheading, Reward in cash three hundred strings.' In a rectangle on the left there are three lines of small characters beginning with the words Shandong Eastern Circuit etc., etc. Only the words Shandong Eastern Circuit and Southern Capital Exchange Certificate Treasury Increase are visible. The rest are obliterated and cannot be distinguished.

"There are three lines of writing in a rectangle on the right. The first line is 'Printed Certificate △.' The second line is 'Printed Certificate Official.' The third line is 'Department of Ministries Board of Revenue Deputized △,' but no year is recorded. If the four characters for Shandong Eastern Circuit did not appear we could not know that it was a Jin Exchange Certificate. On the left, outside the ornamental border, there is a line of writing which reads "for each △ △, etc., etc." but which is worn and cannot be made out.'"

[11]*Yong Cottage Daily Notes* contains an entry on the Zhenyou Treasure Deed.

year and month." Afterward is given the region of circulation as well as the seals of the various officials managing the issue. It goes on to add "Counterfeiters are to be beheaded; reward in Treasure Deeds of three hundred strings, as well as the offender's family property." Finally comes the year of the zhenyou period and the month and day, and the seals of the officials in charge.

The line "no limit of year and month" is not present on the Exchange Certificates, although later on Exchange Certificates in actual fact no longer had expiration dates either. Outside the border were the acceptances of various localities, which was the same sort of thing as with Exchange Certificates.

A printing block for the Xingding Treasure Spring has also survived.[12] This one was for a 2-string denomination note. It is 0.24 meters long. It differs from both the Exchange Certificate and the Zhenyou Treasure Deed. Those two employ double lines in their border designs. The Treasure Spring employs a single line. The denomination is not written horizontally atop the border, but rather consists of a drawing of two strings of cash.

Inside the outer border are two horizontal enclosures, the top one containing the four characters "Xingding Treasure Spring," and the bottom one the four characters "Two strings known diminished," each balanced

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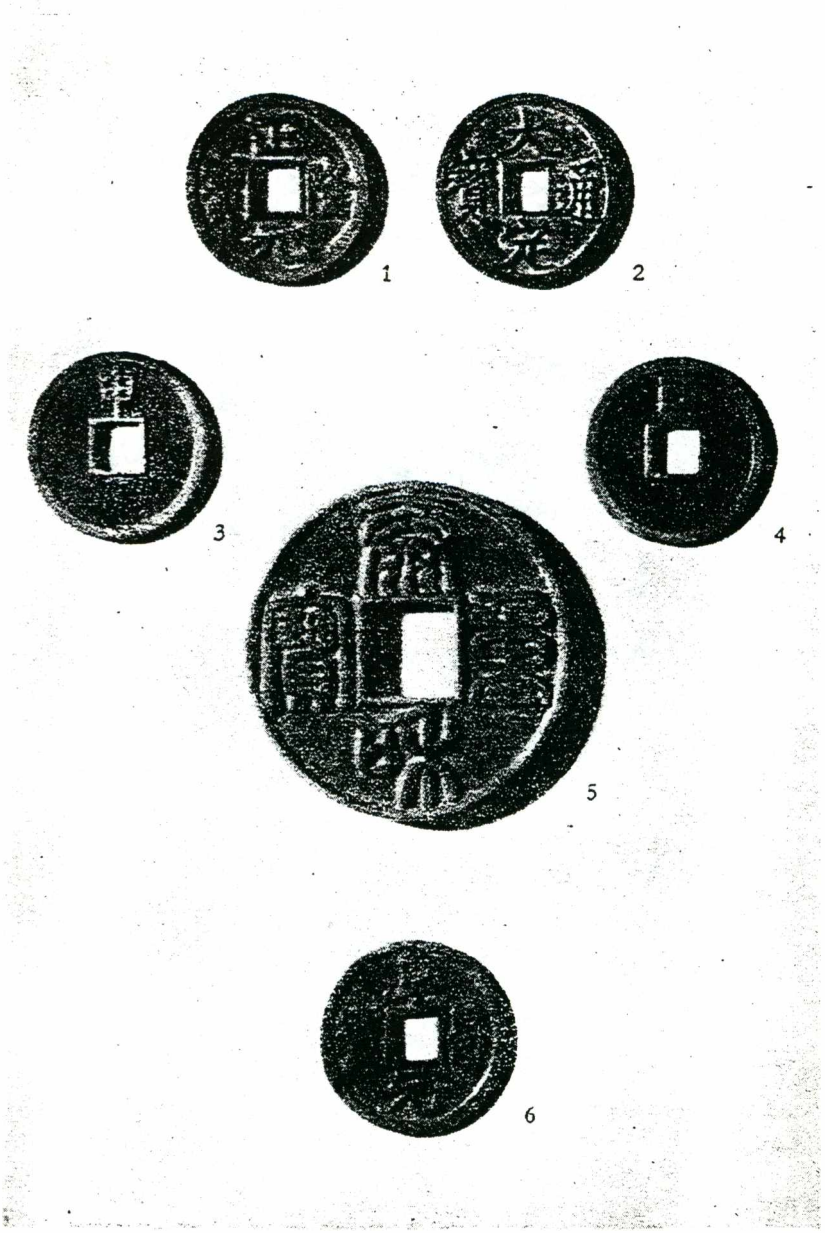
against the other.

Below are two rectangular enclosures. The one on the left reads "△ *ziliao*," and the one on the right reads "△ *zihao*." Below the rectangle is another horizontal one in which are contained the three characters "Southern Capital Circuit." To the left and right of the rectangle are the seal script lines saying that counterfeiters will be punished and giving the amount of the reward for informers (six hundred strings).

This is the top half of the plate. In the center of the bottom half is a circle surrounded with a peony flower pattern. Inside that is a line on the penalty for counterfeiting and the reward. On the left are five lines of characters. The first three lines are "Memorial accepted to print Xingding Treasure Spring, To circulate alongside ready cash, Not limited to a year or month in circulation." The fourth line contains the Treasure Spring Treasury seal and the holding office's seal. The fifth line contains the seal of the printing treasury and holding office seal. There are also five lines on the right side. The first line is "xingding 6th year, 2nd month, day." The second and third lines have places for the Treasure Spring Treasury Commissioner and Printing Treasury Commissioner's seals. The fourth line is the Board of Revenue's permission seal. The fifth line is the Department of Ministries and Board of Revenue's authorizing official's seal.

[12] Cf. *Yong Cottage Daily Notes*.

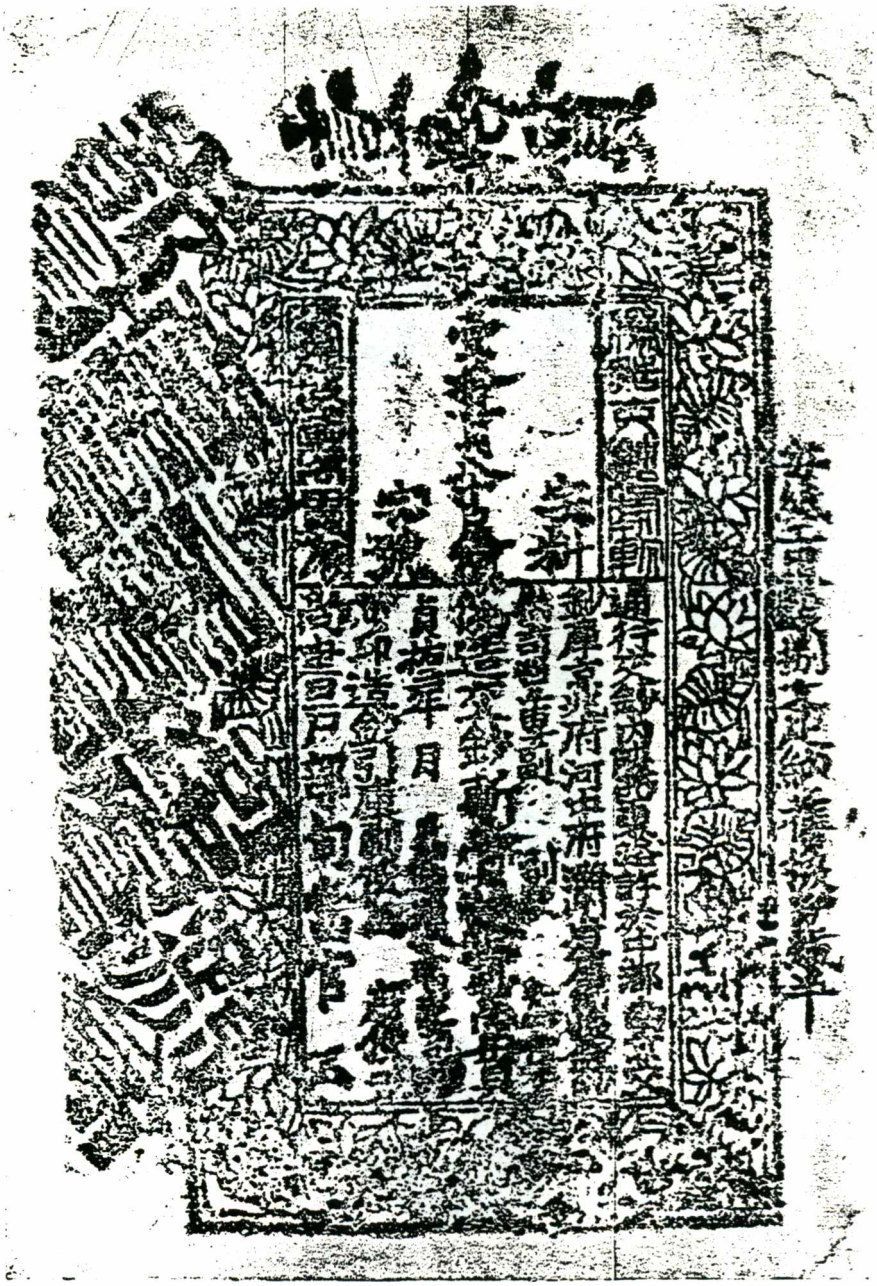


圖版六十二　金的錢幣

1.正隆元寶。 2.大定通寶。 3.大定通寶背申字。 4.大定通寶背酉字。 5.篆書泰和重寶當十錢。 6.劉豫的阜昌元寶。

PLATE LXII. JIN'S COINS

1. Zhenglong Original Treasure. 2. Dading Circulating Treasure. 3. Dading Circulating Treasure reverse with character *shen*. 4. Dading Circulating Treasure with reverse bearing character *you*. 5. Seal script Taihe Heavy Treasure 10-cash coin. 6. Liu Yu's Fuchang Original Treasure.



圖版六十三　金的交鈔（拾貫）（趙權之藏）

鈔面的文字，大體上和《金史·食貨志》的記載相符。但各地所發行的，文字稍有不同。左邊五行斜文宋體篇字是史書所未提到的，是註明流通區域，這裏指明五個區域，即"中都合同"、"南京合同"、"京兆府合同"、"河中府合同"、"鄜州合同"。由此可知這是流通最廣的一種交鈔。但票面有貞祐三年字樣，應當是最後一次發行，因爲同年改發貞祐寶券。

PLATE LXIII. JIN'S EXCHANGE CERTIFICATE (TEN STRINGS)
(Collection of Zhao Quan)

The inscription of the face of the certificate for the most part agrees with that recorded in the *Ruzhen-Jin History* "Treatise on Food and Money," but there are variations in the texts of notes issued in different places. The five lines of slanted Song-style characters on the left side are not mentioned by the history. These specify the regions of circulation. This note specified five such regions: "Central Capital joined circulation," "Southern Capital joined circulation," "Capital Prefecture joined circulation," "Hezhongfu joined circulation," "Luzhou joined circulation." This shows that this was a most widely circulated Exchange Certificate, but the note bears the date zhenyou 3, and so it must have been part of the very last such issue, since that same year the Zhenyou Treasure Deeds were issued in their stead.

4. The Yuan Dynasty's Monetary System

The Mongols' government of China brought about a fundamental change in the Chinese monetary system. From then on, China adopted silver as a measure of value. The history of Chinese money may be divided into different stages based on the standard employed.

For example, based on the nomenclature of copper coins, the Tang Dynasty is a watershed. Prior to Tang the grain and ounce were used

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as monetary names. From Tang on, the Treasure cash labels were so used.

In terms of the adoption of paper money, Song may be taken as the watershed. Prior to the Song, metal money was used. From Song on, paper money was employed. Such distinctions are not, however, fundamental, since prior to Song the main measure of value was the copper cash, and the Exchange and Account Notes of Song were essentially certificates of exchange which retained the string of cash as their unit.

It was only beginning with the Yuan Dynasty that China went over to use of silver as a measure of value, and also gradually developed silver into a medium of circulation.

The Mongols were transformed from a nomadic way of life[1] under the influence of neighboring peoples, and in a single leap entered into a monetary economy. At the time of Temujin, they still retained the method of exchanging goods for goods,[2] but under the influence of neighboring peoples, they probably very quickly mastered the use of silver.

The Turkestan region had used silver coins before then, the silver coins of Khorazm were circulating in Turkestan during the eighth century,[3] and the Mongols enjoyed close trade relations with Khorazm. Temujin [by then Chinggis Khan] had made an alliance [*sic*; this was merely a trade relationship. EHK] with Khorazm, and it was common for groups of merchants to circulate between the the two places. Khorazm was a large and powerful Central Asian nation then, and one more advanced than the Mongols. Therefore, before they came into power in China, and during the early stages of that rule, the Mongols were making some use of silver, not only for trade[4] and loans,[5] but also for expressing prices.[6]

All of this was fully reflected in the *zaju* opera. These musical dramas largely depicted the situation under Jin rule and at the beginning of Yuan.

The Mongol Khan's annual gifts to his imperial clan and his officers were in silver. When buying horses, the price was also paid in silver.[7] Silver coins were also minted, on which were depicted a man on horseback holding a sword. More common was an animal, like a rat, ox, or tiger to symbolize the year. After the Mongols took control over China, they continued to refer to the year of the rat, the year of the tiger, etc., in their writings.

Even before the Mongols took control over China, they had begun to cast Chinese-style coins, like the Great Dynasty Circulating Treasure.[8] [Cf.

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[1]Huang Zhen, *Loose Compendium of the Essence of Ancient and Modern Records*: "Those Dadan who were near the Chinese were able to use fire for their food, and were called the cooked Dadan. Those at a distance from the Chinese, only hunted with bows and arrows for their food, and plucked water grasses to make their residences. Those who observed the greening of the grass over the course of a year were called the raw Dadan. There were two kinds of raw Dadan: One called the black and one called the white. Those now flourishing are Black Dadan. . . The Black Dadan reached a point where Temujin rebelled and called himself Emperor Chinggis."

[2]*Secret History of the Mongols*, 1: "Duoben Mie'erkan was carrying the venison back when on the way he met a pauper walking along leading a child . . . who said . . . 'if you give that venison to me, I'll give this child to you.' . . ." *Secret History of the Mongols*, 6: "The Uighur named Asan had come from Wanggu Tizhong's A'ce Hushi's Jitiwuli. He had a thousand castrated sheep and one white donkey, which he was leading to the Ergu'nie River to exchange for sable and *qingshu*. He came to Balezhu [Baikal?] Lake, and while he was watering his sheep, met Chinggis."

[3]Robert P. Blake, "The circulation of Silver in the Moslem East Down to the Mongol Epoch," *Harvard Journal of Asiatic Studies*, vol. II (1937), 302.

[4]*Yuan History*, 150, "Biography of Zhang Rong": "He was made magistrate of Ji'nanfu. At this time, silver was employed for trade. The people competed to open graves so as to take it. Rong sent down an order forbidding the practice."

[5]Peng Daya and Xu Ting of Song, *Outline of the Affairs of the Black Tatars*: "Their traders, from the Tatar lord down to the ce-devant kings, Heir Apparent and princesses all pay the Muslims in silver. People who make loans to them earn interest."

[6]Li Zhichang, *Record of a Journey to the West by the Changchun True Man*, 1. In a matter occurring during year xinhai, 6th month of Emperor Taizong: "28th day, east of Bowoliduo, . . . a *dou* of [?]^{n} rice is 10 ounces of silver." *Yuan History*, 3, "Annals of Emperor Xianzong," 7th year, 9th month: "Uighur crystal plates, jewels, pearls and umbrellas, can be worth

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over 30,000 ingots of silver."

[7]*Yuan History*, 4, "Annals of Emperor Shizu, 1," zhongtong 2, 7th month: "The price of a horse in silver was 4,900 ounces."

[8]Great Dynasty was the name the Mongols used for them-

Plate lxvi,1 at end of this subsection.] There are a number of variant forms of this coin. Most are not carefully made. Individual coins vary in weight from 2.7 to 3 grams. The strokes on the three characters for "large," "circulating" and "treasure" resemble the calligraphy on the Northern Song Daguan coins. Some specimens have taken on a greyish color, which has hitherto been considered a a sign of the silver having been alloyed, but none of them has undergone chemical analysis. Some of the coin reverses bear seal marks, either one or two of them. Some people infer from these that such coins had been in circulation.

The Mongols mainly used paper money after taking over control of China, and even went so far as to ban circulation and buying and selling of gold and silver on several occasions,[9] but these bans were all short-lived, and there is some question as to how effectively they were enforced, since among the populace at large, borrowing,[10] recompense for labor,[11] the expression of prices,[12] and everyday

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exchanges[13] seem all to have sometimes employed silver.

At the very least, silver was generally used as an instrument for storing value, and at the same time it served as the backing for the issue of paper money.

The shape that silver took at this time was probably not that of the previous foreign-style silver coins, but rather comprised Chinese-style ingots or Original [i.e. *Yuan*] Treasure.

It is said that calling silver ingots Original Treasure began with the Yuan Dynasty. In zhiyuan 3, Yang Shi was serving as Exchange Certificate Intendant of the Circuits when he requested that the silver of the Balanced Standard Treasuries be cast into ingots weighing 50 ounces and which would be called Original Treasure.[14]

In zhiyuan 13 [1276], the Mongol soldiers were returning to Yangzhou after completing the conquest of Southern Song, when the Grand Councilor Boyan put out an order to search the baggage of the officers for broken pieces of silver, which were melted down and cast into ingots, each weighing 50 ounces. These were later presented to Emperor Shizu, who then distributed them as gifts.

This is why these Original Treasure came to circulate among the people. Later, the government also minted them on its own initiative. Those of zhiyuan 14 [1277] weighed 49 ounces each, and those of zhiyuan 15 weighed 48 ounces.[15] The label Original Treasure had, however, long since been used for copper coins.[16]

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selves before they changed their appellation to Great Yuan. Weng Shupei, *Collected Investigations of Ancient Coins*, includes an investigation of this. For the Great Dynasty Circulating Treasure silver coin, cf. Xuan Yugong, "Great Dynasty Circulating Treasure Continued Investigation," *Encyclopedia of Ancient Coins*, latter compendium, three-strokes section, pp. 95-97.

[9]In zhiyuan 21 [1284], 10th month, the Yuan Dynasty banned buying and selling of gold and silver. In the 1st month of the next year, the prohibition was relaxed. Cf. *Yuan History*, 13, "Annals of Emperor Shizu, 10." There was another prohibition in zhiyuan 24, which was relaxed in dade 8 [1304], 7th month. Cf. *Yuan Decrees and Regulations*, 20. In zhida 2 [1309], 9th month, there was yet another ban. Cf. *Yuan History*, 23, "Annals of Emperor Wuzong." It was relaxed in zhida 4. Cf. *Yuan Decrees and Regulations*, 20.

[10]The *zaju* musical drama *The Affectionate Couple's Coverlet*, first act: "[The Yuanwai, Liu, says] Please drop everything and come right here. It's been a full year since Prefect Li borrowed 10 pieces of silver from me, and there's no sign of him returning it. When I calculate the interest, he owes me 20 pieces of silver. Let's you and me go discuss it with him." Cf. *Selected Yuan Songs*, 30.

[11]The *zaju* musical drama *The Peach-flower Girl Breaks the Law to Marry Lord Zhou*, "Preface": "[The child says] Old dad, you may rest content. This small fragment of silver I have brought to you as tuition." Cf. *Selected Yuan Songs*, 30.

[12]Zhu Shijie, *Arithmetic Primer* mainly reckons prices in cash coins, but at times does so in silver. For example, in the first chapter, "The Method of Carrying Over the Head," he has a strip of brain of 1 *zhu* for 7 *li* of silver, and elsewhere for 7 *li* 2 *hao* of silver. A catty of fine silk is given as 1 ounce 11 grains and 8 *si* 4 *xi* of silver. Under the "Nine Returns Division Method," it has 6 catties 10 ounces of silk being worth 22.525 ounces of silver. There are also instances of calculating prices in gold. For example, it says that an ounce can buy 1.25 *mu* of land.

The *zaju* musical drama *The East Hall Elder Exhorts the Breaking of the Disciples*, act 2: "[The teaseller says] I've reckoned the bill, and at the very least my tea money is 5 *qian*, my wine cash is 3 ounces, my food money is 1 ounce 2 *qian*; for the singer, 5 ounces; for land transport silver, 8 *qian*. The total comes to 10 ounces, 5 *qian*."

[13]The *zaju* musical drama *The Peach-flower Girl Breaks the Law to Marry Lord Zhou*, first act: "[Lord Zhou says] I'll give you an ounce of silver over the amount to buy some wine and meat to eat." We cannot tell exactly when these musical dramas were written. The references they contain to use of silver could date to the early Yuan, before the prohibitions on use of silver.

[14]*Yuan History*, 170, "Biography of Yang Shi."

[15]Tao Zongyi, *South Village Rest from Plowing Record*, 30.

[16]The practice of calling copper cash Original Treasure began with the early Tang Inaugural Circulating Treasure, which was sometimes popularly read circumferentially as Kaitong Original Treasure. This mode of reading a coin inscription is said to have had its own antecedents. The *Wilderness Guest Collected Conversations*, 8, quotes Xu Pengnian's *Family Rules* as

Nor was the practice of having silver ingots weighing 50 ounces a creation of the Mongols. This was probably already being done by Tang times, and the Ruzhen-Jin also used such ingots.

Such an Original Treasure ingot has been unearthed in recent years. It resembles the Han Dynasty boat-shaped silver ingots. There are three columns of characters on its face. The middle column reads "Balanced Standard zhiyuan 14 silver fifty ounces." The columns on either side provide the official artisan's official seals. The reverse bears the two large characters for "Original Treasure" in intaglio. It weighs 60.71 market ounces, which is about equal to 50 treasury ounces.[17] Evidently this was an early period Original Treasure.

It was at this point that the words Original Treasure assumed a new meaning, to be the Yuan [i.e. Original] Dynasty's Treasure. But because it was confused with the name originally used for cash coins, posterity missed its political significance, and people thought of Original Treasure as a common name for silver ingots. When men of Yuan times happened to use the terms silver ingot and ingot of silver, they apparently did so in terms of a definite system: A large ingot was 50 ounces, a medium ingot was 25 ounces, and a small ingot was 12 ounces.[18]

I have seen a silver ingot shaped like a steelyard weight [i.e. like a bone, with bulges at both ends], dated year dingsi (which must be Emperor Renzong's yanyou 4, or 1317), and which weighed around 50 treasury ounces. It bore quite a few characters on its face. Though they were intaglio cut Chinese characters, upon first glance they resemble Mongol writing. In addition to the Zhending Circuit place name, they also bear the inspectorate acceptance, treasury commissioner and deputy's names, the names of four silversmiths and three weighers, and one decorated treasurer's seal.

Quite a few Yuan Dynasty silver ingots have been dug up in Japan. They are 4.5 Japanese inches long and weigh 490 *momme* (equal to 50 Chinese ounces). The size and weight of five of them vary somewhat. They are shaped like steelyard weights, and both faces bear inscriptions, in form not differing much from those of the year dingsi silver ingot.[19]

I have also seen references in various works to a Taiyuan Circuit silver ingot and a Zhending Circuit silver ingot, both of which bear long inscriptions. These are, however, much worn and hard to decipher. On the Taiyuan Circuit ingot the only words that can be made out are "Taiyuan Circuit," "Treasury Commissioner and Deputy jointly," "treasury," "weight 50 ounces," "artisan," "toll official," and the surnames "Wang," and "Li."

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Of the characters on the Zhending Circuit silver ingot, the only ones that can be recognized are "Zhending," "silver artisan," and "Director in Chief."[20] Evidently these were both official silver.

In addition, there is also a piece of long, thin Tianli Provision Silver, which weighs 356.25 grams, the equivalent of 10 ounces of that time. One face bears 16 Mongol words. On the other side are two lines of Chinese characters, "Great Yuan Tianli second year 9th month, Board of War issue coin, Provision Official Office, army provisions." Underneath this are two seals in the Mongol language.[21]

The development of Mongol paper money may be divided into five stages.

The first stage was prior to the reign of Emperor Shizu. The Mongols had already begun to issue paper money before the death of Temujin, under the influence of Song and Jin, particularly Jin.

For example, in 1227 (Song Emperor Lizong's baoqing 3), Ashi printed Account Notes in Bozhou, using silk as their unit of denomination.[22] In the 8th

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saying: "In the time of Emperor Minghuang, there was a rich commoner named Wang Yuanbao [i.e. Original Treasure], who was appointed to the coin minting office, and whose name was as a consequence subsequently written often enough so that the coin name was read in a way that matched it."

[17]In 1956, two of these were dug up in Jurongxian, Jiangsu. Cf. Ni Zhenlu, "Original Treasure," *Cultural Relics Reference Materials*, 5 (1957). We might also quote the Ming Dynasty writer, Ye Sheng (1420-1474), in his *Shuidong Diary*, 11: "I have recently heard of a 50 ounce silver ingot called an Original Treasure. I saw several dozen silver ingots which had been hidden inside a lone rock and were found by an official bowman. They were all flat in shape, unlike current forms. Small characters meaning Department of Ministries were stamped on their faces. On their reverses were incised the two large characters Original Treasure."

[18]Hu Sansheng, *Explanation of the Text and Correction of Errors in the Comprehensive Mirror*, 11.

[19]Kobata Jun, *History of the Circulation of Money in Japan* (revised and expanded edition), p. 284, quoting *Imperial Emissary's Small Record*.

[20]Okudaira Masahiro, *Record of East Asian Coins*, 11, pp. 69-71.

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[21]Okudaira Masahiro, *Record of East Asian Coins*, 11, p. 71.

[22]*Investigation of Literary Remains Continued*: "In the last years of Emperor Taizu, Ashi was carrying out the commander-in-chief's responsibilities in Bozhou. After a fire begun by

year of Ögedei's reign (1236), Exchange Certificates were issued.[23] In his 12th year, Liu Su circulated mulberry paper money in Xingzhou.[24]

By this time, the Jin monetary system had already collapsed. Naturally, their paper money no longer circulated, and so the Mongols issued their own in each place, limiting its circulation to that place alone. It was to be traded in every three years, and had no metal backing.

This proved very inconvenient for trade, and so in the year Möngke succeeded to the throne (1251), Shi Ji recommended establishing convertability of notes and silver so as to stabilize the paper money.[25] In the 3rd year, Khubilai issued Exchange Certificates in the capital.[26]

For the shape of the paper notes of this period, we can only consult the brief accounts provided by foreigners. In 1253, the Frenchman [*sic*] Guillaume Rubruquis, came east from Constantinople. This was the 3rd year of Möngke's reign. He later wrote a travel diary in which he said that the money circulated in China was made of cotton paper, was the size of the palm of a hand, and on it was stamped writing like that on the state seal of Möungke.[27]

This may be a reference to the Exchange Certificates issued by Khubilai in the capital. We can learn from this account that the Exchange Certificates then were printed on cotton paper, and that they were relatively small. Methods may, however, not have been altogether identical everywhere.

The second stage began with the ascent to the throne of Emperor Shizu, or Khubilai. In zhongtong 1, Khubilai carried out a monetary reform. The histories refer to the three kinds of paper notes of zhongtong 1 (1260).

To begin with, in the 7th month, an edict created the Zhongtong Original Treasure Exchange Certificates, based on a silk standard, and denominated in ounces. Two ounces of such Exchange Certificates were worth 1 ounce of silver.

Next, in the 10th month, were circulated the Zhongtong Original Treasure Certificates, sometimes called Original Treasure or Original Treasure Certificates, or Treasure Certificates. These came in ten denominations,[28] 10-cash, 20-cash, 30-cash, 50-cash, 100-cash, 200-cash, 300-cash,
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500-cash, 1-string, and 2-strings. One string of Treasure Certificates was equal to 1 ounce of Exchange Certificates, and 2-strings was equal to 1 ounce of silver.[29] Fifteen strings was equal to 1 ounce of gold.[30]

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soldiers, goods no longer circulated, and so he used a quantity of silk, and printed Account Notes, which he authorized for circulation in that locality." *Yuan History*, 150, "Biography of Ashi": "During year dinghai [1227] . . . after a fire set by soldiers in Bo[zhou], goods did not circulate. Ashi used a quantity of silk, and printed up Account Notes which he authorized to circulate locally, allowing the people to gain profit from trade."

[23] *Yuan History*, 2, "Annals of Emperor Taizong," 8th year, 1st month: "There was an edict to print and circulate Exchange Certificates."

[24] *Yuan History*, 160, "Biography of Liu Su": "Year gengzi. Emperor Shizu resided in the Qiandi Palace. Su was made Pacificator of Xingzhou, where he promoted iron smelting and circulated mulberry paper money, on which both public and private interests relied."

[25] *Yuan History*, 147, "Biography of Shi Ji": "Year xinhai. . . Each circuit used mulberry paper money for trade. Such money did not cross local borders. It was exchanged every two or three years. The backing for the certificates grew ever weaker, and commerce was blocked. Ji requested establishment of both silver and certificates as legal money. People felt this would be convenient."

Wang Yun, *Complete Collected Works of Mister Qiurun*, 54, "Funerary Inscription for Lord Shi Shendao": "Year xinhai . . . Each circuit issued mulberry paper money to facilitate trade. The rule was that it could not go beyond the circuit's borders. The offices responsible were rather firm in collecting profits. It was to be exchanged in two or three years. Its original backing became exhausted, and commerce was blocked. His lordship swiftly memorialized the Dowager Empress to establish the silver-certificate joint legal tender regulations, so as to raise what had become low, and make heavily demanded what had become lightly demanded, and to change the blocked up into the circulating and convenient."

[26] *Yuan History*, 4, "Annals of Emperor Shizu, 1."

[27] Yule, *Cathay and the Way Thither*. Rubruck, or Guillaume Rubruquis, in 1253 (Emperor Xianzong's 3rd year) came east from Constantinople. He says in his travel diary: "The common money of Cathay is a paper of cotton, in length and breadth a palm, and on it they stamp lines like those on the seal of Mangu." Yule quotes this statement in his *Cathay and the Way Thither*, volume II, p. 240, in a footnote.

[28] *Yuan History*, "Treatise on Food and Money," only mentions nine denominations, but *Yuan History*, 206, "Rebellious Officials: Biography of Wang Wentong," has the following: "In the Winter of this year the Zhongtong Exchange Certificates were first issued, in denominations from 10-cash to 2-strings, in all ten denominations." Moreover, Wang Yun, *Middle Hall Affairs Record*, 2 (cf. *Complete Collected Works of Mister Qiurun*, 80), also says there was a total of ten denominations.

[29] Sun Chengze, *Remaining Dreams of Spring Brightness* says that 1 string of Zhongtong Certificates was equated with 1,000 cash, and was worth 1 ounce of silver. Cf. Okudaira Kasanan, "The Late Yuan Certificate and Legal Tender Certificate Cash," *Kahei* magazine, no. 150.

[30] *Yuan History Newly Compiled*, 87, "Treatise on Food and

In addition, there was woven damask Zhongtong Silver Money, which was divided into five denominations: 1-ounce, 2-ounces, 3-ounces, 5-ounces and 10-ounces. One-ounce of this Silver Money was equated with 1 ounce of actual metallic silver.

Of these three paper moneys, Silver Money never circulated. This is stated very clearly in the histories, so there should be no question about it.[31]

Concerning the Exchange Certificates and Original Treasure Certificates, however, the historians have not transmitted information on to us in a clear fashion. Were these two after all one and the same thing, or were they separate paper moneys? This is still a problem.

The *Yuan History* merely says that in zhongtong 1, 7th month, day bingzi, there was an edict to produce Zhongtong Original Treasure Exchange Certificates, and that in the 10th month, day guichou, they first circulated Zhongtong Treasure Certificates, which would make it appear that the two were either the same thing, or that one thing was being discussed with two names.[32]

When they discuss the Exchange Certificate, they do not mention denominations, but when they speak of Treasure Certificates, they do mention denominations. Later on, they merely talk in general of Zhongtong Certificates, and no longer make any distinction between the two.

There are also only general statements about the quantity issued. In the zhiyuan 19 [1282] "Enumerated Conditions for Regularizing the Certificate Regulations" memorial by the Department of Ministries, and in the "Enumerated Conditions for Circulation of Zhiyuan Treasure Certificates" promulgated in zhiyuan 24, only Zhongtong Treasure Certificates are mentioned, and nothing is said of Exchange Certificates.

There still were, however such official titles as Exchange Certificate Commissioner, Exchange Certificate Intendant's Office, and Exchange Certificate Treasury. Besides this, there is also a contradiction involving the face value of Exchange Certificates. The texts all state that 50 ounces of silver exchanged for 1,000 ounces worth of silk certificates, and at the same time also say that 1 string's worth of Treasure Certificates was equal to 1 ounce's worth of Exchange Certificates, and that 2 strings worth of Treasure Certificates was equal to 1 ounce of metallic silver. Therefore, 1,000 ounces worth of silk certificates must have been worth 100 ounces of silk certificates.

It would seem to be hard to explain the simultaneous issue of two differently named paper moneys having the same value, and yet the histories clearly state that 1 string's worth of Treasure Certificates was equal to 1 ounce's worth of Exchange Certificates, thereby distinguishing them as two different things.

Moreover, Revenue Board Certificates were also divided into Silk Certificates and Original Treasure Certificates. For this reason, we can only explain the situation as the sequential issue of two kinds of paper money, in response to two different sets of recommendations.

Perhaps we should say that they symbolized two different prices, the Exchange Certificates standing for the price of silk, and Treasure Certificates symbolizing the price of copper cash, but both of them having the same face value in silver, and being exchanged for silver. Later, both circulated together. As a result, their ounce and string units of denomination also became blurred together.

The proclamation of zhongtong 2, 1st month, mentions Zhongtong Original Treasure Exchange Certificates,[33] and allows people to bring Original

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Money," quoting Liu Xuan.

[31]Herbert Franke, *Geld und Wirtschaft in China unter der Mongolen Herrschaft* (Leipzig, 1940), p. 40, confuses the Silver Money with the Silver Certificates used prior to Emperor Shizu's time, and so supposes that the Silver Money had been circulated. He also supposes that Exchange Certificates were used to exchange for the old certificates, and that Original Treasure Certificates could only be used to pay taxes.

[32]The Japanese Okudaira Masahiro says that the two were the same. Cf. his "The Late Yuan Certificate and Legal Tender Certificate Cash," *Kahei* magazine, no. 150.

[33]*Completed Collected Works of Mister Qiurun*, 80, *Middle Hall Affairs Record*, states that the money issued in zhongtong 2, 1st month, was still Zhongtong Original Treasure Exchange Certificates. The proclamation on that occasion goes as follows: "The printing of Zhongtong Original Treasure Exchange Certificates by ministerial authority is intended to be undertaken by the Proclamation Offices of the circuits. They are to be circulated without expiration dates. They may be used to pay taxes such as those on stillbeer and vinegar, salt, iron, etc., and are not be be refused for any such purposes. Any person upon whom is bestowed Treasure Exchange Certificates may at his convenience bring them to a treasury for conversuion into actual silver. Payment should be made in accord with the amount presented, and the process is not to be impeded. For each

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ounce's worth exchanged a fee of no more than 3 *fen* in labor and ink charges may be collected. Nothing beyond this is to be added or deducted in making them over for cash. The Treasure Exchange Certificates are to be circulated in accord with the following stipulations. If there are any persons who violate the Certificate regulations, they are to be treated in accord with what the investigation determines. It is recommended that the following be

Treasure Exchange Certificates to the Certificate Treasuries to be exchanged for silver and commodities.

In enumerating the Original Treasure and Exchange Certificates, only the Original Treasure denominations are specified, in strings of cash, but it states clearly that 1 string of Original Treasure was equal to 1 ounce of Certificates.

Another article states that concerning the old certificates originally circulated by the circuits there should be posted a placard announcing that when they are exchanged for new certificates, they will not be permitted to continue to be used. This is because when the Zhongtong Certificates were issued, there were still over 8,000 strings worth of the old silver certificates in circulation. Because these were abolished, the certificates'

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price fell, and both public and private confidence was disturbed.

Liu Su thereupon proposed three ways of coping with the situation: One was to continue using the old certificates. The second was to use both the old and new ones. The third was to use the new certificates to redeem the old ones.

The Department of Ministries adopted the third method, and issued 500,000 strings of Treasure Certificates to redeem old certificates.[34] Another version makes it 5,000 ingots.[35] That would only have been 250,000 strings worth. In zhongtong 2, 2nd month, when the Department of Ministries and the Intendant's Office were debating plans for the issue, they discussed making the Original Treasure the standard for paying such taxes as the stillbeer and vinegar impost and the salt gabelle.[36]

Perhaps there was a division of labor between the Exchange Certificates and Treasure Certificates at the time when the old certificates were redeemed. That is, the Exchange Certificates were used to redeem the old Silk Certificates and the Treasure Certificates to redeem the Silver Certificates. Perhaps when the Exchange Certificates were first issued the aim was to use them to redeem the Silk Certificates.

We will have to have more material before we can resolve these difficulties involving the Zhongtong Certificate system. The best thing would be to find an actual example of one of the Original Treasure Certificates. Up to the present, those found seem to have been limited to Exchange Certificates.

Of the Zhongtong Original Treasure Exchange Certificates unearthed in recent years, I have seen a 500-cash specimen.[37] It too is divided into three sections. At the very top is the name of the certificate. The second section contains the denomination in metal, with the *ziliao* and *zihao* sections on either side of it. Below the denomination is a picture of the number of strings arranged horizontally. Above the *ziliao* and *zihao* are two columns of text, one in Chinese and one in Phagspa Mongolian script.

The third section contains a number of lines of text, including "Department of Ministries memorial assented to, to print Zhongtong Original Treasure Exchange Certificates. It is proclaimed that these may be received in payment for taxes, and may circulate in the various circuits without expiration date."

Next are places for the seals of the Original Treasure Exchange Certificate Treasury and Issuing Office, and the seals of the printing treasury and issuing office. After that comes a line which reads "Counterfeiters to be beheaded. Reward in silver of five ingots, as well as the family property of the offender."

At the end is the year and month of the zhongtong era, the places for the seals of the Original Treasure Exchange Certificate Treasury Commissioner and Deputy Commissioner, and the seals of

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issued:

"--When the circuits circulate Zhongtong Original Treasure, sales and purchases on the streets of all such goods as gold, silver, silk, silk cloth (heavy silk and damask), by the bolt, *hu* or *dou*, it shall be at the rate of 1 string's worth being equal to 1 ounce's worth of Certificates, and with each ounce and string's worth being equal to 1 ounce of silver in actual circulation. This to be a permanent rule, to which nothing is to be either added or from which to be deducted.

"Ten-cash Twenty-cash Thirty-cash Fifty-cash

"One-hundred-cash, Two-hundred-cash, Three-hundred-cash, Five- hundred cash

"One-string-cash-diminished, Two-strings-cash-diminished [Cash diminished to 70 per hundred, or 80 per hundred. If copper cash had been employed, then the government bureau's profit would have increased. Hence the face value of the Certificates was expressed in diminished hundreds.]

"--When the circuits first circulated the old certificates, they put up white placards which merely announced that the treasurers of the issuing offices would exchange whatever quantity was presented so as not to harm the masses. It is necessary that any notes presented be cleared on the same day, and not be again circulated. [Such a placard was to be hung up in front of the gates of the treasury offices, so that all might be informed of these things.]"

[34] *Yuan History*, 160, "Biography of Liu Su." *Outline of the Activities of Notable Officials of the Yuan Dynasty*, 10, "The Secretary Duke Liu Wenxian."

[35] *Yuan History*, 125, "Biography of Buluhaiya."

[36] Wang Yun, *Middle Hall Affairs Record*, first part.

[37] Kept in the Shanghai Museum.

the Printing Treasury Commissioner and his deputy. The last line has a place for the seal of the Department of Ministries' Intendant's Office.

The certificate is printed on grey-black mulberry bark paper, and must have been printed from a copper printing plate. According to what the histories record, wooden blocks were employed at the beginning of zhongtong, and the notes were printed on coarse cotton paper. It was not until zhiyuan 13 [1276] that they shifted to copper printing blocks. It was probably at this time that they also changed over to mulberry bark paper, but the name of the zhongtong year-period was retained.

There are some differences between the inscriptions on the unearthed Exchange Certificates and what is recorded about them in the histories. The histories clearly state that the Exchange Certificate took the ounce as its unit. Wang Yun's *Complete Collected Works of Mister Qiurun* states that when brought to exchange for gold, silver or goods, for each ounce's worth there was a labor and ink charge of 3 *fen* per ounce, which would make it all a matter of ounces of silver.

The note itself, however, is denominated in cash, and only the reward is expressed in silver. The *Yuan History* states that in zhongtong 1, Phagspa script was proclaimed for use as the Mongolian written language. The *New Yuan History* says that it was not until zhiyuan 6, 2nd month that the new
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script was proclaimed. If that is the case, then why is Phagspa script used for the Mongolian text on the zhongtong 1 Exchange Certificate? If these notes are not fakes, then it was in zhiyuan 13, when the change to copper printing plates was made, that a reform in the arrangement of and text on the Zhongtong Certificates was effected.

In addition, the Treasure Certificates and Exchange Certificates must have been merged as Original Treasure Exchange Certificates, and as a consequence both names could be applied to them.

The Zhongtong Certificates' sizes probably varied according to their denominations. The higher the denomination, the bigger the certificate. There was no official printing on the backs of the certificates. It is said that printing on the backs was recommended in zhongtong 2 to hinder counterfeiting, but because it was inconvenient to do so, this was not done.[38]

Though the Zhongtong Treasure Certificate took the string of cash as its unit, actually Zhongtong Original Treasure copper coins were also minted. The Treasure Certificates were, however, backed by gold and silver, mainly by silver.[39] One might almost say that it was an uncoined silver standard system.

The goverment established Certificate Treasuries in each of the circuits to provide 100 percent backing in metal for the paper money. The people could bring paper money to the Certificate Treasuries to exchange for specie. If there were too many notes on the market, they would immediately put out silver to redeem them.[40]

Such a system was merely a further development of the Song and Jin systems. Southern Song, however, still had copper cash in circulation, whereas Yuan used paper money exclusively. Gold, silver and copper cash were not permitted to circulate. It was just as Marco Polo said: They could everywhere use a small piece of paper to buy any sort of commodity. Evidently the Europeans of that time did not know the use of paper money.[41]

In zhiyuan 12 [1275], they added 2-cash, 3-cash and 5-cash small certificates, which were called Thousandth Certificates, but in zhiyuan 15 [1278] these were abolished as inconvenient.

Zhiyuan 13 [1276] is an important date in the history of the Yuan Dynasty's monetary system. It was the occasion for carrying out a monetary reform because in that year the Mongols took control over the rich and populous region south of the Yangtze.

First of all, they wanted to redeem the south's Communicating Medium and Account Note paper money, and so greatly increased the size of the money supply. Second, they no longer had a hard money backing for their currency. They even prohibited use of copper coins. Third, they changed from wooden to copper printing blocks for the Zhongtong Certificates. They used this as the occa-

[38] *Middle Hall Affairs Record.*

[39] Wang Yun, *Middle Hall Affairs Record*, says that silver was the backing, but the *Yuan History*, "Biography of Buluhaiya" says gold and silver were the backing.

[40] *Yuan History Newly Compiled*, 87, "Treatise on Food and Money": "In zhongtong, Yuan was established. . . . They printed the Zhongtong Original Treasure. . . . It was somewhat obstructed. Silver was put forth to redeem certificates, lest the people become suspicious. They were accumulated in the various circuits. The original stock of specie was distributed without disturbance."

[41] Some foreign writers have said that the Europeans used exchange certificates during the Middle Ages. For example, Del Mar, in his *Money and Civilization*, several times mentions the issue of leather money as being completely identical in nature to modern notes. He also says (p. 29) that when in 1122, Venice's Doge Michieli besieged Tyre, he issued leather money. Nevertheless, Marco Polo, who had come from Venice [and was from a mercantile family. EHK], seems not to have known about this.

sion for combining the Treasure Certificates and Exchange Certificates. That they later were still speaking in terms of both ounces and cash was probably to avoid confusing them with Zhiyuan Certificates. Zhiyuan Certificates were denominated in strings, and Zhongtong Certificates in ounces.

In zhiyuan 19 [1282], 10th month, the Department of Ministries received assent to a nine article memorial "Denotation of Conditions for Regularizing the Certificate Regulations," which fixed the redemption price in gold and silver.

Tax silver would have a purchase price of 2 strings 50 cash per ounce, and a selling price of 2 strings 60 cash. White silver would have a purchase price of 1 string 950 cash, and a selling price of 2 strings. Flower silver had a purchase price of 2 strings, and a selling price of 2 strings 50 cash. An ounce of gold would be bought for 14 strings 800 cash, and sold for 15 strings. That would keep the gold-silver exchange ratio at 1:7.5.

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Included among the conditions were various punishments, as for privately buying or selling gold and silver, or corrupt practices by officials and clerks when exchanging old certificates for new ones. Gold and silver smiths and gold and silver shops could not use their own specie to make utensils. They could only process the gold and silver brought in by their customers, and had to incise the full name of the artisan on the object.[42]

The third stage began with the monetary reform

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[42] *Yuan Decrees and Regulations*, 20, "Board of Revenue," 6, "Certificate Regulations," contains the following as the text of the zhiyuan 19, 10th month Department of Ministries memorial "Denotation of Conditions for Regularizing the Certificate Regulations":

Price list for redeeming gold and silver: For tax silver, the price per ingot entering the treasury in certificates is 102 ounces 5 *qian*; the price when issued from the treasury in certificates is 103 ounces. For white silver, the purchase price per ounce in certificates is 1 ounce 9 *qian* 5 *fen* [i.e. 1.95 ounces]; the price when issued from the treasury in certificates is 2 ounces. For flower silver, the price per ounce entering the treasury in certificates is 2 ounces; the price when issued from the treasury is 2.05 ounces. For red gold, the price per ounce entering the treasury in certificates is 14.8 ounces; the price when issued from the treasury in certificates is 15 ounces.

---For worn certificates brought for redemption to the certificate treasury, a labor and ink fee of 3 *fen* per ounce [i.e. 3 percent] is charged. No more may perversely be charged for the labor. Should treasury officials or clerks have people in the streets or markets secretly add additional labor and ink fees for redemption, they will be given 57 strokes of the bamboo for offenses involving 10 ounces or less; for more than 10 ounces, they will be given 77 strokes; for amounts of more than 1 ingot, they will be given 107 strokes and be dismissed from office. Persons redeeming certificates under such conditions will be deemed equally guilty. When an offender's name is down for 5 ingots, the informer will be rewarded. Handling of such matters is solely entrusted to the people and officials managing the matter. If they are diligent in their management, then offenses can be eliminated.

---Purchases and sales of gold and silver are entrusted to the official treasuries in accord with the exchange prices. If private parties engage in sales or purchases, and someone informs on them to the officials, the gold or silver and the certificates are to be entirely confiscated, and half the amount is to be given as reward to the informer. If he would himself have been subject to arrest, the amount will be reduced by half. For amounts less than 10 ounces, the penalty is to be 57 strokes; for amounts more than 10 ounces, the penalty is 77 strokes; for amounts of an ingot or more, the penalty is 107 strokes. Additional certificates found under the name of the transgressor are to be paid over to the informer

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as reward.

---Sellers of gold and silver who voluntarily confess may avoid the original penalty and give the price of the specie in question to the officials. For purchasers who do not confess, the price in certificates is to be confiscated, and a further ingot's worth of certificates is to be taken from them, and given as reward to the informer. Purchasers who confess are to be treated as above.

---Gold and silver smiths and families which open shops for fabricating specie to earn a living must rely on people bringing in specie to be fabricated. The artisan's family and given names must be engraved on the object. They may not use their own gold or silver to make things for sale. If they already have manufactured utensils, they must hasten to sell them to the Balanced Standard Treasury. If they evade this obligation, and someone informs on them to the officials, the informer will receive a reward in accord with the rules involving private exchange of gold and silver.

---If someone who has obtained privately bought or sold gold or silver wishes to request cash or goods, his request will be honored. If a person confesses, he will be punished by not being rewarded in accord with the rule on confiscation. Those who had been granted permission, are to be found guilty at the normal level. Officials and soldiers from each ward who are to enforce the prohibition, but who are not diligent in searching out violators, are also to be found guilty.

---When redeeming certificates, a sealmark requesting their destruction is to be stamped on worn notes, and worn notes are to be taken in every season. If they are not

of zhiyuan 24 (1287), when the Zhiyuan Treasure Certificate was issued. In the 3rd month of that year, the Department of Ministries proclaimed the "Zhiyuan Treasure Certificate Circulation Regulations."[43]

The Treasure Certificates were divided into ele-

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stamped for destruction, the perpetrator is to receive 57 strokes, and is to be dismissed from office.

—If officials or clerks of the Certificate Treasuries illicitly take gold or silver or certificates out of the Treasury to make loans or exchanges for business purposes, they are to be punished in accord with the provisions of the Sagely Edict. The elders in charge of the people and the officials in overall charge of each place are to provide an accounting of these funds once each month. If local officials and clerks commit abuses in their circulation, they are to be treated as being as guilty as criminals would be.

—If Certificate Treasury officials or clerks do not enter gold and silver turned in onto the rolls, but instead put it out for an additional fee, and if they buy gold and silver turned in to the treasury with certificates registered under the names of others, thereby selling it secretly at an additional price to others, anyone may confiscate such funds, and for such an offense the penalty is death, no matter how large or small the amount involved is. The price in certificates is to be given as reward to the one who had confiscated them.

—If a person brings gold or silver to a treasury, it should be redeemed in proportion to its purity, and its purity should not be exaggerated or underestimated. Violators will receive 57 strokes of the bamboo, and be dismissed from office.

[43]In zhiyuan 24, 3rd month, the Department of Ministries proclaimed the following "Zhiyuan Treasure Certificate Circulation Regulations":

—One string of Zhiyuan Treasure Certificates will be equal to 5 strings of Zhongtong Treasure Certificates. The new [old -Peng] are to jointly circulate and are legal tender for public and private uses.

—As at the beginning of zhongtong, official treasuries are to be set up at the circuit level. Purchases and sales of gold and silver are to be according to the levels fixed by the certificate regulations. Private dealing is prohibited. For each ounce of flower silver entering the treasury, the official price in Zhiyuan Treasure Certificates will be 2 strings; when leaving the treasury, it is to be 2 strings 5 *fen*. White silver is to be bought or sold as above. Tax [silver] of 1 ingot will have an official price in Treasure Certificates of 2 ingots; it will be sold for 102 strings 500 cash in Treasure Certificates. For each ounce of red gold the price in certificates will be 20 strings; when sold by the treasury it will be for 20 strings 500 cash. Henceforth if anyone engages in private purchase or sale of gold or silver, anyone may inform on them, the value of the gold or silver will be officially confiscated, with half to go as reward to the informer, and an additional 2 ingots worth in certificates held under the name of the transgressor is also to be paid to the informer. For amounts involving 10 ounces of silver or less or 1 ounce of gold or less, violators are to receive 57 strokes. For amounts larger than 10 ounces of silver or 1 ounce of gold, the penalty is 77 strokes. For amounts larger than 50 ounces of silver or 10 ounces of gold, the penalty is 97 strokes.

—When people bring worn certificates to the Balanced Standard Treasury to exchange for Zhiyuan Treasure Certificates, one is to be discounted for five, and labor-ink fees are in addition to be levied at no more than the old level of 3 *fen* per string. When visiting travellers wish to have something light and convenient for doing business, and redeem Zhongtong Treasure Certificates for Zhiyuan Treasure Certificates, one will exchange for five, and any quantity will be redeemed. The Proclamation Guarding Offices and Disposition Offices of the circuits, and those in charge of prefectures, are forbidden to interfere with their administration, and are not to presume upon their power. Treasury officials are not to practice extortion, or to take excess labor and ink fees which would undermine the certificate regulations. Violators are to be severely punished. Treasury officials who break these laws are to suffer dismissal and erasure of their names from the official rolls.

—Commoner households holding silver and who wish to pay in Zhongtong Treasure Certificates, may as of old pay up to 4 strings. If they wish to pay in Zhiyuan Treasure Certificates, they will be accepted at a discount of 800 cash. Officials at any location must accept them without hindrance. The remainder, when accepted for payment of taxes, will be discounted as above.

—Salt gabelle vounchers have been accepted at any location according to the official selling price expressed in certificates of 20 strings per voucher. Henceforth, in selling vouchers, it is permitted to use 2 strings of Zhiyuan Treasure Certificates and 10 strings of Zhongtong Treasure Certificates. When purchasing salt vouchers, new and old certificates may be used in equal quantities. Those wishing to pay in Zhiyuan Treasure Certificates will be allowed to pay up to 4 strings.

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—In various circuits, imposts on tea, stillbeer and vinegar, and fees for bamboo goods, cinnabar powder, tin and stone, may be paid in Zhiyuan Treasure Certificates, with one equal to five. Those wishing to pay in Zhongtong Treasure Certificates may also do so.

—Those who incur debts, either public or private, in cash to officials or for garrison transport, if the loans were made in Zhongtong Treasure Certificates, and repayment is made in Zhiyuan Treasure Certificates, one is to be discounted for five. Those who wish to repay in Zhongtong Treasure Certificates, are to repay in them up to a string. Lenders are to receive them without obstruction.

—Circuit level Balanced Standard Treasury officials and

ven denominations: 5-cash, 10-cash, 20-cash, 30-cash, 50-cash, 100-cash, 200-cash [Plate lxv], 300-cash, 500-cash, 1-string and 2-strings [Plate lxiv].[44] They circulated alongside Zhongtong Certificates, with 1-string of Zhiyuan Certificates equated with 5-strings of Zhongtong Certificates; 2-strings were equal to 1 ounce of silver; 20-strings were equal to 1 ounce of gold.

The Balanced Standard Treasuries of the circuits would buy and sell gold and silver so as to stabilize the price of the Certificates, but private trading in gold and silver remained prohibited. Exchange of worn or damaged Treasure Certificates for new ones still involved a labor and ink fee of 3 percent.

It is said that the "Zhiyuan Treasure Certificate Circulation Regulations" were put forward by Ye Li.[45] Ye Li was a figure of late Southern Song times who had made his proposals for the monetary system to the Southern Song government. It had not accepted them. He resubmitted these proposals after the Yuan takeover.

This is a relatively complete set of rules for a monetary system. It differed from the zhiyuan 19 "Denotation of Conditions for Regularizing the Certificate Regulations," which merely comprised some

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tax collectors, if encountering these as payments or in exchange, have it as their duty to consult the people's convenience, and not raise obstructions. If any request additional fees above those stipulated in the regulations, and thereby interfere with these regulations, inquiry is to be made as to the facts, and they are to be dismissed and their names removed from the rolls.

—Shopkeepers on the streets and in the markets, and travelling dealers, if they use Zhongtong Treasure Certificates to buy or sell commodities, are to sell them only according to the old prices. The are not to raise suspicions by suddenly increasing prices. It is permitted to reduce prices on various items from time to time. If rich and great merchants raise prices, inquiry is to be made into the facts, and they are to be punished.

—Inquiry has revealed that the people have been short of certificates of small denominations, and so have had difficulties in carrying on trade. By now issuing Zhiyuan Treasure Certificates in eleven denominations from 2 strings down to 5 cash, we make it convenient for the people to use them.

—Counterfeiters and circulators of counterfeit Treasure Certificates are to die. Informers are to be rewarded with 5 ingots of silver as well as the family property of the criminal.

—Those officials and elders entrusted with the management at the circuit level must render an accounting at half-monthly intervals of the gold, silver and Treasure Certificates which ought to be present in the Balanced Standard Treasuries. If any have been shifted, lent, bought or sold privately, or transported to gain profit, inquiry is to be made to make matters clear, and the central board is to lay accusation to determine guilt. Senior officials are to put the money out publicly. Secondary officials are to undertake their circulation. The Proclamation Offices and Investigatory Offices of the various circuits are to make investigations. If they discover abuses, they should make inquiry as to the facts, and exercise full control over the offenders so that they do not thereby cause trouble and undermine the certificate regulations.

—In offering fields or houses as security for loans, the mortgages are to be expressed in Treasure Certificates, and not in such goods as grain, silk or cloth, which would undermine the certificate regulations. Violators are to be punished.

—Investigatory officials and clerks at the circuit level are not to come to the Balanced Standard Treasuries to buy gold or silver, or to bring large quantities of worn certificates to be redeemed for fresh certificates. Violators are to be punished.

—After these articles have been promulgated, the enforcement office, offices in all prefectures and districts, and enforcement officials must be constantly diligent in investigating the prohibitions so that there are no violations of them. If enforcement of the prohibitions is not strict, the circulation of money will be obstructed to the detriment of both public and private interests, and those in charge of these local offices will be held personally accountable, and those at the prefectural level must also practice careful administration. As always, the Investigatory Censors and Investigatory offices should make frequent investigations. Those who do not practice strict good administration will be punished. (Errors in the "Redemption of Gold and Silver Price Table" have been corrected on the basis of *Shen Ke's Addendum to the Yuan Decrees and Regulations*.)

[44] Ye Ziqi, *Grass and Tree Master*, 3, latter part, "Miscellaneous Systems Compilation": "The Zhiyuan Treasure Certificates comprised in all ten denominations: 10-cash was a half *qian*; 20-cash was 1 *qian*; 30 cash was 1.5 *qian*; 50-cash was 2.5 *qian*; 100-cash was 5 *qian*; 200-cash was 1-string; 300-cash was 1-string 5 *qian*; 500-cash was 2-strings 5 *qian*; 1-string was 5 ounces; 2-strings was 10 ounces; 5 1-string notes were half an ingot; 5 2-string notes were 1 ingot." The reference here to 10-cash being half a *qian* must mean that 10-cash of Zhiyuan Certificates were equal to half a *qian* in Zhongtong Certificates, and that 5 2-string notes were 1 ingot was a way to say that 10-strings worth of Zhiyuan Certificates were equal to 50-strings of Zhongtong Certificates. Both the Zhongtong and Zhiyuan notes were being circulated simultaneously at that time, with the Zhongtong Certificates being used as the basis for calculations. Hence when Zhiyuan Certificates were used to express prices, it was necessary to convert them into Zhongtong Certificates.

[45] *Investigation of Literary Remains Continued*, 9, "Investigation of Coins."

supplemental rules to cover several special situations. These zhiyuan rules, however, were linked to previous monetary regulations, and in both language and substance established continuity with these past regulations. The zhongtong 2 "Original Treasure Exchange Certificate Rules" and the zhiyuan 19 "Denotation of Conditions for Regularizing the Certificate Regulations" were its notable precursors.

The authorities wanted to redeem the Zhongtong Certificates when the Zhiyuan Certificates were issued,[46] but this was not in fact done, and various annual gifts, deficits and army provisionings all continued to be expressed in terms of Zhongtong Certificates. This was also the case for a variety of prices.

The sizes of the Zhiyuan Certificates also varied in proportion to their face values, the higher denominations being larger in size, though inscriptions and designs remained substantially identical.

For example, the 2-string Certificate was 29 cm long and 19.5 cm wide, excluding the blank border. Written horizontally from right to left on the top of the note are the six characters for "Zhiyuan Universally Circulated Treasure Certificate." Below is an ornamental enclosure, the interior of which is divided into two portions. In the center of the top portion are written horizontally the two characters for "Two Strings." Below each is a drawing of a string of cash. On each side of these is a column of Mongolian writing.

Below the Mongolian writing on the right are the characters *ziliao*, and in the same position of the left the characters *zihao*. The lower portion contains ten columns of characters arranged vertically. The first three lines are "Department of Ministries memorial accepted to print Zhiyuan Treasure Certificates. The proclamation

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stipulates that they are to be issued and accepted, circulated and drawn in with no expiration date, and are to circulate universally in all circuits."

The fourth and fifth lines contain the seals of the Treasure Certificate Treasury Office and Printing Treasury Office. The middle line reads "Counterfeiters are to be sentenced to death." Below this are printed two lines reading "Informers are to be rewarded with five ingots of silver, and in addition the family property of the transgressor."

There follows the year of the zhiyuan period, the month and the day, "Treasure Certificate Treasury Commissioner and Deputy," "Printing Treasury Commissioner and Deputy," and "Department of Ministries Intendant's Office." These officials probably all stamped their seals on the ten slanted lines on the right side at the time of issue, as was done with the Jin certificates.[47]

Aside from the minor differences in size, denomination and pictures below the denomination, the small certificates were entirely identical. For example, the 200-cash certificate was only 22.5 cm long and 15 cm wide.

The fourth stage began with the monetary reform of Emperor Wuzong's zhida 2 (1309), 9th month, when the Zhida Silver Certificates were issued in thirteen denominations, from 1-thousandth to 2-ounces. An ounce's worth of Silver Certificates were equated with 5-strings of Zhiyuan Certificates or 1 ounce of metallic silver, or 0.1 ounces of gold.

Simultaneously two copper coins were minted: the Zhida Circulating Treasure and the Great Yuan Circulating Treasure. The Zhida Circulating Treasure had a Chinese inscription, and one cash was equated with a 1-thousandth Silver Certificate. The Great Yuan Circulating Treasure had a Mongolian inscription, and each of these was equated with 10 Zhida Circulating Treasure coins. They also restored to circulation the old coins from earlier dynasties. A time limit was established for redemption of the Zhongtong Certificates.

The zhida monetary reform brought China closer to a silver standard. Denominating the Zhongtong Certificates in ounces and ingots had already indicated the influence of the silver ounce system.[48]

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[46] *Yuan History*, 15, "Annals of Emperor Shizu, 11." *Universal Statutes Continued.*

[47] Luo Zhenyu, *Illustrated Record of the Certificate Money of Four Reigns* contains the following captions: "On the right is a Zhiyuan 2-string Treasure Certificate copper printing block. It has recently been excavated." "On the right are Zhiyuan One-hundred-cash and Three-hundred-cash Treasure Certificates. They are now in the Western and Asian Museum in the capital of Russia, and were obtained from Gansu in this country. Doctor Todomo Shuno[?] has shown them in a book of photographs. Because they were reduced in the photographs, their sizes could not at first be known. Their style is the same as that of the 2-string Treasure Certificate. Above the ornamental border is a printed text which can no longer be made out. On the right side are lines of slanted printed text, which are also worn. They must be the names of the circuits paying out cash. The system was like

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that of the Jin certificates. . . . I do not know if at first these certificates had printing on their backs. When Dr. Todomo Kano returned from Russia, he said that he had seen a Zhiyuan 2-string certificate in the museum which was without printing on its back." A fragment of a 2-string Zhiyuan Certificate has been found in Turfan in recent years. Cf. Huang Wenbi, *Notes on the Archeology of Turfan*, Plate 53.

[48] "Outline of Ancient and Modern Weight Systems" (*Col-*

However, the 1-ounce Zhongtong Certificate was only equal to 0.5 ounces of white silver. The Zhongtong Silver Certificate's unit was the same as that of metallic silver, but it was never put into circulation. It was not until after the Zhida Silver Certificate was adopted that silver became the formal measure of value.

Nevertheless, the Zhida Silver Certificate system was merely a passing episode in the history of Chinese monetary systems. Emperor Wuzong died in zhida 4 [1311], 1st month, and in the 4th month Emperor Renzong abolished the Zhida Silver Certificates and copper cash, and restored the Zhongtong and Zhiyuan Certificates.

The Zhongtong Certificates had long since ceased to circulate, but the people still used them as the standard for expressing prices. Now they were to be printed again. Copper cash were banned from circulation, and the Great Yuan coins were to be brought to the Certificate Treasuries within fifty days to be exchanged for Treasure Certificates. The old coins from earlier ages were to cease being used on that same day.[49]

At the same time that Emperor Renzong abolished the Zhida Silver Certificates and copper coins, he permitted buying and selling of gold and silver, except that transport of specie beyond the frontiers was not permitted. Nor was it to be circulated as money.

The Arab Ibn Batuta travelled to China in around zhizheng 5 [1345], and said that the Chinese used paper money rather than gold or silver. He also said that if a man brought gold or silver to the marketplace to use to buy something, the merchants would be unwilling to accept it. They would insist on having the gold or silver exchanged for paper money, and only then could anything one pleased be bought.[50]

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lectanea of Ancient and Modern Books and Illustrations, "Economic Compilations: Food and Money Statutes," 356, "Coins and Certificates Section"): "In the time of Emperor Chengzong, Zheng Jiefu advised, saying . . . at the beginning of the state, 50 ounces worth of of the Zhongtong Certificates made one ingot. This was then called the silver ingot."

[49]The zhida 4, 4th month "Regulations Halting Use of the Silver Certificates and Copper Coins and Restoring the Zhongtong Certificates" (*Yuan Decrees and Regulations*, 20, "Board of Revenue," 6, "Certificate Regulations")"

---One string of Zhida Silver Certificates were equated with 5-strings of Zhiyuan Certificates or 25-strings of Zhongtong Certificates. This has not met the people's needs and has been inconvenient. Their printing has already been ordered halted. The Department of Ministries has issued to the localities Zhida Certificate capital and established a deadline for halt in their use. Those using them among the people are to bring them to the treasuries accordingly for redemption. The Secretariat, Board of Revenue and Transport Offices in various localities are to be prepared to purchase zhida 5 salt vouchers to pay out in exchange. They will be accepted in payment of other imposts so as not to harm the people.

---Though it has been a long time since the abolition of the Zhongtong Certificates, all commodity prices among the people are still expressed in their terms. The offices are to print them as of old, to circulate jointly with the Zhiyuan Certificates as primary and secondary currencies respectively, so as to convenience the people. . . .

---Though coins are an ancient system, their current use is not possible. The new and old copper coins recently issued by the Department of Ministries have been amalgamated into strings. Those hoarded among the people are everywhere so abundant that they can not be counted. Though their use for making change is more convenient than use of silver, they block and harm the certificate system and deeply harm state plans. For the Great Yuan copper coin a deadline of 50 days from the date proclaimed in the text of the edict has been set for them all to be brought to the Certificate Treasuries for exchange without any loss. Old coins from former times which the offices had issued and the commoners have hoarded are not to be exempted, and are not to circulate after the day set. Violators will be punished.

---The State Capital Department and the local coin inspectorates and intendants offices are all to be abolished.

---Counterfeiters of Treasure Certificates, and those who conspire to do so, as well as those who carve the printing blocks, make copies on paper, buy the colored ink, insert the *zihao*, and surrepetitiously print them are all to die, and suffer the confiscation of their family property.

---Those who cut up Treasure Certificates and use genuine ones to make counterfeits, are to receive 100 strokes for the first offense, and be exiled for one year. For subsequent offenses they are to be transported to a distance.

---Those who buy counterfeit certificates . . .

---Those who print counterfeit certificates in two neighboring areas who are discovered and do not confess.

---Those who inform on those who print counterfeit certificates are to be rewarded with 5 ingots of silver.

---Various manufacturers of counterfeit certificates . . .

---Banning of gold and silver was originally to underpin the certificate regulations. Though this was done, their prices have risen further, and the people have not been really convenienced. Henceforth, there will be authority to relax the prohibition and allow purchases and sales. Merchants who make purchases to ship specie to foreign shores are to be punished according to the regulations.

[50]Yule, *Cathay and the Way Thither*, Vol IV, *Travels of Ibn Batuta in Bengal, China and the Indian Archipelago*.

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The fifth stage is represented by the Zhizheng Certificates and Zhizheng Circulating Treasure copper coins issued during the monetary reform of Emperor Shun in zhizheng 10 (1350). One string of Zhizheng Certificates were equated with 1,000 copper cash or 2-strings of Zhiyuan Certificates. These Zhizheng Certificates are, however, something about which the historians have not informed us clearly.

The Treasure Certificate Metropolitan Intendant Offices established in the circuits in zhizheng 10 exerted general control over the minting of the Zhizheng copper coins [Plate lxvii,4-9] and the printing of Exchange Certificates. A number of books state that they also produced Zhongtong Exchange Certificates,[51] or say "they changed to produce Zhizheng, and printed Zhongtong Exchange Certificates."[52]

Some have supposed that this was an error in the sources, and that it ought to have been said that Zhizheng Exchange Certificates were printed, but the texts go on to state: "In former times the Zhiyuan was the primary, and the Zhongtong was the secondary. Later on the secondary took over the position of the primary money."[53] Evidently the paper money issued in zhizheng 10 was the Zhongtong Exchange Certificate. The edict issued in the 11th month of that year also says that "Zhongtong Exchange Certificates were used to control a reduced 1,000 copper cash, and were equal to 2-strings of Zhiyuan Treasure Certificates."

Nevertheless, Lü Sicheng, who lived during that time, distinguished between Zhongtong Certificates and (Zhizheng) Exchange Certificates, saying there were five types of money: coins from previous ages, Zhizheng coins, Zhongtong Certificates, Zhiyuan Certificates, and Exchange Certificates.[54]

Ye Ziqi also states: "The Zhizheng Exchange Certificates were mulberry paper money of inferior quality. They were not used long before they abruptly rotted away and became unsuitable for redemption."[55] He also remarks: "In addition there was set up the Zhizheng Exchange Certificate. The material of which it was made was inferior and easily destroyed, so that it was hard to redeem. Subsequently its circulation was obstructed."[56]

These several statements seem to superfically contradict each other, but in fact are all correct. The so-called Zhizheng Certificates-used the old printing plates of the Zhongtong Exchange Certificates to print new notes. On their backs were added the printed words "Zhizheng printed Original Treasure Exchange Certificate," and they were circulated at face value. Therefore, Wang Yi said: "The Zhongtong Exchange Certificates were used as more nearly full-hundreds, and circulated alongside the Zhiyuan Treasure Certificates."[57]

The statement in the *Yuan History* that a string was worth a thousand copper cash shows that the Zhongtong Exchange Certificate actually was denominated in cash and not in ounces and tenths of ounces [i.e. *qian* in its alternate meaning to cash of 0.1 ounce]. Later, the Zhiyuan Certificates and cash used the tenth and the hundredth of an ounce as their units, but most people during Yuan used the string and ounce units interchangeably.

The price of silver in terms of copper within the Yuan monetary system is not very clear. In the written sources, silver and copper cash are generally priced in terms of certificates, and the two only very rarely were linked directly.

Zhongtong Certificates were only priced in terms of silver, and not in terms of copper coins, 2-ounces of Certificates being equated with 1 ounce of white silver. The same was true of the Zhiyuan Certificates.

The Zhizheng Exchange Certificates were priced in copper cash and not in silver. Notes of 1-ounce were equated with 1,000 copper cash.

Only the Zhida Silver Certificate was simultaneously linked to silver and copper cash. Each ounce's worth of Silver Certificates was equated with 1 ounce of white silver, 0.1 ounces of gold, or 1,000 copper cash.

However, if when the Zhizheng Certificates were issued, 2-strings of the Zhiyuan Certificates could still be worth 1 ounce of silver, that would have made an ounce of silver equal to 1,000 copper cash.[58] If this had been the case since the beginning

[51] Mention is made of Zhizheng Exchange Certificates either before their issue or by later writers. For example, *Yuan History*, 138, "Biography of Tuotuo," states: "The Minister of Personnel, Qizhemajian, said to also make Zhizheng Exchange Certificates. Tuotuo trusted him."

[52] Nagatani Shinitsu, *Superfluous Words on Agricultural Fields*, first part, states: "In the former Yuan . . . in zhizheng year gengyin, the Zhongtong had long since been abolished, and they changed to making the Zhongzheng [*sic*, error for *Zhizheng*. EHK], and printed Zhongtong Exchange Certificates, calling them new certificates."

[53] *Ibid.*

[54] *Yuan History*, 97, "Treatise on Food and Money: Certificate Regulations."

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[55] *Grass and Tree Master*, 3, former part.

[56] *Grass and Tree Master*, 3, latter part.

[57] *Lord Wang Zhongwen [Yi]'s Collected Works*, 12, "Advice on Money."

of Yuan, then the Zhongtong and Zhiyuan Certificates

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could both have been commuted to 500 actual cash at the time they were issued. At the time the Zhizheng Certificates were issued, 1-string of them was commuted to 1,000 cash or 2-strings of Zhiyuan Certificates. In terms of copper cash, the Zhiyuan Certificates would not have depreciated in value.

Why was the price of Zhizheng Certificates in terms of Zhiyuan Certificates so low? This was because the government then did not permit the use of cash. When the Zhida Certificates were issued, 1-string was equated with 5-strings of Zhiyuan Certificates, but calculated in silver, the exchange ratio of Zhida and Zhiyuan Certificates was actually 1:2.5. Therefore, the relationships of Yuan paper money, copper cash, gold, and silver are confused.

The map of the Mongol empire shows its territory as spread far and wide, and so the sphere of circulation of its money was also broad. Places like Helin and Weiwuer[59] had formally established Exchange Certificate Intendants' Offices. Exchange Certificates may even have circulated into the South Seas region,[60] because there were places in South Asia whose money had exchange prices in terms of Zhongtong Certificates.

For example, Luohu equated 10,000 of its *bazi* with 24-ounces worth of Zhongtong Certificates. Wudie equated a silver coin weighing 0.28 ounces with 10-ounces worth of Zhongtong Certificates. Jiaochi discounted 67 of its copper coins for 1-ounce worth of Zhongtong Certificates.[61] These could merely be exchange prices, and not necessarily face values in circulation.

Persia's (the Iranian state) Khan Qihetu (or Qihedu) in zhiyuan 31 (1294) issued paper money within his own borders. It was also called Certificates, and these Certificates bore Chinese writing. He was probably imitating the style of the Yuan Dynasty notes. Certificate treasuries were established in every province of the kingdom.[62] Although the rulers of Persia then were Mongols, their official records were printed in Chinese.

During the Ashikaga [*sic*, should be Kamakura] Shogunate in the latter part of the thirteenth century, Japan also used paper money. In 1319 (yanyou 6), its issue was halted. It is said that a portion of these notes continued to circulate down to the fifteenth century.[63] India's Tughlaq Dynasty is also said to have tried to use paper money at the beginning of zhishun (1330-1331).[64] At the beginning of Ming, Korea also used mulberry paper money.[65]

Some histories[66] state that the Yuan never minted coins. This is incorrect. It has been said that Emperor Shizu (Khubilai) once asked Liu Bingzhong about the problems of a monetary system. Liu answered from the perspective of the taboos of yin-yang, and exhorted Khubilai not to use coins, but to rely solely on certificates. He said that if this was done, political power could be maintained for a long time.[67] It was supposedly for this reason that Yuan did not use coins.

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[58]Li Jiannong, *Draft Economic History of Song, Yuan and Ming*, p. 104, states: "During the Yuan Dynasty, an ounce of silver was normally worth 2,000 cash." This statement is not reliable. He probably reached this conclusion on the basis of 2-strings worth of both the Zhongtong and Zhiyuan Certificates being equal to 1 ounce of silver, but 1-string of Certificates was not equal to 1 string of copper cash, just as 1-ounce worth of notes was not equal to 1 ounce of silver.

[59]*New Yuan History*, 74, "Treatise on Food and Money," and *Yuan History*, 7, 11, "Annals of Emperor Shizu," both record this.

[60]*Yuan History*, 13, "Annals of Emperor Shizu": In zhiyuan 22, 6th month, "day bingzhen, a horse was sent to hurry to Hu and Ali with a thousand ingots worth of Certificates. A horse came back to Batu seeking the dispatch of treasure."

[61]Wang Dayuan, *Outline Gazetteer of the Island Barbarians*.

[62]*Duosang's [Dawson's] History of the Mongols* (perhaps Christopher Dawson, Chinese translation by Feng Chengjun), latter fascicle, 6.3 has a detailed narrative on Persia's issue of Exchange Certificates. This episode is also mentioned in Yule, *Cathay and the Way Thither*, Chapter 3, p. 150.

[63]For the circulation of notes in Japan, cf. Kusama Naokata, comp. *Three Moneys Illustration Compendium*, Appendix, 3, "Treasure Certificates for Virtuous Administration," in the section on classical books. Alexander Del Mar, *Money and Civilization*, p. 373, also mentions this practice.

[64]Cf. second work cited in note 62 above.

[65]For Korea's use of paper money, cf. *Veritable Records of the Yi Dynasty*, "Veritable Record of Great King Taizong," "Veritable Record of Great King Shizong," and works like *Complete Investigation of Supplementary Documents* and *Great Statutes of the Entire State*.

[66]*Yuan History*, "Treatise on Food and Money: Certificate Regulations": "Though the Yuan's Exchange Certificates and Treasure Certificates all were denominated in cash, coins themselves were not minted."

[67]Tao Zongyi, *South Village Rest from Plowing Record*, 2: "Emperor Shizu once asked the Chief Protector, Liu Bingzhong, about coins, and Liu replied: 'Coins are used during the *yang* stage; mulberry paper is used during the *yin*. The Chinese are in a bright *yang* region. The desert is a shady *yin* area. Now, Your Majesty has arisen like a dragon on the dark desert, and as ruler has approached the Central Xia. You ought to use mulberry paper money so that your sons' and grandsons' generations may

This story does not correspond to the facts. Not only did the Yuan Dynasty mint coins, it minted no small number of different kinds of them. However, there are a number of especially small coins which were temple coins or gift coins, and not formal money. Formal coins were in fact much fewer than those of other dynasties. This, however, was merely a continuation of the Jin pattern. The Jin, in an age of bad currency inflation, did not employ ready cash.

The earliest Chinese-style coin minted by the Mongols must be reckoned the Great Dynasty Circulating Treasure [Plate lxvi,1]. This was a coin minted by the Mongols before they adopted their state name Yuan,

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when they still called themselves Great Dynasty.

The Great Dynasty Circulating Treasure comes in both silver and copper, the construction of both of which is very careless. The inscription sometimes resembles those on the Daguan or Dading coins. Not many survive, but no two are alike, which is rather odd. There is also a Great Dynasty Original Treasure, which is finely and uniformly made, and resembles the Zhenglong and Dading coins. These are still scarcer.

There were some fifty years between the time the Mongols adopted the state name Yuan and the time they inaugurated the zhongtong year-period [1260]. Just as they were adopting their dynastic name, the Western Xia were minting coins. The Huangjian and Guangding coins were both minted after the Mongols began calling their state Yuan. The Jin were still using their Taihe large coin, which they later continued to mint. Since the Mongols imitated the Chinese and Jin systems, then so far as money is concerned, in addition to issuing paper money, they could also have tried to mint copper coins.

There are some large Inaugural Circulating Treasures which were perhaps minted at this time [Plate lxvi,3]. The two characters meaning "Inaugural" very much fit the pretensions of the Mongol aristocracy. These Inaugural coins were the size of 5-cash and 10-cash coins. There were also some the size of 3-cash coins.

Their peculiarity is that their inscriptions are not uniform: A single coin might bear several different calligraphic styles. The sizes of the characters were also not uniform. These traits enable them to be distinguished from Southern Tang and Min Inaugurals.

The first character of the word Inaugural [*kai*] is drawn with the classifier meaning gate closed. The second character [*yuan*] is not balanced, and the form of the characters is uneven. The character for "Circulating" [*tong*] is sometimes in regular script and sometimes in thin-gold style, the character for "treasure" [*bao*] is sometimes in *banfen* script and sometimes in sealscript, like the Taihe Heavy Treasure, and sometimes in thin-gold style as on the Chongning coin.

There is one 3-cash size coin with a closed gate on its first character which is midway between the Tang Inaugural and the Southern Tang Kaixi coin, and a second character [*yuan*] resembling that on the Southern Song coin. The fourth stroke on this character [the one on the lower right] is, however, irregular. The upper right hand stroke on *tong* forms a right angle. The character for "Treasure" resembles that on the Chongning Circulating Treasure. The reverse has something of the flavor of the Taihe 3-cash coin and the Duanping Heavy Treasure. They are also the same size. These coins do not seem to have been minted at the same time, and it is not certain that they were in formal use. The Yuan imitated a number of coins from previous dynasties, and not just the Inaugural coin.

There are other coins of varying sizes bearing Northern Song year-period names on their obverses and notations of value on their reverses.

Among those I have seen are a Daguan Circulating Treasure the size of a 5-cash coin, and bearing on its reverse the two characters *banqian*, meaning "half-tenth-ounce" and using an abbreviated version of the second character []a; and also Inaugural Circulating Treasure, Daguan Circulating Treasure, Xuanhe Circulating Treasure and Dading Circulating Treasure small coins bearing on their reverse the two characters *banfen*, meaning "half-hundredth-ounce."

These coins are poorly made, and their inscriptions rather squat. The reverse inscriptions would seem to be linked to paper money, a type of legal tender certificate denominated in tenths of an ounce. These could also be gambling chips. In form they seem to echo the style of the Great Dynasty Circulating Treasure, and hence resemble early Yuan objects.

There is another small coin, on the obverse of which are the four characters *zhi* (or *jiao*) *chao ban fen*, meaning "Pay (or Exchange) Certificate Half Hundredth-ounce." The reverse is blank.

During the zhongtong period, there were Zhongtong Original Treasure with regular script and seal script inscriptions forming a matched set. They are finely made and uniform, so they must have been cast at official furnaces, but because their number is

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guard it. If you use coins, the realm within the Four Seas will not be peaceful.' Subsequently it was decided not to use coins. Only Emperor Wuzong made some use of them, but before long, they were abolished."

so small, they could have been test mintings.

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In zhiyuan 22 (1285), when Lu Shirong headed the government, he advocated minting Zhiyuan coins.[68]

Two kinds of Zhiyuan Circulating Treasure have come down to us [Plate lxvii,1]. One is a small coin with a Chinese inscription. The other is in Mongolian script [],[b] and is the size of a 2-cash coin. It could have been used in the palace, or have circulated among the Mongol nobility.

The Mongolian on the paper money and copper coins was all in the new script created by Phagspa. It was squared off, like Chinese characters, but still more resembled Sanskrit and Tibetan, since Phagspa came from Turfan. Before his innovation, the Mongols had employed the Uighur written language.

There is another 10-cash sized Zhiyuan Circulating Treasure, the reverse of which also bears four characters. Above the hole is the Mongol word for the *Zhi* of Zhiyuan. Below the hole there seems to be a Ruzhen word. To the right of the hole is something in Uighur, and to its left is a Western Xia word. These are probably the four characters meaning Zhiyuan Circulating Treasure. One suspects it was made for play.

Coins were minted during both the yuanzhen [1295-97] and dade [1297-1308] year-periods.

There are Chinese and Mongolian versions of the Yuanzhen coin. The Chinese inscription coins come as Yuanzhen Circulating Treasure [Plate lxvi,4] and Yuanzhen Original Treasure. The Circulating Treasure is a small coin, and the Original Treasure resembles a 2-cash coin. The Mongolian language coin is a Yuanzhen Circulating Treasure,[c] and is large, between the size of a 2-cash and a 5-cash coin.

The Dade coin also comes in Chinese and Mongolian [Plate lxvi,4] versions, both being Dade Circulating Treasure. The Chinese language version comes in large and small sizes, resembling 1-cash and 2-cash coins. The Mongolian version comes only in a large size, and most have indistinct inscriptions. Their construction is inferior. Relatively few of these coins have survived.

During zhida 3 (1310) of Emperor Wuzong, two types of coins were produced. One was a Chinese inscription Zhida Circulating Treasure small coin [Plate lxvii,2]. The other was a Mongolian language Great Yuan Circulating Treasure[d] 10-cash coin. At that time Spring-money Inspectorates were set up to mint coins in Shandong, Hedong, Liaoyang, Jianghuai and Chuanhan (or Sichuan).[69] Hence their quantity is relatively large.

There are two other Chinese language Great Yuan Circulating Treasures which are extremely scarce. One is a small coin with a blank reverse. The other is a large coin, a little smaller than the Mongolian inscription 10-cash coin, and so it too was probably a 10-cash coin.

There are two calligraphic styles on its obverse. The characters for Great, Circulating and Treasure are in thin-gold style, as on the Daguan coins. The character for Yuan is in an oblique style peculiar to the Yuan Dynasty. This coin reminds people of the previously mentioned large Inaugural coin. They could have been minted during the same period. There is a foreign word on each side of the hole on the reverse. If these are not Mongolian, they must be in the script of some contemporary minority people.

There is another small coin with an inscription resembling this one. It is generally characterized as Turkish, but in fact its inscription does not resemble Turkish writing. From its construction, particularly the shape of the hole, one might assign it to the Yuan Dynasty.

There is also a Great Yuan State Treasure in sealscript, the reverse of which bears two characters. At first glance these seem to be foreign writing, but upon careful examination they are recognizable as the two Chinese characters for the zhida year-period. They were probably coins produced when minting began in zhida 2 [1309]. Others say the two characters are zhiyuan [1264-1295 or 1335-1341].

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There are also coins for most of the year periods after zhida. During the huangqing year-period [1312-14], there were Huangqing Circulating Treasures and Original Treasures. During yanyou [1314-21], there were Yanyou Circulating Treasures and Original Treasures. All of these were small coins.

During the zhizhi years [1321-24], there was a Zhizhi Circulating Treasure small coin and a Zhizhi Original Treasure 2-cash. There is also a Great Yuan Zhizhi small coin, but the four corners of the hole extend to the outer rim.

During taiding [1324-28], there was a Taiding Circulating Treasure small coin. The Zhihe Original Treasure of the zhihe period [1328-29] seems to have been a temple coin. During zhishun [1330-33], there was a Zhishun Circulating Treasure and a Zhishun Original Treasure, both small coins. The

[68] *Yuan History*, 205, "Biography of Lu Shirong," zhiyuan 22: "Shirong memorialized . . . to plan for the current situation, nothing would be better than to follow the precedents of Han and Tang, and select copper to cast into Zhiyuan coins, which would circulate alongside thin silk deeds and certificates."

[69] *Yuan History*, 184, "Biography of Wang Duzhong."

Yuantong Circulating Treasure of the yuantong period [1333-35] is also a small coin.

The later zhiyuan [of 1335-1341, as opposed to the earlier one of 1264-1295] must also have had coins. Numismatists have hitherto divided Zhiyuan Circulating Treasure into former Zhiyuan and latter Zhiyuan, but criteria for this distinction are very hard to determine.

All such coins have Chinese inscriptions and are rarely seen. Most of them were minted among the people, and had no connection with the state system, since neither their inscriptions nor their construction are uniform. If, however, they were mixed in with ordinary coins, they could have circulated. Hence down through the ages there has been no great difference in their economic significance between private and officially minted coins.

A number of types of Zhizheng Circulating Treasure were minted during the zhizheng period [1341-68] [Plate lxvii,5-9]. In general, they may be divided into three categories.

The first category consists of five types of coins in three denominations employing the Earthly Branches to symbolize years, for a total of fifteen variant forms. These five types are distinguished by symbols in Mongolian on their reverses: []^{e} (Chin. *yin*, the 3rd Branch), []^{f} (Chin. *mao*, the 4th branch), []^{g} (Chin. *chen*, the 5th branch), []^{h} (Chin. *si*, the 6th branch), and []^{i} (Chin. *wu*, the 7th branch). Each type comes in small, 2-cash and 3-cash sizes. These characters probably symbolize the five years from zhizheng 10, sexagenary cycle year gengyin (1350), to zhizheng 14, year jiawu, during which they were minted. In that last year minting of copper coins was halted.[70] The construction of this category of coin is relatively regular.

The second category consists of coins which bear value designations. This is the most complex category. Some coins bear both Mongolian and Chinese inscriptions on their reverses. Some are only in Mongolian. The former includes 2-cash and 3-cash coins. On the reverse of the 2-cash coin above the hole is a Mongolian word []^{j} (meaning 2), and below the hole is the Chinese character for "2"; above the hole on the 3-cash coin is the Mongolian []^{k} (3), and below the hole the Chinese numeral "3". The latter includes 5-cash and 10-cash coins. Above the hole on the 5-cash coin is the Mongolian []^{l} (5), and the 10-cash coin bears a []^{m} (10).

There is another even larger 10-cash coin. In addition to the Mongol symbol above the hole on the reverse, below the hole are three Chinese characters meaning "one ounce weight." There are also several other types whose construction is still less fine. The Mongolian script on Yuan coins seems to be a phonetic transliteration. Hence the word for the 7th Earthly Branch and the numeral five, both pronounced *wu* in Chinese, are written with the same Mongolian word.

The third category consists of the Legal Tender Certificate coins, all of which are large coins [Plate lxviii]. On the obverse are the four characters meaning "Zhizheng's Treasure." On the reverse above the hole is the character *ji*. To the right of the hole are the two characters meaning "Legal Tender Certificate." To the left of the hole the denomination is specified: five-hundredths, one-tenth, one-tenth-five-hundredths, two-tenths-five-hundredths and five-tenths. The five-hundredths weighs 17-18 grams and the five-tenths weighs 143 grams. In diameter, this is the largest coin in all the history of China. Later on, however, apparently some weight reduction occurred,

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since some smaller ones have been found.

The fact that these were denominated in tenths and hundredths would seem to prove that the Zhizheng Exchange Certificates were also denominated in ounces, tenths and hundredths of an ounce, and that perhaps these were additional units, but this Legal Tender Certificate coin is not encountered in the records, and we cannot tell if it was formally circulated.

Some say their inscriptions were written by Zhou Boqi,[71] and that they were written prior to zhizheng 5 [1345]. If that is true, then it would not have been the zhizheng 10 Exchange Certificates, but the Zhiyuan or Zhongtong Certificates that were involved. However, the Zhiyuan Certificates were denominated in strings of cash and not in fractions of an ounce. We also do not know the significance of the *ji* on the reverse. Some say that since this coin has been found in Jiangxi, the *ji* must refer to the place Ji'an,[72] but in recent years some have been dug up in Anhui. All of this awaits verification.

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[70] *Investigation of Literary Remains Continued*, 9, "Investigation of Coins."

[71] Zhou Boqi's *Approaching Light Collection* contains the passage: "The second Winter, there was an edict to circulate coins, and I received an Imperial Order to write the Zhizheng's . . . one stanza each of seven-word regulated verse." This is according to a Ming copy of a Yuan woodblock edition which is no longer extant. *Approaching Light Collection* contains poems from prior to zhizheng 5, but as to which year the words "second Winter" refer to, still awaits investigation. The first to argue that the coin inscriptions were written by Zhou Boqi was Zhang Yanji. The material from *Approaching Light Collection* was mentioned by Wang Yinjia. Cf. his "Zhou Boqi's Calligraphy on the

The construction of these coins is, however, very peculiar: They are of uneven thickness. Nor are their outer rims uniform. They are very different from Zhizheng coins normally seen, as though they were of local manufacture or made by other mints. Their inscriptions are, however, really not bad. This would indicate that they were officially made coins after all.

There is something else that is peculiar about these Legal Tender Certificate coins. Generally speaking, you only have paper money substituting for metal money, but these coins are metal money having value in themselves, and yet they are used to substitute for intrinsically valueless paper money.

They also differ from the secondary moneys which in later ages circulated under paper money systems in that those later secondary moneys were of small denominations having limited circulations, whereas Legal Tender Certificate coins were a large denomination money, and there would seem to have been no limits on their power to be used to make payments.

Very few of these coins have survived. Probably the paper money depreciated in value very quickly, causing the value of the metal content of these coins to exceed their nominal value. The previously mentioned coins bearing notations of value like half-tenth and half-hundredth could also have been minted at that time.

Collectors have a "Yi Border Auspicious Prosperity" coin which is the size of the Zhizheng Circulating Treasure 5-cash coin, and the style of the inscription of which very much resembles the Hundred Plate's Treasure and Inspection Plate Thousand Treasure category of coins. Judging from their construction, they must be Yuan objects. Yi Border must refer to the Il-Khanate. I have only seen one such coin.

With an inscription like Auspicious Prosperity, it would not seem to have been a coin normally circulated. It reminds one of the "high prosperity, auspicious profit" coins which are called "high prosperity" coins for short, and which in terms of their construction seem to have been earlier than the Yi Border Auspicious Prosperity, and may be attributed to the Five Dynasties. There is still no proof, however, whether these High Prosperity coins were ever used as Chinese-style coins.

The Il-Khanate was established after Hülegü conquered Persia, but I have not heard that it ever used such square-holed round coins. Still, at that time its connections with China were very close. It was one of the four great khanates of the Mongols. The Il-Khanate did imitate China's paper money. The Yi Border Auspicious Prosperity coin could have been a congratulatory coin minted for it by China then. It could also have been a coin minted by the Mongol rulers to give to the rulers of the Il-Khanate.

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Except for the Zhiyuan, Zhida, the Mongolian inscription Great Yuan and the various Zhizheng coins, Yuan Dynasty copper coins were few in number, and their construction and inscriptions were often not uniform. This raises the question of whether or not they were actually circulated: That is to say, the question as to whether or not they were money.

I think that aside from the small temple offering coins all those coins roughly the size of ordinary coins must be conceded to have been money. At the time of the zhida 2 [1309] monetary reform, it was ordered that the Zhida Circulating Treasure and Great Yuan Circulating Treasure be used alongside coins from earlier dynasties. If even the coins of previous dynasties could be circulated, it would hardly be reasonable if such coins from the current dynasty as the Zhiyuan, Yuanzhen and Dade had not circulated.

When the Silver Certificates were abolished in zhida 4 [1311], the new regulations acknowledged that it was impossible to count the number of copper coins being hoarded among the people. They would have been more convenient than silver for making change. It was only because the authorities feared they would interfere with the paper money that they banned coins.

We can only surmise from this how abundantly copper coins circulated then, and how the people used coins in preference to Certificates. We can also imagine how after the prohibition the people would continue to circulate coins, especially in the south where the orders of the Mongol rulers could not be well enforced. The circulation of copper coins probably continued without interruption.

Year-period coins minted after zhida [1312] could have been minted by the workmen of the six coin inspectorates and 19 local intendants' offices shut down in zhida 4. By the time of the zhizheng 10 [1350] monetary reform, it was again clearly ordered that the Zhizheng Circulating Treasure coins circulate alongside copper coins from earlier periods, and copper coins in general thereupon again

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Zhizheng Legal Tender Certificates," *Coins*, no. 19.

[72]In the past some have said that the character *ji* on the reverse of the Legal Tender Certificate coin was short for *jijin*, or auspicious metal. The coin dealer Dai Baoting has said that since most of these coins have come from Jiangxi, some have said that this must refer to a place name, such as Ji'an in Jiangxi, but I have heard that in recent years some have also been unearthed in Anhui.

achieved legal status.

Prior to zhida [1308], the Yuan Dynasty did not make much use of copper coins. Old coins held by the people were frequently sold to merchants, who transported them abroad or melted them down to make useful objects from the metal.[73]

A portion of them flowed into Japan. Sometimes Japan exchanged gold for copper coins.[74] This was probably by way of the normal trade channels. In taiding 2 (1325), the Japanese sent merchant vessels to China on behalf of certain temples. In zhizheng 1 [1341], the Japanese Shogun Ashikaga Tadayoshi sent two ships to China to carry on trade. Upon their return, they paid him 5,000 strings of actual cash for the building of the Tenryoji Temple.[75] It is said that thereafter there were annual expeditions which everyone called Tenryoji ships.[76]

Obviously no small number of coins flowed into Japan during the Yuan Dynasty. Naturally, these were mainly Song coins.[77] At that time the Japanese relied entirely on Tang and Song coins. The twelve types of coins that they had minted themselves had already gone completely out of circulation. This is demonstrated by the results of modern excavations in Japan.

Gold was still in use during Yuan. Not only were there instances of use of gold for gifts,[78] it was also widely used as an instrument for transporting-value, as in travel expenses.[79] Yunnan taxes were even calculated in gold.[80] In zhiyuan 10, there was an edict calling on people to carry 100,000 ounces of gold to Ceylon to buy medicine.[81]

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In zhongtong 1 [1260], the Yuan gold-silver exchange price was 1:7.5. By zhiyuan 19 [1282], the Department of Ministries' "Regulations for Rectifying the Circulation of Certificates" still had it as 1:7.5, but by the time of the zhiyuan 24 [1287]

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[73]Cheng Jufu, *Snow Pavilion Collection*, 10, "Copper Coins."

[74]*Yuan History*, 208, "Japan": In zhiyuan "14, the Japanese sent merchants carrying gold to exchange for copper coins. Permission for this was granted."

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[75]Shunoku Taeba, *Record of the Construction of the Tenryoji Temple*. (Quoted in Wang Jiwu, *History of Sino-Japanese Communications*.)

[76]*History of Sino-Japanese Communications*, quoting *Mirror for the Examination of Our Dynasty Continued*.

[77]In 1712 a hoard of ancient coins was unearthed at Mito City's Seisoji Temple. There was a total of more than 234 strings worth, ranging from Inaugural Circulating Treasures to Zhida Circulating Treasures. Of these, 19 strings 600 cash were Inaugural coins, 800 were Qianyuan coins, over 200 were Five Dynasties coins, 181,700 coins were Northern Song, 6,416 were Southern Song, and only 5 were Yuan Dynasty (Zhida) coins. Cf. Ishii Kendō, "Scope of Ancient Coins From the Earth," *Kahei* magazine, No. 223, pp. 1-22. Some of this group of coins could have been brought to Japan during Yuan times. In 1902, in Japan's Zenshoji Temple in Kobumura there was found a hoard of over 85,500 ancient coins, the greater proportion of which were too corroded for their inscriptions to be read. Those which could be read ran from the Half-ouncer to the Yuan Dynasty's Zhida coins. (Source of this material is the same as the above citation.) Hence at least a portion of them were brought in during Yuan. They may be categorized as follows:

Han, Wei, Six Dynasties	5 coins	
Tang		2,472
Five Dynasties		58
Northern Song		24,323
Southern Song		595
Liao	2	
Jin	2	
Yuan	5	
Japanese coins	3	
Korean coins	4	
Vietnamese coins	1	
Privately minted 2-cash coins		21
TOTAL		27,491 coins

In addition to these, in 1930 there were excavated at a Kamakura primary school a hoard of ancient coins running from the Inaugural coins to Xianchun coins, which evidently were also brought in during Yuan times. Cf. Irita Totonomi, "Report on Excavation of Ancient Coins from Kamakura Primary School Hall," *Archeology Magazine*, Vol. 25, no. 9.

[78]*Yuan History*, 93, "Treatise on Food and Money, 1": "Emperor Chengzong once said to the Chancellor, Wanze, 'What is the annual amount of gold, silver and certificate money which comes in?' . . . The answer was, 'The amount which annually enters is 19,000 ounces of gold, 60,000 ounces of silver, and 3.6 million ingots worth of certificates.'" *Yuan History*, 4, "Annals of Emperor Shizu," zhongtong 2: "As gifts for princes, 1,000 ounces of Tajik gold, 5,000 ounces of silver and 300 bolts of silk." In zhiyuan 14: "Baidale and 1,355 men were rewarded for merit in battle with 100 ounces of gold and 15,000 ounces of silver."

[79]The *zaju* musical drama "Local Scholar Pang Makes a Deception to Raise a Loan," act one: "[The *zhengmo* says] Sir, I am giving you this cake of gold to meet your expenses on the road." (*Selected Yuan Songs*, 10.) *Three Tigers Descend the Mountain to Fight to Requite Mercy*, act one: "I'll give you this gold hairpin for travelling expenses. Go to that silver shop to convert it. Stop complaining so much.

[80]*Yuan History*, 12, "Annals of Emperor Shizu, 9" zhiyuan 19: "Yunnan taxes are reckoned in gold."

[81]*Yuan History*, 8, "Annals of Emperor Shizu, 5."

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"Regulations For the Circulation of Zhiyuan Treasure Certificates," it had changed to 1:10. What was the reason for this change? Was it that the price of gold in China had increased?

Probably not. The gold-silver exchange price of the Mongols before they came to rule over China was probably under the influence of Central Asia. After they took over control of China, they either accepted the Chinese ratio or came under its influence.

It is also possible that the Mongol rulers intentionally pushed down the gold price of silver, drew in silver, and transported it to Central Asia. To them at that time silver had greater usefulness than gold. During those centuries, silver coins circulated abundantly in Central Asia, and this stimulated demand there for silver, driving up its price.

Ever since Song times, Chinese society had been unsettled. Gold and silver had been used as stores of value, and gold was more suitable than silver for that purpose. This had driven the price of gold up. It was for precisely this reason that during the eighty odd years of the Yuan Dynasty large quantities of Chinese silver flowed out into Central Asia. In southwest China, the exchange ratio remained at 1:6, or even 1:5.5, which was exactly the same as the exchange ratio in India and Central Asia.

In addition to the above-mentioned Great Dynasty Circulating Treasure silver coin, a Zhiyuan Circulating Treasure gold coin was minted during the zhiyuan period [1264-95].[82] There was also a Yuanzhen Circulating Treasure small silver coin. These gold and silver coins were not, however, intended to circulate, their nature being not far removed from some gold plated coins. They were probably charms or offering coins or Spring coins.[83]

At that time most of the more remote localities used commodity moneys. Yunnan, for example, used cowry money, which was also called *bazi*. There were probably 80 of these to the string, which was worth 0.12 ounces of silver. The gold-silver exchange ratio in Yunnan then was 1:8, but the government allowed people to commute 20 such strings for 0.1 ounces of gold when paying taxes.[84] Actually, 20 strings were worth 2.4 ounces of silver or 0.3 ounces of gold. This represented severe exploitation.

In the Xikang-Tibet region, the majority used gold, and the minority circulated salt as money. Brine was boiled down, and the salt then put into molds to make into bricks weighing around half a pound, round at one end and squared off at the other. They were set next to fires to be baked hard. Official seals were applied to them.[85]

During late Yuan, there were a number of Chinese rebels who minted coins [Plate lxix].

The first of these coins was Zhang Shicheng's Tianyou coin. Zhang Shicheng occupied Gaoyou, and took on the dynastic name Great Zhou. In zhizheng 13 (1353), he changed the era name to tian-

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[82]Zhang Juzheng, *Great Hill Collection*: "In the North Park of the Imperial City is the Guanghan Palace. Its roof tiles are broken, though its columns still stand. It is said to have been used by Empress Fan of Liao as the Shuzhuang Pavilion. . . . In wanli 7 [1579], 5th month, 4th day, there was unexpectedly found on a beam on the side of the mound 120 gold coins which had been hidden there. The Ruler gave four of them to me. Their inscriptions read Zhiyuan Circulating Treasure." Shen Defu, *Compendium of Things Obtained in the Wilderness During Wanli* also records this event.

[83]*Leisurely Residence Record*: "When the zhida change of era name occurred, the women had all their jewelry made into small gold and silver coins which they wore, and which were called Spring coins."

[84]*Yuan History*, 12, "Annals of Emperor Shizu, 9," zhiyuan 19: "Yunnan taxes are reckoned in gold, but they are commuted to cowry when paid in. Each 0.1 ounces of gold is worth 20 strings of cowry." *Investigation of Literary Remains Continued*, zhiyuan 13, 1st month: "Yunnan circulates Exchange Notes, Account Notes and *bazi* cowry. . . . The Yunnanese use cowry in place of coins. When Certificates were first circulated, the people found them inconvenient. The official in charge of their circulation, Ankuadeqi, said that Yunnan was not familiar with Certificates, and that it would hence be best to allow *bazi* to circulate along with Exchange Notes and Account Notes for the convenience of both official and private users. This was done. By zhiyuan 19, 9th month, it was determined that Yunnan taxes be reckoned in gold. If paid in cowry shells, each 0.1 ounces of gold would be worth 20 strings of cowry. In Emperor Chengzong's dade 9, 11th month, the Yunnan regional government was given 10,000 ingots worth of Certificates, and ordered to use them along with cowry. Cowry was not to go beyond its original locality. If it did, it was to be treated like counterfeit certificates."

Marco Polo also noted the use of cowry in southwest China: "They use white porcelain, namely the shells one finds in the sea, such as are hung around a dog's neck. Eighty of them are worth a silver saggio, that is to say, two Venetian grossi, and you must know that eight saggi of fine silver are equivalent to one saggio of find gold." *The Travels of Marco Polo* (tr. Prof. Aldo Ricci), p. 187. *Grosso* was the name of a Medieval Italian silver coin. It was first minted by the Holy Roman Emperor at the beginning of the ninth century. Venice began to mint it around 1200. The coin weighed 2.25 grams. Its purity was 965.2 parts in a thousand. Therefore, 80 *bazi* cowry were worth 4.5 grams of silver. This is the equivalent of a little more than 0.12 Chinese ounces.

[85]*The Travels of Marco Polo* (tr. Ricci), p. 185.

you,[86] and destroyed bronze Buddhas to mint the Tianyou Circulating Treasure, of which there are small, 2-cash

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3-cash and 5-cash denominations.

On the reverse of the small coin is a numeral one, signifying it was a 1-cash coin. There is an expanded version of the numeral two on the reverse of the 2-cash denomination, and expanded versions of the numerals three and five on the 3-cash and 5-cash coins respectively. The obverse inscriptions are in regular script. The reverses are in sealscript. These retain something of the style of the Zhizheng coin.

The second is Han Lin'er's Longfeng coin. In zhizheng 15 [1355], Liu Futong put Han Lin'er onto the throne with the dynastic name of Song, and changed the era name to longfeng. The Longfeng Circulating Treasure was minted in small, 2-cash and 3-cash denominations.

The third are Xu Shouhui's Tianqi and Tianding coins. In zhizheng 18 [1358], Xu Xhouhui changed the era name to tianqi and minted the Tianqi Circulating Treasure. The following year he again changed the era name, this time to tianding, and minted the Tianding Circulating Treasure. Both coins came in small, 2-cash and 3-cash denominations. The Tianqi coins come in regular script and seal script versions. Both are rare.

The fourth is Chen Youliang's Dayi coin. In zhizheng 20 [1360], Chen Youliang killed Xu Shouhui, changed the era name to dayi, and minted a Dayi Circulating Treasure, also in small, 2-cash and 3-cash denominations.

The fifth is Zhu Yuanzhang's Dazhong Circulating Treasure coin. They were minted in both zhizheng 21 [1361] and 24 [1364] in small, 2-cash, 3-cash, 5-cash and 10-cash denominations.

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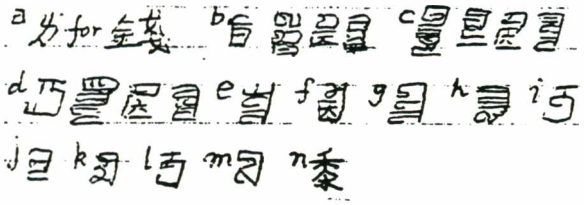
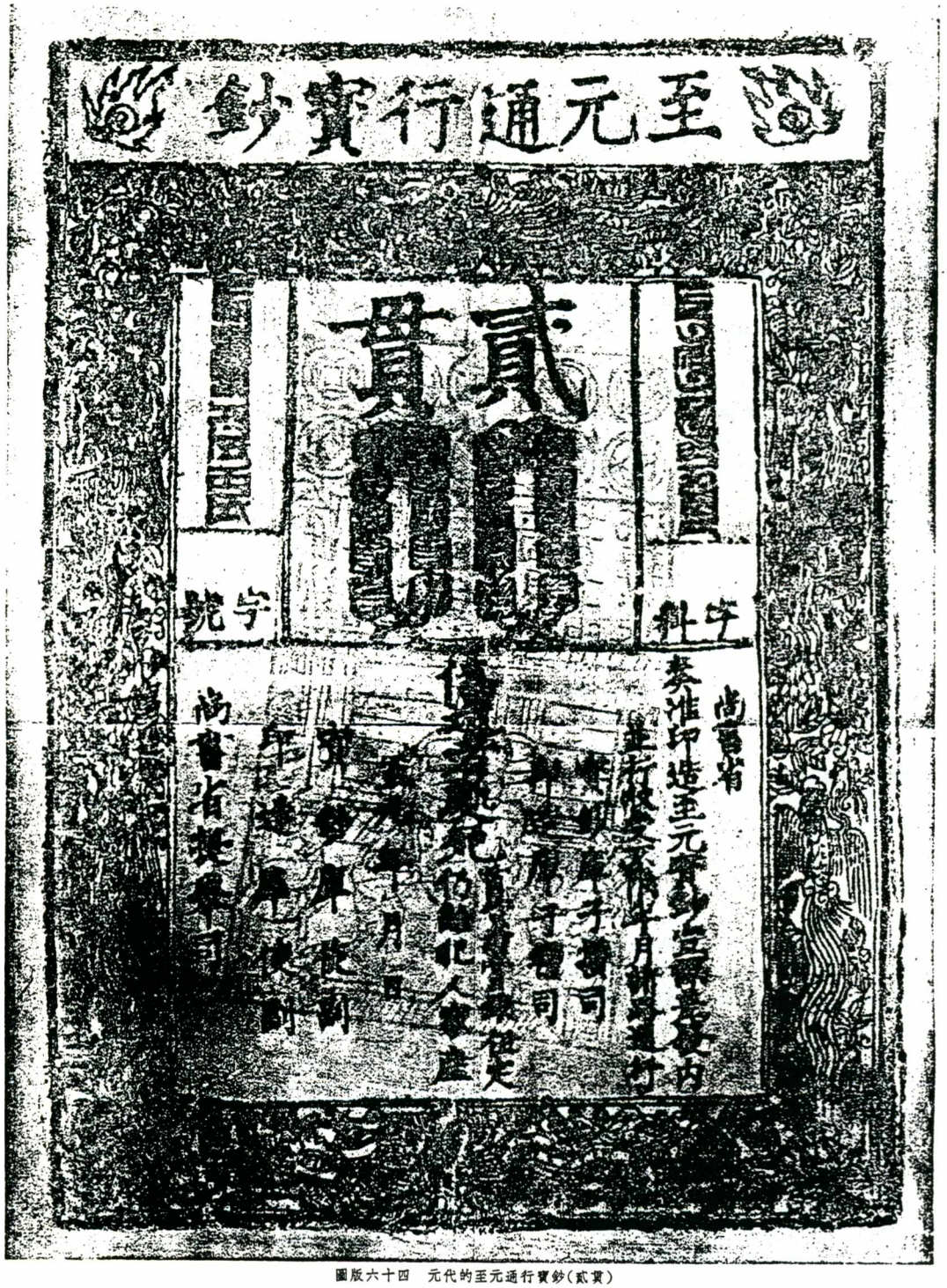
[86] *Yuan History*, 43, "Annals of Emperor Shun, 6," says that Zhang Shicheng set up the era name tianyou with the meaning classifier "proclaim" on the second character rather than the classifier meaning man. The *Ming History*, 123, "Biography of Zhang Shicheng," also uses the same character. The histories are in error here. That tianyou was a Tang year-period name.



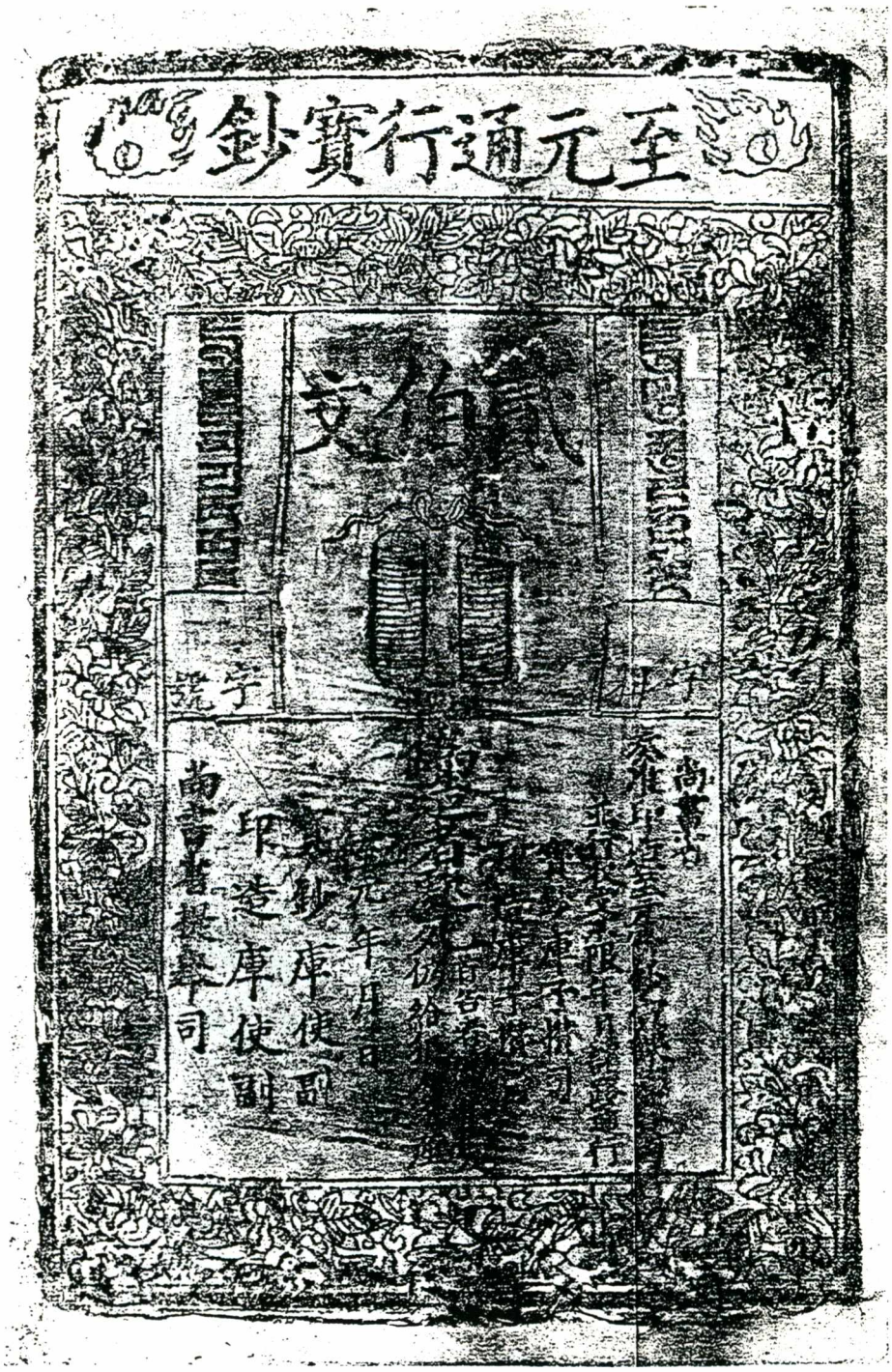


圖版六十四　元代的至元通行寶鈔(貳貫)

至元寶鈔發行於至元二十四年(公元 1287 年),它比以前進步的地方,是不限年月,諸路通行。宋的交會都有界分,金人的交鈔,在初期也有七年盤革之制,後來才永遠行使。蒙古人採用了這一原則,而增定另一原則,即全國通行的原則,使發行統一。

PLATE LXIV. THE YUAN DYNASTY'S ZHIYUAN UNIVERSALLY CIRCULATED TREASURE CERTIFICATE (TWO STRINGS)

The Zhiyuan Treasure Certificate was issued in zhiyuan 24 (1287). The points in which it represented an advance over previous paper money were that it had no expiration date and that it circulated in all circuits. Song's Exchange and Account Notes all had expiration dates. The Jin's Exchange Certificates at first had seven year expiration times. Only later did they circulate in perpetuity. The Mongols adopted this principle, and added another to it, the principle of nationwide circulation, which made possible a unified issue.

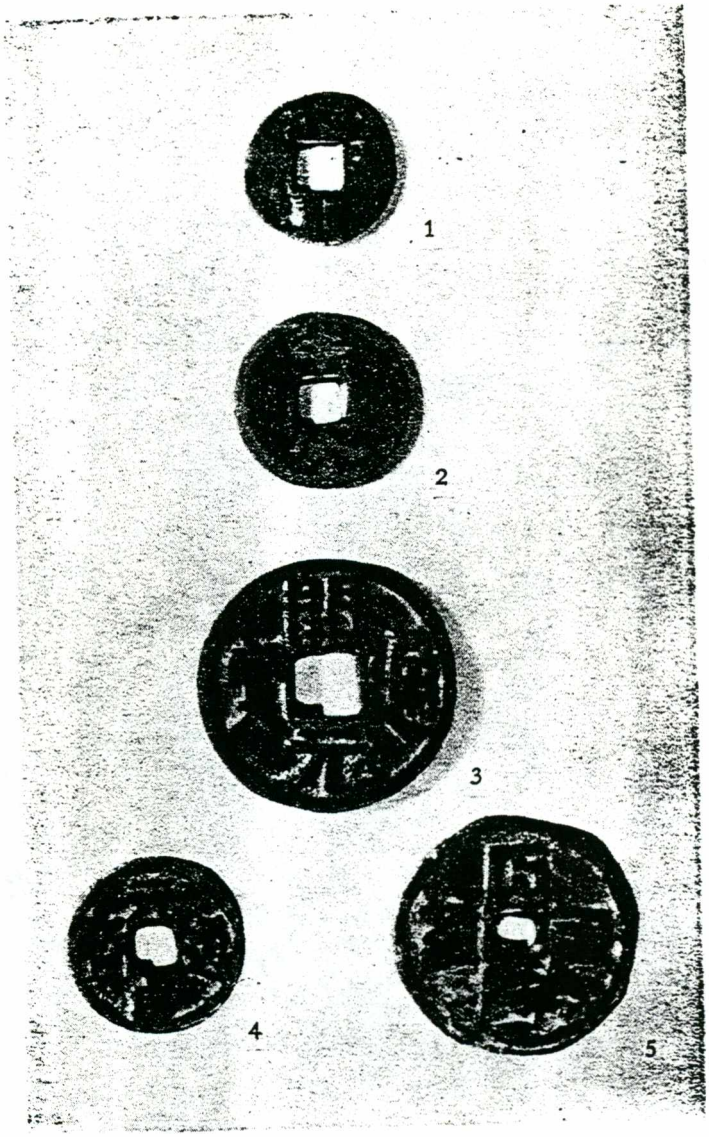


圖版六十五　元代的至元通行寶鈔(貳佰文)

至元寶鈔的面額分爲十一種，計有五文、十文、二十文、三十文、五十文、一百文、二百文、三百文、五百文、一貫、二貫，鈔票幅廣隨金額而有大小，但票面文字都差不多。

PLATE LXV. THE YUAN DYNASTY'S ZHIYUAN UNIVERSALLY CIRCULATED TREASURE CERTIFICATE (TWO-HUNDRED CASH)

The Zhiyuan Treasure Certificates came in eleven denominations: 5-cash, 10-cash, 20-cash, 30-cash, 50-cash, 100-cash, 200-cash, 300-cash, 500-cash, 1-string and 2-strings. The sizes of the notes varied according to their denominations, but the inscriptions they bore were nearly identical.

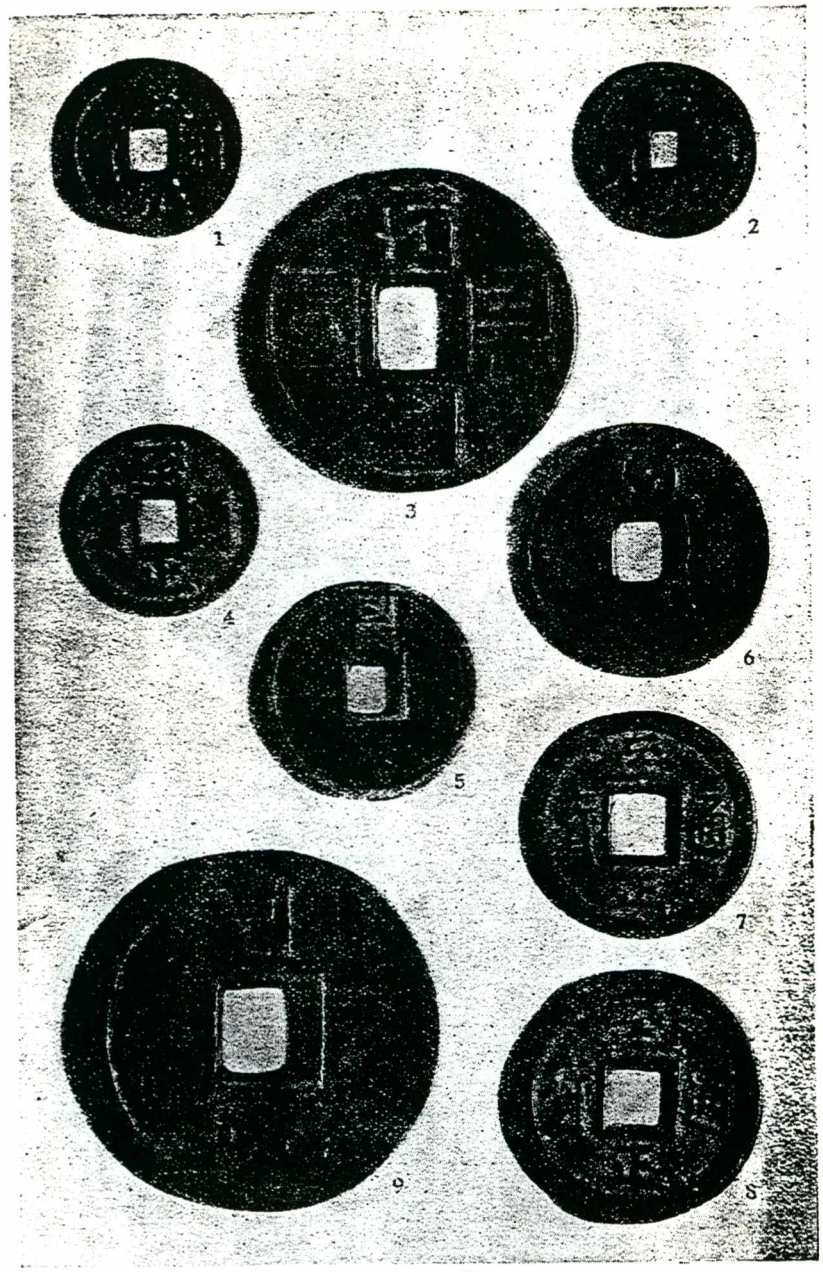


圖版六十六　元代的錢幣(一)

1.大朝通寶銀錢。 2.宣和通寶半分權鈔錢(?)之背。 3.開元通寶大錢。 4.元貞通寶。 5.蒙文大德通寶。

PLATE LXVI. YUAN DYNASTY COINS (1)

1. Great Dynasty Circulating Treasure silver coin. 2. Xuanhe Circulating Treasure half-fen legal tender certificate coin[?] reverse. 3. Inaugural Circulating Treasure large coin. 4. Yuanzhen Circulating Treasure. 5. Mongolian language Dade Circulating Treasure.

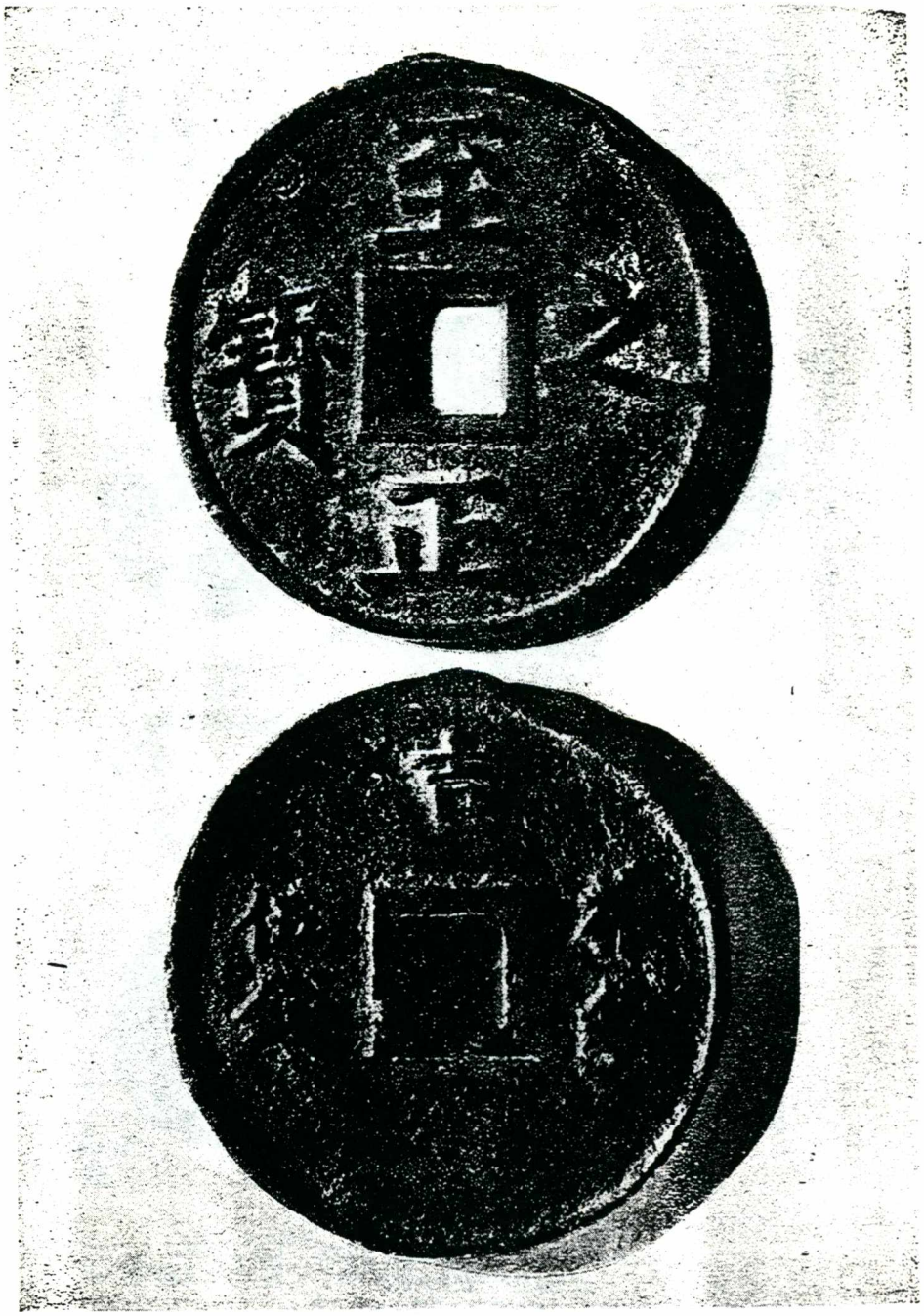


圖版六十七　元代的錢幣(二)

1.至元通寶。 2.至大通寶。 3.蒙文大元通寶當十錢。 4.至正通寶。 5.至正通寶折二錢背的蒙文卯字。 6.至正通寶折三錢背的蒙文午字。 7.陰起文至正通寶折二錢。 8.陰起文至正通寶折三錢。 9.壹兩重至正通寶當十錢之背。

PLATE LXVII. YUAN DYNASTY COINS (2)

1. Zhiyuan Circulating Treasure. 2. Zhida Circulating Treasure. 3. Mongolian language Great Yuan Circulating Treasure 10-cash coin. 4. Zhizheng Circulating Treasure. 5. Zhizheng Circulating Treasure 2-cash coin reverse's Mongolian language character *mao* (the fourth of the 12 Branches of the sexagenary cycle). 6. Zhizheng Circulating Treasure 3-cash coin reverse's Mongolian language character *wu* (the 7th branch). 7. Dark raised inscription Zhizheng Circulating Treasure 2-cash coin. 8. Dark raised inscription Zhizheng Circulating Treasure 3-cash coin. 9. One-ounce weight Zhizheng Circulating Treasure 10-cash coin's reverse.



圖版六十八　至正之寶權鈔伍錢

這是中國直徑最大的錢幣。

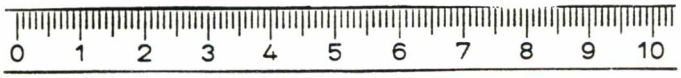
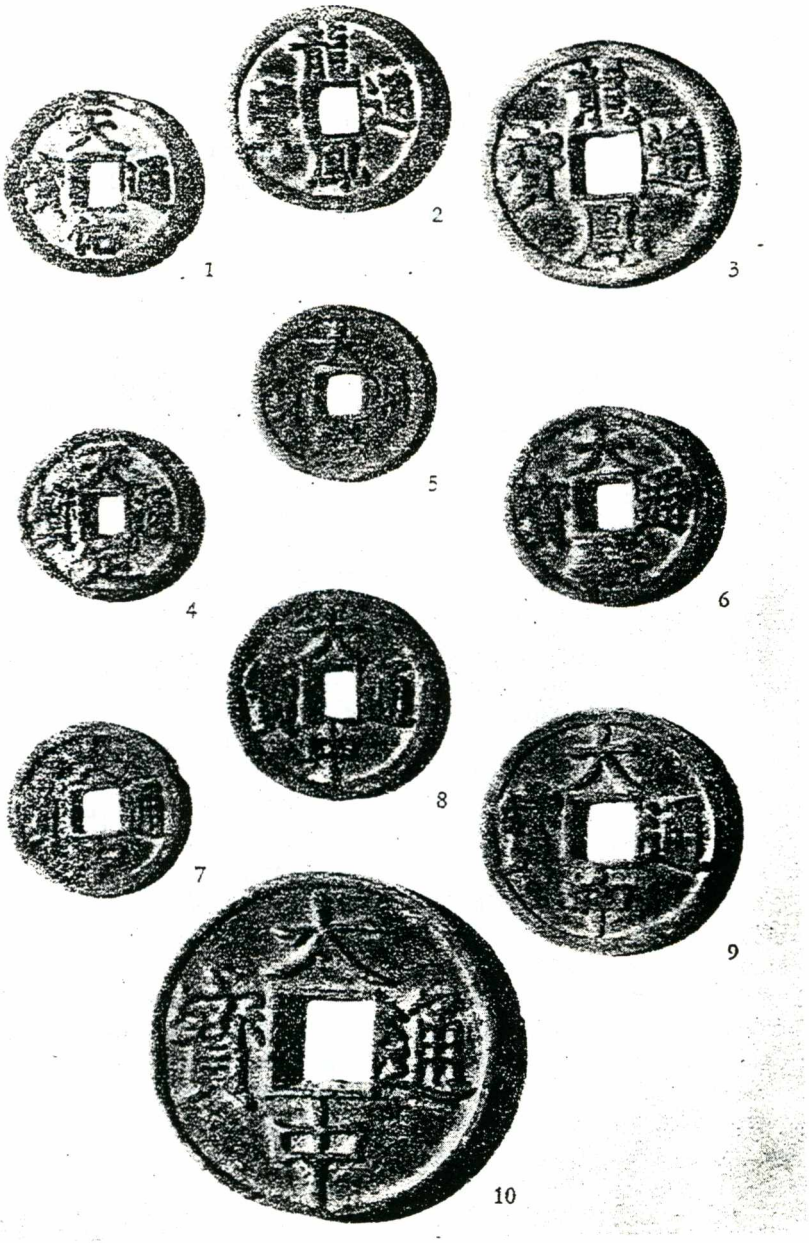


PLATE LXVIII. ZHIZHENG'S TREASURE LEGAL TENDER CERTIFICATE FIVE COIN

This is the Chinese coin with the largest diameter.



圖版六十九　元末起義者的錢幣

1.張士誠的天佑通寶。 2.韓林兒的龍鳳通寶折二錢。 3.龍鳳通寶折三錢。 4.徐壽輝的天定通寶。 5.陳友諒的大義通寶。 6.大義通寶折二錢。 7.朱元璋的大中通寶。 8.大中通寶折二錢。 9.大中通寶折三錢。 10.大中通寶當十錢。

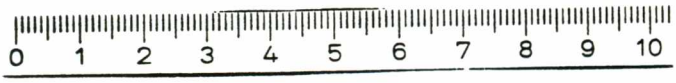


PLATE LXIX. LATE YUAN REBELS' COINS

1. Zhang Shicheng's Tianyou Circulating Treasure. 2. Han Lin'er's Longfeng Circulating Treasure 2-cash coin. 3. Longfeng Circulating Treasure 3-cash coin. 4. Xu Shouhui's Tianding Circulating Treasure. 5. Chen Youliang's Dayi Circulating Treasure. 6. Dayi Circulating Treasure 2-cash coin. 7. Zhu Yuanzhang's Dazhong Circulating Treasure. 8. Dazhong Circulating Treasure 2-cash coin. 9. Dazhong Circulating Treasure 3-cash coin. 10. Dazhong Circulating Treasure 10-cash coin.

6.2 Money's Purchasing Power

1. Jin's Monetary Inflation

The history of the Jin monetary economy may be divided into three periods: During the forty years before zhenyuan (1115-1153), they had no money of their own. They used old Liao and Song coins. Though there was frequent warfare during this period, there was no currency inflation since the invasions they launched

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did not encounter much resistance.

Every time they took a Chinese city, they also got hold of a large quantity of gold and silver objects. The expenses of their wars were born by the Chinese. During the jingkang period (1126-1127), when they attacked and entered Bianjing they obtained an incalculably large ransom.[1] Thereafter, China made a regular annual payment. Sometimes, in addition to gold and silver, it included heavy silk, oxen, horses, mules, and even books.

The second period of 53 years ran from zhenyuan 2 (1154), when the Exchange Certificates were issued until taihe 6 (1206), when the Mongols proclaimed their dynastic title Yuan, and the Jin halted use of coins. During this period, the Jin issued their own paper money, and minted copper coins and silver ingots. The currency was already suffering from a tendency toward gradual inflation.

The third period was the period of currency inflation from taihe on.

During the first decade or two of the second period, not many Exchange Certificates were issued. Coins were still the main instrument of circulation, and since little copper was produced within Jin territory, there was virtually a coin famine. At the beginning of dading (1161), Shaanxi was ordered to circulate iron coins from the old days. It was only because of their inconvenience that their circulation was later halted.

The governmental authorities simultaneously banned melting down of copper to make utensils, with not even casting of bronze mirrors being permitted, and issued official coins. New copper mines were also sought out to supply raw material for additional coins. By that time Southern Song's money was already undergoing inflation, and its monetary system had become extremely fragmented. Hence, when Southern Song emissaries came through Jin territory, they felt that Jin's monetary system was simple by comparison with their own.[2]

The reasons why coins were insufficient in number then, was not so much that their numbers were too few as that prices were high. During Tang times, a person's daily expenses could be met by 11 or 12 cash.[3] When Northern Song's Su Tongbo was in the Lingnan [i.e. the south], a family of six or seven had living expenses of only 100 cash per day, which would come to 15 or 16 cash per person,[4] but during Jin's dading 4 (1164), Emperor Shizong had the officials of his retinue rent some commoners' cottages, and each of them paid 100 cash per day as rent.[5] We can tell from this that money's purchasing power had somewhat lessened.

Later, issue of paper money increased, causing the real value of copper coins to become higher than their nominal value, and raising the cost of minting them.[6] As a consequence, copper coins began to be hidden away. This meant there was a coin famine while over 60 million strings of coins accumulated

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[1]For details of the gold and silver extorted by the Jin from Bianjing, cf. chapter 5.2.6, note 22.

[2]*Outline of the Nine Encyclopedias by Topics*: "During the qiandao period, the Right Shi Hu served as Travelling Emissary to the Jin state. Upon reaching Bianjing, he found there were Exchange Certificates. . . . At this time, China also used the sort of money that had the legal status of coins, but the southeast had Account Notes. There were also Sichuan Vouchers, Huai Exchange, Hu Account, with many different places turning them out, leading to constant difficulties. Coins were numerous and cheap. Their weights were not uniform. They [i.e. Jin], however, only used Exchange Certificates to circulate in Henan, and old Chinese coins in Hebei. This seemed simple by contrast."

[3]Tang Yuti, *Record of Responses to Ghosts*: "The paper merchant Chen Tai was supporting a monk, and did so for two years without wearying of it. Suddenly one day the monk asked, 'How many mouths do you have responsibility for? Is your money sufficient for them?' Chen replied, 'My dependents come to twenty persons. It takes about a hundred strings per annum to care for them in a rough and ready way."

[4]Shang Binghe, *Social Customs through the Ages*, quoting *Dongpo Grove of Records*' statement that in the Lingnan daily expenses were 100 cash (for six or seven people). In the Ming Dynasty, Zhang Xuan, *Western Garden Record of Things Seen and Heard* (written during the Chongzhen reign), 14, "Frugality," says: "When Dongpo was exiled to Qi'an, his daily needs were only 150."

[5]*Ruzhen-Jin History*,-6, "Annals of Emperor Shizong, first part," dading 4, 1st month, renyin: "There was an edict to the retinue to pay 100 cash per day as rent for commoners' cottages."

[6]*Universal Statutes Continued*, dading 29: "The Daizhou and Quyang mints annually produced more than 140,000 strings of coins, but their annual expenses reached more than 800,000. Hence they were closed down."

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in out of the way places without ever being taken out for use.[7]

Currency inflation got under way after Emperor Zhangzong took the throne (1189). At first they only increased

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official salaries. Then they abolished the seven year expiration date for Exchange Certificates, letting them circulate in perpetuity, and also halted minting of coins.

At first the Exchange Certificates retained their credibility since the quantity of them in circulation was about the same as the quantity of ready cash.[8] After mingchang 4 (1193), the quantity issued increased. Salaries of officials and soldiers were sometimes paid entirely in Exchange Certificates, and at this point difficulties appeared in maintaining their circulation.

Wages and expenses for transportation were somewhat high during the mingchang period [1190-96]. The price for transporting 100 catties 100 *li* by foot over flat ground averaged 146 cash. Over hilly terrain it was 155 cash. During Northern Song's yuanfeng period a transportation worker going to an outer province could only get 50 cash per day, and in monetary terms even this was considered high. The cost was three times higher within Jin's borders. The cost of transporting 100 catties 100 *li* downstream by water was 35 cash. Going upstream it was 39.4 cash.[9] As for the wages of labor, four iron smiths formed a team of laborers, and received 540 cash.[10]

Expenditures increased still more in cheng'an 1 (1196), because of embroilment with the Khitan. The following year, large denomination Exchange Certificates with face values of more than 1-string were no longer easily circulated, and so silver ingots were issued.

The face value of the silver ingots was 2 strings of cash per ounce, which was somewhat lower than the price under Southern Song. At that time (Emperor Ningzong's qingyuan 3 [1197]), the price of silver under Southern Song was around 2,300 cash per ounce. The price of 2 strings per ounce reflected the inflation already under way. Moreover, this was an official price. The market price was only 1,600 cash per ounce.[11] Therefore the face value of the Cheng'an Treasure Money ingots cannot be considered to have been low.

Later, illicit coining became rife, and the ingots were alloyed with copper and tin, causing merchants to close down the market. In cheng'an 5 (1200), the Cheng'an Treasure Money ingots were abolished. Both high and low within Jin society then were in agreement that the number of copper coins was insufficient, and so neither officials nor people were permitted to hold coins. They did not realize that this hoarding was a necessary consequence of the paper money inflation.

In taihe 4 (1204), probably because it cost 10 cash to produce just one Taihe Circulating Treasure small coin,[12] 2-cash and 3-cash coins were minted, but particular emphasis was placed on the 10-cash Taihe Heavy Treasure. By this time, silver was already in circulation among the people, and there are instances of rice being reckoned in terms of silver, with a *dou* selling for more than 10 ounces.[13]

Issue of paper money expanded as preparations were made for war with Song. By taihe 6, there was no demand for Shaanxi Exchange Certificates, and so the Jin simultaneously used 100,000 strings of coin to redeem a portion of the Certificates and issued small certificates, for which they had the people exchange large certificates, since the credibility of the small certificates was better.

However, people's faith had been shaken, and the government banned public discussion of monetary questions.[14] They simply printed large and

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[7] *Ruzhen-Jin History*, 48, "Treatise on Food and Money, 3," dading 28: "The Ruler said to the ministers, 'Recently, coins have been seen in the outer circuits in very large numbers. We have heard that there are more than 60 million strings worth, all piled up in out of the way places. Since they do not circulate, there is no increase from them for either public or private interests."

[8] *Ruzhen-Jin History*, "Treatise on Food and Money, 3," mingchang 3, 5th month: "An order from the Department of Ministries stated that Exchange Certificates in circulation among the people ought to be limited in quantity, and should not be greater in number than the quantity of ready cash."

[9] Sha Keshi, *Advice on River Districts*, latter part, "Transportation, Number 5."

[10] *Ibid.*, "Labor Rates, Number 4."

[11] *Ruzhen-Jin History*, "Treatise on Food and Money, 3": "In taihe 1, 6th month, the Prefect of Tongzhou, Lu Gou, said that circulation of Certificates remained strong among the people, but that the price of silver was not stable. The officially fixed price was 100,000 per ingot, but the market price was only 80,000."

[12] *Ruzhen-Jin History*, "Treatise on Food and Money, 3," taihe 4: "Liang Tang said that casting coins was terribly expensive. For the expenditure of 10 cash, 1 cash could be obtained."

[13] *Ruzhen-Jin History*, 108, "Biography of Hou Ji": "In taihe 4 . . . Ji sent up word that 'Recently famine north of the river has been terrible, with people being brought to the point of cannibalism. In Guanzhou and Zangzhou a *dou* of rice has been 10 or more ounces of silver."

[14] *Ruzhen-Jin History*, "Treatise on Food and Money, 3":

small Exchange Certificates intermixed, and required their use in place of coins for exchanges and secured loans of amounts larger than 1 string. Merchants were not permitted to carry more than 10 strings of ready cash.

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Any amount in excess of 10 strings had to be converted to Exchange Certificates.

At that time the Jin were still strong, or at least the Song were unable to defeat them. Hence Song was obliged to seek peace with them and pay an increased annual tribute. In da'an 2 (1210), "the defeated army's labor service brought 84 carts of rewards for the army. The soldiers were bloodied and the state ruined. There was no way to avoid bad practices. Exchange Certificates were so lightly demanded that they very nearly could not be exchanged in the market."[15] From then on, the Mongols pushed in step by step, and the currency inflation became ever more severe.

Emperor Xuanzong's moving of the capital to Daliang represented the Jin's equivalent of Song's earlier crossing to the south. In zhenyou 2 (1214), 2nd month, they issued large Certificates of from 20-strings to 100-strings face value. This amounted to a ten-fold inflation. When they went on to issue face values of from 200-strings to 1,000-strings, this constituted an inflation of one hundred fold.

At this point, though tax receipts had increased several fold, the value of money had fallen to one-thousandth of its former level, so that each string of Exchange Certificates was worth less than one cash.[16]

Most trade was being conducted in ready cash, but as the government was still intending to ban the use of coins, most of them were flowing out to Southern Song,[17] because at this point the Jin inflation was worse than Southern Song's. By this time (Emperor Ningzong's jiading 8 [1215]), Southern Song's Account Notes were no longer circulating much, and people were using coins for making exchanges.

In zhenyou 3 [1215], 7th month, the Yuan soldiers occupied Jiyuanxian, and the Jin changed the name of Exchange Certificates to Zhenyou Treasure Deeds, but they remained beset militarily from all sides. The Mongols attacked them; Li Quan pillaged them; and the Song soldiers also attacked them. There was no way to maintain the value of their money.

The Jin then resorted to to the Righteous Price system of price controls. The effect of this was to discourage people from bringing commodities to the capital at all. The Righteous Prices were changed twice a month, whereas the market prices did not remain the same from morning to evening. When the authorities forced limits on prices, the merchants closed their doors and no longer carried on business.

Treasure Deeds were originally issued in the greatest quantities in Hebei and Shaanxi Circuits, but the merchants brought many of them to Bianjing to use to buy gold and silver, which caused an enormous leap in prices in Bianjing. After a year, 1-string of Treasure Deeds was only worth a few cash. Reckoned in silver, however, prices were not at all high. In xingding 1 and 2 [1217-18], a horse only cost 5 ounces of silver.[18]

A great debate on the monetary system broke out in court at this point. The Executive Gao Qi and the Shaanxi Provincial Governor, Hui Ji, advocated exchanging the old for new certificates. The Prince of Pu, Shouchun, and the Defender of Longzhou, Wanyan Yu, opposed this, and instead advocated redeeming a portion of the old notes and temporarily halting their printing.

In principle, the latter position was, of course, the way to retrieve the situation, but as the war had not halted, there was no way to halt their issue or to redeem old certificates. And so, in the end, Hui Ji's

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"At this time, because the money had been frequently changed, the people often gathered in the markets to express their resentment. When the Ruler learned this, he gave orders to the Censorate, saying, 'Henceforth any who give information leading to the arrest of those who dare gather in the city markets to discuss difficulties in circulating the Certificates, will be given a reward of 300 strings of cash."

[15] *Ibid.*

[16] Liu Qi, *Treatise on Return to Concealment*, 10.

[17] *Ruzhen-Jin History*, "Treatise on Food and Money, 3," Xu Ding sent up a message saying: "In my humble opinion we must ban ready cash temporarily. On the pretext of giving orders on army requirements to the local offices, the people's strength may be measured and collected. Then money will circulate and the prices of goods will level off. As soon as coins are no longer used, limits will be set on the amount of wealth stored away by wealthy families to anticipate difficulties. The external abuses caused by frequent changes in Exchange Certificates have brought affairs to a parlous state. It no longer merely excites talk. Merchants frequently transport coins by boat to trade with the Yangtze and Huai regions, and many coins have entered Song territory. The Song people are pleased by this, but the Jin do not halt it."

[18] *Ruzhen-Jin History*, 107, "Biography of Zhang Xingxin," who in xingding 2 sent up a communication: "In the market of Taozhou, 100 ingots of silver will, it is said, fetch nearly 1,000 horses. . . . I have also heard that in frontier areas this Autumn, harvests have been sparse. When one gets silver for sale of a horse, one hurries to exchange it for grain."

position was adopted, and Zhenyou Circulating Treasure paper notes were issued, with 1-string of them equated with 1,000-strings of Treasure Deeds.

This represented an open confession by the government that the purchasing power of the paper money had fallen to one-thousandth of its original value.

By this time the Mongols were attacking the walls and moats on virtually a daily basis, and the Jin did not know when they could rest their troops. Because the annual tribute from China did not
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arrive, they launched an invasion of the south.

They did not realize that their own monetary system was already in dissolution. When they issued the Circulating Treasure note, they fixed its value at 4-strings to one ounce of silver, the same value as the Treasure Deeds. Thus, if an ounce of silver was worth 4,000 strings, the value of a Treasure Deed had fallen to one-two-thousandth of its original level.

Before xingding 5 (which ended in 1222), an ounce of silver could buy over 800 strings worth of Circulating Treasure. That is to say, the price of Circulating Treasure notes had fallen to less than half of one percent of its former level, and silver had increased in value relative to Exchange Certificates or Treasure Deeds by more than forty fold.

At the end of xingding 4 [1220], the Zhennan Regional Commandant, Wendihansijing, recommended permitting people to use silver in place of Certificates for paying taxes, and also that Xingding Original treasure large and small silver coins be minted to serve as rewards for the army. The authorities did not follow his advice.[19]

In yuanguang 1 (1222), a shift to issue of Xingding Treasure Spring occurred, each string's worth of which was equal to 400 strings of Circulating Treasure notes. Two-strings of it was worth 1 ounce of silver, but by the following year it had fallen so far in value as to be virtually useless, and the authorities merely limited the price of silver to no more than 300-strings of the Treasure Spring per ounce. If we match this with the earliest of the Exchange Certificates or Treasure Deeds, then the price of silver had jumped between 6,000 and 10,000 times.

The histories state that in yuanguang 2 [1223], 5th month, still more of them were made, with each string equated with 50 Circulating Treasure notes. I do not know what the meaning of this statement is. The *Investigation of Literary Remains Continued* says it refers to 1-string of Yuanguang Heavy Treasure being equated with 50-cash of Circulating Treasure. That would be unreasonable. Probably it was equated with 5,000-strings of Circulating Treasure or 50-strings of Treasure Spring.

They also state that Yuanguang Precious Money was made, but do not say what its face value was, but merely give its equivalent in silver.[20] It is possible that they abolished the old certificates.

It must have been at this time that the monetary system fell into chaos, and the people either shifted over entirely into silver for making exchanges,[21] or jointly to silver and heavy silk.[22]

From yuanguang 2 [1223], when the Precious Money was issued, to the time when Bianjing was occupied by the Mongols, a period of a decade, the Jin state fell into dissolution, and there was no way for its paper money to circulate at all. At the end of zhengda [1232], the Mongol soldiers besieged Bianjing. The Jin had no strategy for restraining them, and provisions inside the city were exhausted.

At the beginning of tianxing 1 [1232], a *dou* of rice was worth 4 ounces of silver, and by the 12th month, a *sheng* of rice was over 2 ounces of silver.[23] Even normally wealthy people would take their jewelry, toys, articles of adornment, jade rings and pendants and brocaded clothing to the Tianjin Bridge market stalls, hoping to sell them for the price of a *sheng* of rice or a plate of beans to assuage their hunger for just that day.[24] Liu Qi

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[19] *Ruzhen-Jin History*, 48, "Treatise on Food and Money, 3."

[20] *Ibid.*

[21] *Ibid.*: ". . . not long after it was circulated, silver daily became more expensive, and Treasure Spring daily cheaper, so that people expressed prices solely in terms of silver."

[22] *Record of Strengthening Barbarians Continued*, 2, the words of Yan Da to his wife: "A peasant from Niangxian, Sun Manor, named Yan Da, during the zhengda period bought an ox from a rural travelling merchant named Liu Jin, but Yan grew sick and died. . . . On his deathbed, he wanted to see his wife and mother. The wife and mother hurried to his side, clinging to each other, and crying. They asked, 'Why must you die?' He replied, 'My death is fated by Heaven, but I have been cheated by Liu Jin. Previous to this, when we were bargaining over the price of the ox, did we set the price in heavy silk or in silver?'"

[23] *Ruzhen-Jin History*, 119, "Biography of Tiegenushen": "At the beginning of tianxing . . . nearly several hundred thousand refugees had been gathered. A *dou* of rice was worth 4 ounces of silver." *Ruzhen-Jin History*, 115, "Biography of Wanyan Nushen": "Tianxing 1, 12th month . . . At this time there was no communication between the inside and outside of Bianjing. A *sheng* of rice was 2 ounces of silver. The food of the masses was exhausted, and the bodies of those dead from starvation could be seen everywhere."

traded an exceedingly fine fur robe which had been kept by his family for eight *sheng* of rice. He exchanged a gold hairpin for a slab of beef.

The histories mention the issue of Tianxing Treasure Account in Caizhou during tianxing 2. Liu Qi says that the Yuanguang Precious Money was the last of the paper moneys, since he was himself in Bianjing, and did not know what was going on in Caizhou. During Southern Song's duanping 1 [1234], Wu Qian discussed the Jin inflation, and said that by their last years 100 strings of paper money could only buy a bowl of noodles.

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At the beginning of Yuan, Yelü Chucai said, "10,000 strings only exchanged for a single cake." I do not know what type of paper money he was referring to.

There were also the so-called small 10-string and large 10-string Tongtian Treasure Account. These labels could refer to variant forms of a single type of paper note, but they could also be two different paper moneys with the same face value circulated simultaneously, and having different purchasing power. The reference to Tongtian Treasure Account is probably an error for Tianxing Treasure Account.

To sum up, the Jin monetary inflation was unprecedented. The number of different paper moneys was very great, they were frequently changed, and after enough such changes everyone found it hard to remember them. Hence the statements of contemporaries can only be taken as correct in spirit, and not as the literal truth.

As the Tianxing Treasure Account was issued in Caizhou, and came in four denominations in silver from 1 to 4 *qian*, it must have been a separate paper money. Hence it had no exchange price with other paper moneys. It was then nearly a decade since the issue of the Yuanguang Precious Money, which by then had, I suspect, long since gone out of use.

The Jin monetary inflation provides an excellent historical lesson, since in military terms, the Jin never weakened, and retained their self-confidence. Toward Southern Song they always maintained an arrogant attitude, and always managed to defeat the Song. It was only because their military expenditures became too large, so that they had to add an ugly monetary inflation to their tax burden, that the Jin rulers finally made it so hard for people to maintain themselves that producers fled and their warriors lost their spirit of combat. Only then were they destroyed.

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2. *The Early Yuan Zhongtong Certificate Inflation*

Yuan Emperor Shizu brought a long needed unity to the monetary system. During the more than three centuries since the Five Dynasties, China's monetary systems had been in a chaotic state. In the course of establishing their state, the Mongols cut through the Gordian knot to make such unification a priority.

Naturally they could not undertake to continue the chaotic monetary systems of the peoples they conquered, and this was especially true of their inflated paper moneys. The Jin paper money may be said to have already lost all its purchasing power.

In Emperor Xianzong's 1st year (1251), from the various certificates the Mongols had themselves issued in the north, they selected for universal use the Silver Certificate legal tender system, with silver backing to maintain its purchasing power. These were later redeemed at par with Zhongtong Certificates.[1] As of zhiyuan 12 (1275), the quantity of Zhongtong Certificates issued was only some 16 million ingots worth.

After the Mongols had occupied the south (zhiyuan 13, Song Emperor Qianyou's deyou 2, 1276), there were two schools of thought as to how to rectify the Southern Song Exchange Note and Account Note systems.

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[1] *Yuan History*, 160, "Biography of Liu Su": "Zhongtong 1 . . . At this time the Zhongtong new certificates were issued, and Certificate Silver was no longer used. Because some 8,000 strings of Silver Certificates had been circulated outside, both public and private interests were agitated, and no one knew what had been determined. Su recommended three possible policies: The first was to continue use of the old certificates. The second was for new and old to be used together. The third was for the officials to use the new certificates to redeem the old on a one for one basis. The Department of Ministries accepted the third recommendation, and subsequently sent down 500,000 strings of certificates."

Wang Yun, *Middle Hall Affairs Record*, first part: "The Department of Ministries announced issue of the Zhongtong Original Treasure Exchange Certificates in a proclamation to the circuits, the text of which stated . . . 'the old certificates and white checks originally circulated by the circuits may only be redeemed up to the number originally issued from the official treasuries, and must not damage the interests of the masses. The certificates must be redeemed on the day they are brought in, and not reissued for circulation."

New Yuan History, 87, "Treatise on Food and Money": "When Yuan was established at the beginning of zhongtong, Wang Wentong took charge of the administration. The Exchange Certificates of the circuits were entirely abolished, and Zhong-

One school, led by Ahemate (or Ahema), Chen Hangui and Yang Cheng advocated used Zhongtong Certificates to redeem them. The other school, led by Yao Shu, Dangongfu and Bayan did not advocate redemption.

In the end the former procedure was adopted, and a 1-string Zhongtong Certificate was equated with 50 strings of Account Notes.[2] Such a rate of exchange probably set the face value of Account Notes very low, which was a normal device for a conqueror to employ. It was for just this reason that a number of people were unwilling to circulate Communicating Medium and Account Notes. Even forty years later a large quantity of these currencies remained in people's hands, and sometimes even were circulated.[3]

The Mongol policy was to zealously promote the use of paper money. The results of this policy were at first somewhat better than the Song's and much better than Jin's experience, but they were eventually unable to maintain stability in the value of their money. In other words, even under the Yuan Dynasty there appeared the phenomenon of currency inflation.

The Mongols paid attention to how the Jin monetary system was destroyed, because their government employed Yelü Chucai, who had served as an official in the court of the Jin Emperor Zhangzong, and understood the inflation Jin had suffered. He advocated setting a limit of 10,000 ingots' worth for the printing of Exchange Certificates.[4] The Mongols were also very conscientious about maintaining backing, keeping reserves of almost 100 percent in hard money. If there was no gold or silver to back them, they would not permit the issue of new certificates.[5] During the early period, money's value was fairly stable.

For example, the price of grain

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was 600 cash per picul in zhiyuan 3 (1266). The following year it was 450. In around zhiyuan 7, rice cost 1-string 400 cash per picul.[6] Such low prices were, however, confined to the first decade or two.[7] Later, prices slowly rose.

Naturally, war causes inflation. It is no wonder that Ahemate both increased taxes and increased the issue of paper money to meet deficits.[8] This is fully demonstrated by the rise in the quantity issued.

The quantity issued in zhiyuan 10 [1273] was only 110,000 ingots' worth. The following year there was an increase to 240,000-250,000 ingots. The year after that there was a further increase to nearly 400,000 ingots. In zhiyuan 13, because the conquest of Southern Song had been completed, the quantity issued increased to over 1.4 million ingots, and because of fears that the price of paper money would fall, use of copper coins was banned.

Inflation was already being noticed by zhiyuan 17 (1280). Officials of the Department of Ministries advised restricting the circulation of Certificates, with all rewards and gifts to be made in cloth, and taxes to mostly be paid in paper notes. But expenditures were not reduced, and the degree of inflation only worsened. The purchasing power of a 1-string Certificate only came up to that of 100 cash of bygone days.[9]

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tong Original Treasure were printed."

[2] *Yuan Literature Categorized*, 40, "Records of Prefaces of Major Laws Through the Generations": "[Zhiyuan] 13. The South was pacified. . . . Fifty strings of Song Account Notes could be exchanged for 1-string of Zhongtong Certificates." Lu Youren, *Yanbei Miscellaneous Record*, latter part: "Fifty strings of Song Account Notes could be exchanged for 1-string of Zhongtong Certificates."

[3] *Yuan Decrees and Regulations*, 20, "Certificates."

[4] *Investigation of Literary Remains Continued*, 9. *Ming History Draft*, "Biographies, 45, Biography of Fan Ji," says it was to make 10,000 ingots' worth per *day*.

[5] *Yuan History*, 125, "Biography of Buluhaiya."

[6] *Complete Collected Works of Mister Qiurun*, 88, "Petition on the Commutation of Salt into Grain and Cash Upon the Official Surrender of Danzhou, Guzhou and Anzhou," states that the price of grain in zhiyuan 3 was 0.6 ounces per picul, and that the following year it was 0.45 ounces. In "Petition on the Affairs of Danzhou, Zhaozhou and the chief of Pingcexian, Zheng Heng" (which dates to c. zhiyuan 7), he says: ". . . for one *dou* of white rice, those without rice give up gold to the amount of 0.14 ounces." That amount of gold would have equalled 140 cash in Certificates.

[7] *Yuan History Newly Compiled*, "Treatise on Food and Money": "When Yuan was established during zhongtong, . . . Zhongtong Original Treasure were printed. . . . They were circulated for 17 or 18 years without falling or rising prices."

[8] *Yuan Literature Categorized*, 58, "Li Jian's Spirit Road Stele of the Department of Ministries Left Executive Lord Zhang," zhiyuan 13: "Ahema was in charge of the state, set up the Proclamation Office, and ran the Board of Revenue in Dongping and Daming. It did not disturb the people, but merely had the function of printing mulberry paper money."

[9] *Complete Collected Works of Mister Qiurun*, 90, "Thirty-five Things for the People's Convenience: On the Certificate Regulations": "When I observe the Original Treasure Exchange Certificates, their circulation among the people is not blocked, but goods are heavily demanded and Certificates are lightly demanded. It is said that 1-string at present is only equal to 100 cash of former days. If they have become as empty as this, there may indeed be said to be a crisis!" He gives several reasons for this. The first is that since zhiyuan 13, all the silver backing for

Because the issue was excessively large then, people frequently brought damaged Exchange Certificates to the Certificate Treasuries to exchange for new ones. The original handling charge for this service was 3 hundredths per ounce, or 3 percent, but redemption was limited to 400 ingots' worth per day, and sometimes the local officials did not even open the Treasury.[10] As a consequence, the market was flooded with damaged notes.[11]

At times the officials and clerks committed acts of extortion, which still further undermined popular trust in the Exchange Certificates, and simultaneously increased popular demand for gold and silver.

According to regulations, people could bring Exchange Certificates to the Certificate Treasuries for redemption in gold and silver, but the officials and clerks of these institutions frequently did not buy and sell at the official prices. They even fabricated names of purchasers of gold and silver so that they might themselves redeem Certificates at the official rate, and then sell the metal at a higher price. This created a black market in gold and silver, which caused the prices of these metals to rise still faster.

In zhiyuan 19 [1282], 10th month, the authorities sent down an edict rectifying the Certificate rules. The Department of Ministries promulgated "Regulations for Regularizing the Circulation of Certificates." The contents of this document focused on the above situation.

The main point was a strict prohibition of private dealing in gold and silver. Specific punishments were fixed for official abuses. As before, Certificate Treasuries would buy and sell gold and silver. Silver would be purchased at a price of 1.95 ounces worth of Certificates for an ounce of the white silver, and would be sold at a price of 2 ounces worth of Certificates. An ounce of flower silver would be bought for 2 ounces worth of Certificates and sold for 2.05.[12] An ounce of gold would be bought for 14.8 ounces worth of Certificates, and sold for 15.

Nevertheless, those in charge did not after all understand that the only way to stabilize the value of money was to halt warfare and reduce unproductive expenditures, so that the issue of paper money could be reduced. In actuality, they were still conscripting provisions to prepare

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for war. In the south sailors were being conscripted and ships built, causing people to lose their livelihoods, and crowds of "thieves and bandits" to arise. Though there were men who offered warnings about all this, they were not paid attention to. The higher expenditures went, the lower fell the value of money, and with the monetary system in disarray, official salaries had to be increased.[13]

By zhiyuan 21 (1284), high prices were causing difficulties for people's standard of living which could no longer be ignored.[14] Khubilai told the Department of Ministries to regularize the certificates, and Sengge (or Sangge) recommended Lu Shirong for the task. Lu Shirong proposed a full program.

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the notes had been removed. The second is that too many of them had been issued. The third is that anticipatory buying of goods had flourished. This was the phenomenon of the flight into goods. The fourth is that officials and clerks were committing abuses. They were creating difficulties which hindered the exchange of old certificates for new ones, which caused the notes to be divided into classes. He advocated using silver to redeem certificates, or the issue of new certificates at an exchange price of one new for two old, so as to draw old certificates out of circulation.

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[10] *Yuan Decrees and Regulations*, 20, "Board of Revenue," 6, "Certificates: Investigation of Certificate Treasury Closings."

[11] *Yuan Decrees and Regulations*, "Certificates."

[12] *Yuan Decrees and Regulations* makes it 2.5 ounces.

[13] *Yuan History*, 13, "Annals of Emperor Shizu, 10," zhiyuan 21, 6th month, renzi: "Salaries of officials and clerks were increased by 100 percent. ; Those making less than 1 ingot's worth were increased by 50 percent." *Yuan History*, 96, "Treatise on Food and Money, 4, Salaries": "In [zhiyuan] 23, the salaries of inner and outer officials and clerks were again ordered increased by 100 percent. Expenditures increased 50 percent." *Yuan Decrees and Regulations*, 15, "Board of Revenue," 1, "Salaries: Increased Expenditures for Officals' and Clerks' Salaries," says that it was in zhiyuan 22, 2nd month.

[14] Zheng Yuanyou, *Suichang Miscellaneous Record* (written during the zhizheng era): "At this time, Jianghuai Province was changed into Jiangzhe Province (According to *Yuan History*, 62, "Treatise on Geography," in zhiyuan 21, Jianghuai Province had its name changed to Jiangzhe Province.) . . . Whenever his lordship went out to see the men and women of Hangzhou, he noticed that it retained something of the air of its old status as capital. When in the midst of a crowd, his lordship would insist on stopping his sedan chair or reining in his horse and admonish them, saying, 'You people are still under a cloud. Now there is no longer a southern dynasty. You are diligent, frugal and energetic, and yet still are not concerned that you cannot pay your taxes. How can you keep going about in this free and easy way?' At this time the students of the three schools were in terrible straits. His lordship went out and insisted on confronting them. He called out, 'Today there is hunger, and killing of examination graduates.' Those gathered hooted at him. His lordship insisted on having them brought forward, took a large purse of small Zhongtong Certificates, and gave it to them. His lordship subsequently gave his word that a school for nourishing scholars would begin under his sponsorship."

Superficially, his plan seemed to tilt toward the fiscal side, but in fact stabilization of the value of money was intimately linked to fiscal policy, since monetary inflation was the consequence of fiscal weakness.

Lu Shirong's plan for reforming the currency may be summarized under five headings: 1) Restoration of the people's freedom to buy and sell gold and silver; 2) Issue Damask Notes and mint Zhiyuan coins; 3) Increase the Treasury's income so as to constrict the size of the money supply; 4) Broaden pasturage so as to increase production; 5) Establish Balanced Standard Revolving Emergency Treasuries to maintain Ever-normal Granaries in which supplies would be accumulated to stabilize the value of paper money and keep prices level.

The heart of the plan lay in increasing the national treasury's income, as for example by levying temporary taxes which ought not otherwise to have been levied, restoring tolls and excises on alcoholic beverages, putting overseas trade under official management, collecting excise taxes from merchants, and official manufacture of iron utensils. He also advocated selecting merchants to manage these activities, and not necessarily disinterested parties. These policies raised a number of enemies against him.

Lu Shirong was an outstanding specialist on fiscal affairs. His defeat was perhaps due to obstruction by those in power, which kept his policies from being properly put into effect. It was perhaps also because the people employed were not good that the anticipated success was not obtained. Perhaps the time given him was insufficient, since it was only four months after he made his proposals that he was impeached and imprisoned. The logic of his position was, however, very robust. [It might also be argued that sharp contraction of government expenditures would also have had a deflationary effect by allowing reduction of new paper money issue, but Lu would no doubt have been purged even sooner by the privileged beneficiaries of such expenditures. EHK]

After Lu Shirong's death, the paper money system remained poorly run, prices continued, as before, to rise, and expenditures, as before, continued to increase. The size of the issue increased to over 2 million ingots' worth.

In zhiyuan 24 (1287), soldiers were again used abroad. From the first day of the year to the middle of the 2nd month, 500,000 ingots, the equivalent of 25 million strings were expended. This was ten times more than the entire government receipts for one year during the tianbao era [742-46] of Tang, or twice the annual tax receipts during the jianzhong era [780-84].

In the end new Certificates were issued. These were the Zhiyuan Original Treasure Certificates, 1-string of which was equated with 5 strings of Zhongtong Certificates. Evidently the authorities were acknowledging that prices had risen at least five fold. Although they intended to redeem the Zhongtong Certificates when the Zhiyuan Certificates were issued, in the end both types of notes circulated simultaneously, and so it was inevitable that price rises would be still more severe.

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There were people then who understood that the reason why the notes were depreciating in value was that they could not be redeemed for cash, and they called on the government to redeem them for gold and silver.[15] Others said that if the government merely used silver to redeem Certificates, this would reduce the quantity of Certificates to the point where not enough of them would remain in circulation, and people would insist on taking silver to the Certificate Treasuries to exchange for Certificates, and thus silver would return to the national treasury.[16]

The degree of inflation of the currency can be made clear by the figures for the amounts issued. The histories contain specific records of the quantities issued during the Yuan Dynasty.

Expiration dates were no longer placed on notes then, and so the amount of paper money in circulation accumulated over time. Though a portion of it was lost or exchanged at the Balanced Standard Treasuries every year, there were, after all, limits to the amount so lost. Therefore, if a year's increased issue exceeded the amount lost during the previous year, the amount in circulation would grow ever larger.

When an issue of Northern Song's Exchange Notes reached their expiration date, about 20 percent were not brought in for redemption. This was one form of loss, but because there were so many different issues expiring at different times, some people felt it was not worth taking the trouble to sort them out. If the quantity involved was not large, they preferred to absorb the loss, and did not exchange them for new certificates. So the Song rate of loss was somewhat higher than Yuan's would have been.

If we assume that the actual rate of loss during Yuan was 5 percent, then in zhiyuan 23 [1286], the quantity of Zhongtong Certificates in circulation was about 147 times the quantity first issued in

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[15] Zhang Zhihan, *Western Cliff Collection*, 13, "Advice on Mulberry Paper Money."

[16] *Complete Collected Works of Mister Qiurun*, 90, "On Certificates."

zhongtong 1 [1260]. On a per capita basis, this was 9,197 cash, a figure far in excess of those for earlier periods.

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YUAN DYNASTY PAPER MONEY ISSUE (1)

Year	Size of Issue (ingots)	Cumulative Total[17] (ingots)	Amt/capita[18] (cash)
zhongtong			
1 (1260)	73,352	73,352	488
2	39,139	108,823	726
3	80,000	183,382	1,220
4	74,000	248,213	1,654
zhiyuan			
1	89,208	345,010	2,300
2	116,208	443,967	2,960
3	77,252	499,021	3,330
4	109,488	583,558	3,890
5	29,880	584,250	3,894
6	22,896	577,933	3,852
7	96,768	645,804	3,229
8	47,000	660,514	3,303
9	86,256	713,744	3,569
10	110,192	788,249	3,941
11	247,440	996,276	4,981
12	398,194	1,344,656	2,822
13	1,419,665	2,697,088	2,293
14	1,021,645	3,583,879	3,047
15	1,023,400	4,428,085	3,765
16	788,320	4,795,000	4,077
17	1,135,800	5,391,325	4,584
18	1,094,800	6,216,559	5,286
19	969,444	6,876,175	5,847
20	610,620	7,142,986	6,074
21	629,904	7,415,741	6,306
22	2,043,080	9,088,034	7,728
23	2,181,600	10,815,232	9.196
24[19]	83,200	10,357,671	8,807
24[20]	5,088,28	15,445,956	13,134

[17]This column's figures are obtained by adding 95 percent of the existing quantity of Certificates to the figure for that year's new Certificates.

[18]I base the Yuan Dynasty population figures mainly on the *Yuan History*, 58, "Geography, 1." For zhiyuan 6 and before, I use a figure of 1.5 million households. For zhiyuan 7 to 11, I use a figure of 2 million households. By zhiyuan 12, they had expanded into the south, and so I increase the number of households to 4,764,077. I assume five persons per household. In zhiyuan 13, they completed the conquest of the south, and the population of the entire country was 58,834,711. For the years following, I continue to use this figure, even though there must have been some slight shifts year by year.

If, however, we take the quantity issued in zhongtong 1 as our baseline, this increase is not very significant, since at that time the Mongols' rule was limited to the north, the population of which was only 10 percent of the whole nation's. The north was also backward in its production, and therefore required only a small amount of money.

Logically, if we wish to surmise changes in the value of money from increases in its quantity, we should, of course, take zhiyuan 12 or 13 [1275, 1276] as our base year, since it was then that the Mongols completed their takeover of the south, and the quantity then issued may be taken as representative of the demand over the entire nation.

If we take zhiyuan 12 as our base year, then the amount in circulation by zhiyuan 23 represented a four-fold increase. If we take zhiyuan 13 as our base year, then there had only been a three-fold increase. This, however, refers to the quantity issued by the government. There may also have been counterfeits in circulation.

In actuality, by zhiyuan 23 the quantity of Zhongtong Certificates had probably reached five times the number of zhiyuan 12 or 13. By zhiyuan 12 or 13, however, the amount issued had already been inflated to pay for the large scale military movements. The quantity of Zhongtong Certificates in circulation then must already have exceeded the amount the people of the entire country would have demanded under normal circumstances.

The figures in the table assume that when damaged notes were exchanged for new ones, these new ones are not included in the figures for the new issue. Otherwise, the annual issue figures would have to be reduced by the number of worn certificates brought in for redemption before they could be added to the cumulative total.

To what degree did prices ultimately rise? The histories do not contain definitive records on this point. In zhiyuan 21 [1284], when official salaries were rectified, they were increased by 50 percent. Of course this figure cannot be taken as representative of the degree to which prices rose. When people

[19]Including only Zhongtong Certificates.

[20]Including that year's newly issued Zhiyuan Certificates.

bought rice to make stillbeer, the official price per picul was originally a 1-string Certificate. Lu Shi-
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rong's reform placing an excise on fermented goods changed this to 10 strings, and in zhiyuan 22 [1285], 9th month, it was reduced back to 5 strings.[21] Therefore, the cost of rice rose at least five fold, which corresponds to the face value in old notes of the Zhiyuan new Certificates.

In fact, however, prices did not merely rise five-fold. Wang Yun said that before the issue of the Zhiyuan Certificates, a 1-string Certificate was only worth 100 cash of former days. After the change-over to the new Certificates, Zhao Mengfu said that over the course of some twenty years, the Certificates had fallen several dozen fold in value.[22] He also said, "to wine and dine a guest costs several dozen times more than before."[23] Obviously, prices must have risen from a dozen or so to several dozen fold.

[21] *Yuan History*, "Annals of Emperor Shizu, 10," zhiyuan 22, 9th month.

[22] *Yuan History*, 172, "Biography of Zhao Mengfu": "There was an edict gathering the officials in the Board of Punishments to discuss the laws. Most wanted to set the punishment for those stealing more than 200 strings worth of Zhiyuan Certificates at death. Mengfu said, 'When the Certificates were first made, they were backed by silver, and the empty was matched by the real. Now, after twenty odd years, supply and demand have diverged by several dozen fold. Hence the Zhongtong were changed into Zhiyuan. After another twenty years, the Zhiyuan must suffer the same fate as the Zhongtong.'"

[23] *Yuan History*, "Biography of Zhao Mengfu." *Pine Snow Studio Collected Works*, "Appendix: Petitions of Yang Zai Duke Zhao": "Year dinghai [zhiyuan 24], 6th month, given rank of Fengshun Daifu as Executive of the Board of War, his lordship managed the postal service of the Empire, and was only to spend on food and drink for guests on mission 2,000 ingots in Zhongtong Certificates. This amount had been fixed in zhiyuan 13. He reckoned that present prices had become so high that expenses had diverged several dozen fold from those of that time. He requested that the Department of Ministries increase his expense account to 20,000 ingots."

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3. *The Zhiyuan Certificates' Depreciation*

When the Yuan rulers sent soldiers beyond the borders, domestic resistance was evoked. Rebellion first appeared among such peoples of the southwest as the Jinchi of Yunnan, the Babai Xifu, and the Miaolao, who rose to the attack one after the other, and whom the Yuan rulers were unable to repress. Military expenditures rose uninterruptedly, and not only did confidence in the regime fall, even the very authority of the government was shaken.

The currency inflation then was not improved by the issue of the Zhiyuan Certificates; rather this worsened the situation. The authorities' talk of so-called primary and secondary moneys was simply a pack of lies, because the first year's issue was more than a million ingots' worth of Zhiyuan Certificates. Added to the 5 million ingots' worth of Zhongtong Certificates, these represented an unprecedented quantity.

If they had withdrawn the soldiers, and given people the leisure to restore their productive forces, the value of the money could have spontaneously stabilized, but unexpectedly they launched yet another major invasion of foreign territory, which kept the peoples of the southwest in an uproar. Ye Li put it well when he observed, "Far off places and distant barbarians, to obtain them is without benefit; as soon as armies are put on the move, expenses mount by huge sums."[1]

After the Zhiyuan Certificates were issued, we hear of nothing but price increases. First, the price of gold rose. Zhiyuan Certificates were priced at one for five Zhongtong Certificates. An ounce of silver was formerly 2 strings of Zhongtong Certificates. Now it remained at 2 strings worth of Zhiyuan Certificates.

An ounce of gold, however, which was previously 15 strings of Zhongtong, was now 20 strings of Zhiyuan Certificates. Therefore, gold was either five times or six or seven times higher. In other words, the price of gold rose in terms of both silver and paper money.

In zhiyuan 26 (1289), the quantity issued was 1,780,000 ingots' worth of Zhiyuan. When added to Zhongtong notes, the total approached 9 million ingots. Sengge recommended raising the price of a salt voucher from 30 strings of Zhongtong to 50 strings (1 ingot), and of a tea voucher from 5 strings to 10 strings.[2]

In zhiyuan 29, the year a fleet of a thousand ships was sent off, Wanze observed that a year's budgeted income was 2,978,305 ingots, and that as of the 10th month, expenditures were already 3,638,543 ingots. Of course this deficit could only be met by additional issue of paper money.

According to Sengge, when issuing the Zhiyuan Certificates, they originally intended to redeem the

[1] *Yuan History*, 173, "Biography of Ye Li."

[2] *Yuan History*, 205, "Biographies of Sengge and Badan."

entire amount outstanding of Zhongtong Certificates, and so required that half the entire national salt gabelle be paid with Zhongtong Certificates. By zhiyuan 26, however, they realized that for the time being, the Zhongtong Certificates could not be entirely redeemed. Perhaps the authorities had no intention of ever redeeming them.

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Profligate issue of paper notes not only caused prices to rise, but also raised obstacles to the circulation of money. Because Yuan Dynasty paper money did not employ expiration dates, the notes circulated in perpetuity, and as the quality of their paper was not good, they were easily damaged. Hence, just as the Jin did, they had a system for exchanging worn notes. But because their issue was too great, the number of worn certificates was also large, and the Certificate Treasuries lacked enough new Certificates to exchange for them, or perhaps it was that the authorities deliberately kept the supply inadequate.

For example, in zhiyuan 19 [1282], 5th month, because the Certificate Treasury in Dadu (modern Beijing) was only permitted to exchange 400 ingots' worth per day, and sometimes did not even open, business was brought to a halt, prices rose, and so they were obliged to allow a daily exchange of one or two thousand ingots' worth. The problem was not, however, resolved, because exchange for new Certificates required payment of a labor and ink fee of 3 percent. Sometimes a Balanced Standard Treasury was too distant, and the officials could still practice extortion of merchants, which prevented damaged Certificates from being exchanged for new ones.

As a consequence, there occurred discrepancies in prices. For example, during zhiyuan 27 [1290], in Jianghuai and Zhexi, if a 2-string Zhongtong Certificate had its border and denomination inscription entirely intact, it could be used at a price of 1-string 200 cash. If it was so severely damaged that no clear trace of the inscription remained, then it could only circulate at a value of 800 cash until it could be sent to the official treasury to be exchanged for a new note.[3] Later the inconvenience of damaged notes drove the people to use of barter, and even to privately issued tea checks, noodle checks, bamboo tallies, wine tallies, etc., as token moneys to serve as instruments for circulation.[4]

There is a brick from the Taihe [Great Harmony] Temple in Chongrenxian, Jiangxi Province, which bears a price list dated zhiyuan 30, 8th month.[5] The price of rice is given as 640 catties of Zhongtong per army *dou*, with the official weight of 500 Certificates. The meaning of this is not clear.

A bolt of hempen cloth was commuted to 1 picul for tax paying purposes. The price of heavy silk was 1 ounce's worth of Zhongtong for 4 *chi* in the local measure of cloth. A bolt of white linen was 7 strings of Zhongtong Certificates, which would come to 2 *zhang* and 5 *chi* in the local measure. Hempen cloth was 2 strings worth of Zhongtong Certificates per bolt. As for wages, a tile worker and a carpenter both made 1 string of Zhongtong Certificates per day.

The inscription on the brick clearly states that "prices have never risen so much as this," and these were rural prices.

After Emperor Chengzong (Tiemuer) ascended the throne, internal disorder began. During yuanzhen 1 (1295), reports from Yunnan stated that the Jinchi Rebellion could not be put down, and that the Babai Xifu were also resisting militarily.

The cost of rice in the capital rose, and the government set up its own retail establishments for selling rice. White non-glutinous rice was sold for 15 ounces worth of Zhongtong Certificates per picul, white rice for 12 ounces, and glutinous rice for 6.5 ounces.[6] The government's price schedule was 5 ounces lower than the market's price for white non-glutinous rice, and 3 ounces lower for white rice. Evidently the cost of rice had gone up by more than a dozen fold.

In dade 3 (1299), a Department of Ministries official said that for years "the expenses for public slaves had amounted to an enormous sum, and the annual income figure had been less than half of annual expenditures." The rest had to be covered by borrowing, which I surmise influenced

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the monetary system. In dade 5, however, they again sent the Yunnan army out to put down rebels, and because of this a local Yunnan official, Song Longji, led the Miaolao and Zijiang peoples into resistance, which included an attack on Guizhou.

During dade 6 and 7 [1302-3], probably in response to Haidu, there was a great increase in the issue of paper money, and in dade 7 inner and outer officials had rice added to their salaries.[7] Naturally, this was related to the fall in the value of money.

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[3] *Yuan Decrees and Regulations*, 20, "Board of Revenue," 6.

[4] *Yuan Decrees and Regulations*, 20, "Board of Revenue," 6, zhiyuan 31, 3rd month.

[5] *Cultural Relics*, 4 (1963), p. 52.

[6] *New Yuan History*, 89, "Relief Measures." The *Yuan History* gives a price of 13 ounces for white rice.

[7] *Yuan History*, 96, "Treatise on Food and Money, 4": "In dade 7 rice began to be added to the salaries of inner and outer

In the 8th or 9th month of dade 11, however, after Emperor Wuzong had assumed the throne, the head of the Department of Ministries spoke of the depletion of the Treasury. He said that for years the annual national income had been 4 million ingots. The central government received 2.8 million ingots, and paid out about the same amount. By the 8th or 9th month of that year 4.2 million ingots had already been expended, and an additional 1 million ingots had been obligated but not yet expended. This was double annual income. They eventually used up more than 7.1 million ingots of the Certificates' backing.

In zhida 1 (1308), 11th month, official salaries were again adjusted. Salary rice was abolished, and salaries were paid in Zhiyuan Certificates prorated in terms of Zhongtong Certificates. That is to say, salaries increased five fold. Total annual expenditures reached 10 million ingots, or 500 million strings, which was still two times annual income. The authorities sold rice for 25 strings of Zhongtong Certificates per picul.[8] This represented approximately twice the level of prices during yuanzhen 1 [1295].

In the 11th month of the year Emperor Wuzong ascended the throne (dade 11) [1307], some advocated using silver certificates and copper coins, but this was not done, probably because the officials of the Department of Ministries did not approve.

During zhida 2 (1309), changes in the paper money system were again debated, and as a consequence the Zhida Silver Certificates were issued, which raised [official] prices five fold in one jump.

Simultaneously, use of copper coins was restored. In addition to coins from earlier times, Great Yuan Circulating Treasure and Zhida Circulating Treasure were minted.

Zhongtong Certificates were to be redeemed within one hundred days. All payments were to be expressed in terms of Zhida Silver Certificates. The price of a salt voucher rose to 4 ounces worth of Zhida Silver Certificates, the equivalent of 100 strings of Zhongtong Certificates, which was twice the level fixed by Sengge in zhiyuan 26 [1289].

This change was, however, short-lived, because Emperor Wuzong died only a few months later. When Emperor Renzong assumed the throne, he overturned Wuzong's reform, abolished the Zhida coins, and withdrew the Zhida Silver Certificates. He said they were being withdrawn because their quantity was too great, and this was putting upward pressure on prices. There may have been some truth to this explanation. Copper coins were abolished because it was said they could not be supplied in adequate numbers. In actuality, because the value of money was unstable, copper coins were being hidden away.

None of these reforms and counterreforms managed to stabilize the purchasing power of the paper money. There were obsequious officials like Li Meng, who understood how the mind of the great Khan worked. Just after the withdrawal of the Zhida Certificates had been proclaimed, he said "prices are falling as quickly as people discern the Sage's spiritual transformation."[9] Fortunately, the Great Khan was not that stupid.

Nevertheless, it is evident that the problem of prices then was a severe one. In the 11th month of that same year (zhida 4), Li Meng said

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that over 6 million ingots worth of Certificates were being used each year then. Several million ingots were required for earth and wood for garrison repairs. Rewards for those who surrendered required over 3 million ingots. Army requirements on the northern frontier added another 6 or 7 million ingots, but there were only some 11 million ingots in the treasury. With this sort of red ink fiscal policy, what else could they do but issue more paper money?

As for issue of paper money after zhiyuan [1295], there was a great increase because of war in Yunnan during Emperor Chengzong's dade 6 and 7 (1302-1303). In zhida 3 (1310), 1.45 million ingots worth of Zhida Silver Certificates were issued. This was equal to over 36 million ingots in Zhongtong Certificates. This represented a sudden increase in the quantity of money. Though they were withdrawn the following year, the quantity of Zhiyuan Certifi-

officials. All personnel with salaries of less than 10 ounces . . . were to be given 1 *dou* of rice for each 10 ounces. For those with salaries of more than 10 but less than 25 ounces, each official was to be given 1 picul of rice. For the remainder with higher salaries, for each ounce's worth of salary, they were to be given 1 *sheng* of rice. If there was no rice, then the equivalent in money at the price of the time was to be given, except that no more than 20 ounces per picul was to be paid, no matter how much more expensive rice became."

[8] *New Yuan History*, 89, "Relief Measures."

[9] *Yuan History*, 24, "Annals of Emperor Renzong, 1," zhida 4, 4th month: "Li Meng entered and said, 'Your Majesty's diligence has been extremely quick. Prices are falling as quickly as people discern the Sage's spiritual transformation. I dare to congratulate you for this.' The Emperor agitatedly replied, . . .

'Now We have been on the throne for less than a month. There is no reason why prices should have fallen. We have put such heavy trust in you. Such words are not to be relied upon.' Meng was ashamed."

cates increased thereafter, and a small quantity of Zhongtong Certificates was also issued. As a consequence, the quantity of money in circulation had increased enormously compared to the period before the issue of the Zhida Silver Certificates.

After Emperor Yingzong's zhizhi period (1321), the amount issued gradually declined, but by Emperor Wenzong's tianli 2 (1329), the quantity of paper money in circulation had increased by seven or eight times over the amount existing prior to the issue of the Zhiyuan Certificates, and from thirty to sixty times the amount in zhiyuan 12 or 13 [1274-5].

YUAN DYNASTY QUANTITY OF ISSUE (2)

Year	Amount Issued[10] (ingots)	Cumulative Total[11] (ingots)	Amount per capita (cash)[12]
zhiyuan			
24			
(1287)	5,088,285	15,445,956	13,134
25	4,608,060	19,281,718	16,396
26	8,900,465	27,217,097	23,144
27	2,501,250	28,357,492	24,113
28	2,500,000	29,439,617	25,033
29	2,500,000	30,377,636	25,831
30	1,300,000	30,158,755	25,645
31	968,530	29,619,347	25,186
yuanzhen			
1			
(1295)	1,550,000	29,688,380	25,245
2	2,000,000	30,203,961	25,684
dade			
1			
(1297)	2,000,000	30,693,763	26,100
2	1,499,550	30,658,625	26,070
3	4,500,375	33,626,069	28,593
4	3,000,000	33,944,765	28,865
5	2,500,000	34,747,527	29,547
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dade			
6	10,000,000	43,010,150	36,573
7	7,500,000	48,359,642	41,122
8	2,500,000	48,451,600	41,200
9	2,500,000	48,529,077	41,266
10	5,000,000	51,102,623	43,625
11	5,000,000	53,547,492	45,533
zhida			
1			
(1308)	5,000,000	55,870,117	47,509
2	5,000,000	58,076,611	49,385
3	36,259,200	91,431,980	77,765
4	10,900,000	63,314,162	53,838
huang-qing			
1			
(1312)	11,211,680	71,360,134	60,681
2	10,200,000	78,092,127	66,405
yanyou			
1			
(1314)	10,100,000	84,287,521	71,673
2	5,100,000	85,173,145	72,426
3	2,100,000	83,014,488	70,590
4	2,500,000	81,363,764	69,187
5	2,100,000	79,395,576	67,513
6	7,500,000	82,925,697	70,515
7	7,500,000	86,279,141	73,367
zhizhi			
1			
(1321)	5,050,000	87,015,184	73,992
2	4,050,000	86,714,425	73,736
3	3,550,000	85,918,704	73,060
taiding			
1			
(1324)	3,150,000	84,772,769	72,086
2	2,100,000	82,634,130	70,265
3	2,100,000	80,602,423	68,539

[10] The amount of issue figures are in units of Zhongtong Certificate ingots. All of the Zhiyuan Certificates and the zhida 3 Zhida Silver Certificates have been converted to their equivalent in Zhongtong Certificates. The figures are drawn from those in the *Yuan History*, "Treatise on Food and Money." Figures for after tianli 2 are scattered within the texts of the basic annals of the *Yuan History*. For the zhishun 1 figure, cf. "Annals of Emperor Wenzong, 2," under the entry for tianli, 12th month, dinghai, which I assume is for zhishun 1. For years which are omitted, I do not know whether new Certificates were not issued or there are gaps in the record. However, "Annals of Emperor Shun, 3" contains an edict of zhiyuan 6, 3rd month, jiashen, halting the printing of Certificates for that year. In zhizheng 1, 12th month, guihai, there were enough Zhiyuan and Zhongtong Certificates in the treasury to cover two years' expenditures, and so manufacture of Certificates was halted for zhizheng 2.

[11] The method for calculating the cumulative total was to add 95 percent of the old notes to the quantity of new Certificates, but because the Zhida Silver Certificates issued in zhida 3 were withdrawn and destroyed within a short time, the cumulative total for zhida 4 has been reduced by that amount.

[12] As before, a population figure of 58.8 million is used.

4	2,100,000	78,672,302	66,898
tianli			
1			
(1328)	1,585,110	76,323,797	64,901
2	6,000,000	80,507,607	68,459
zhishun			
1			
(1330)	2,300,000	78,782,227	66,991
2	4,455,250	79,298,365	67,430
3	4,984,000	80,317,447	68,297
zhiyuan			
3			
(1337)	7,500,000		
4	6,000,000		
zhizheng			
1			
(1341)	4,960,000		

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From its middle years on, the Yuan no longer had a unified issue. In addition to those the government issued, private individuals were also awarded the right to print certificates.

For example, because Zhang Xuan and Zhu Qing achieved merit managing sea transport, they were granted the right to print certificates at the end of zhiyuan 23 [1286]. They could issue as many as they desired, and could become as rich as the court. Although they were later executed, as had been the fate of Prince Bi of Wu and Deng Tong of Western Han (who also had the legal right to issue money, in their case coins), they were able to keep issuing money for seventeen years.[13]

There were also ad hoc issues, as during the years from the end of taiding to zhihe [1328-29], when there was a struggle for the throne, and a shortage of money to meet expenses in the capital was made up by having blocks carved to print certificates. These were not withdrawn and destroyed until tianli 1 [1329].[14]

Sometimes damaged and old notes were reissued after they had been redeemed, as during tianli 2, when there was a famine in the Guanzhong, and a *dou* of rice was worth 13 strings. If notes were somewhat damaged, they could not be used. Nor could people exchange them for new ones. Zhang Shanhao took from the Certifieate Treasuries some 1.855 million strings of old and damaged notes with readable inscriptions which had not yet been destroyed, overprinted them with the denominations 10-strings and 5-strings, and reissued them. Rice merchants could take these notes to a Certificate Treasury to exchange for regular notes.[15] Naturally, these ad hoc issues are not included in the formal issue figures.

The problem of counterfeits was also very severe. Because the cost of production for paper money was low, counterfeiting was hard to avoid. Counterfeits were being printed as early as the beginning of zhongtong [1260].[16]

A regulation of zhiyuan 7 [1270] prescribed the death penalty for counterfeits, but allowed well-made ones to circulate. If they were not accurate copies, they could not circulate, and those who used them were exiled to a distance. Later on, however, makers of both good and bad counterfeits were all sentenced to death.

And yet, despite such cruel punishment, those who risked violating the ban to print notes privately remained very numerous.[17] During dade 7, 12th

[13] *New Yuan History*, 74, "Treatise on Food and Money, 7," zhiyuan 23: "This year, because Zhang Xuan and Zhu Qing had transported provisions for 10,000 households by the sea route, they were granted the right to print Exchange Certificates on their own. The color of their Certificates was blacker than the official ones, and the seals a brighter red. From this time on Xuan and Qing grew as rich as the court itself. Finally,

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they became so profligate that they suffered execution." (According to *Yuan History*, 21, "Annals of Emperor Chengzong," the executions of Zhang Xuan and Zhu Qing occurred during dade 7.) *Investigation of Literary Remains Continued*, 9: "In zhiyuan 23, 11th month, Zhang Xuan and Zhu Qing were granted certificate printing rights as reward for transporting provisions for 10,000 households by the sea route." Ye Ziqi, *Grass and Tree Master*, 3, 4, also records this matter.

[14] *Yuan History*, 32, "Annals of Emperor Wenzong, 1."

[15] *Yuan History*, 175, "Biography of Zhang Shanhao."

[16] *Yuan History*, 163, "Biography of Li Dehui."

[17] *Outline of Ancient and Modern Good Administration* quotes Zheng Jiefu: "[During the time of Emperor Chengzong] as only certificates were used and their production cost was light, counterfeiters proliferated. Though the laws established were severe, in the end they could have no effect." *Yuan History*, 97, "Treatise on Food and Money, 5": "In zhizheng 10 . . . Prior to this, the Left Executive of Capital Affairs, Wuqichangjian had said, 'Certificates have been circulated since Emperor Shizu's time. . . . In recent years . . . counterfeit certificates have proliferated.'" *Yuan History*, 181, "Biography of Huang Qian": "[During the reign of Emperor Renzong] wicked people [reaching into Zhejiang] have formed gangs of counterfeiters to despoil people of their wealth."

Academician Huang's Collected Writings, 26, "Lord Jie Spirit Road Stele": "People in Huizhou were counterfeiting mulberry paper money in a Buddhist monastery." Yu Ji, *The Way Garden Studies Ancient Record*, 3, "Yuzhou Newly Rebuilt Proclaim-the-Sage Temple Confucian Studies Record": "Marquis Li

month, there were 88 cases of counterfeiting among Hangzhou's criminal prosecutions, with 274 individuals involved.[18]

In addition to private printing of notes, raising of certificates was also occurring: the turning of a 1-ounce into a 2-ounce note or the turning of 5 *qian* into 1-ounce.[19] There were even some officials and clerks who treated genuine Certificates as false ones. This must have been because they feared committing errors or wanted to curry favor.[20] Evidently, however, there were many false certificates.

Yuan Dynasty laws concerning counterfeit notes were especially complex.[21] This shows how severe counterfeiting was. Sometimes, damaged notes which had been withdrawn were stolen before they could be burned.[22] Whether or not officials and clerks inside the ministry were committing abuses, these old certificates must have been returned to circulation, and as a consequence the purchasing power of certificates would have been affected.

People mentioned the rise in prices during the dade year period [1297-1308],[23] but different goods rose in price to different degrees. For example, by zhiyuan 24 [1287], food and drink had risen to a level several dozen times higher than in zhiyuan 13, but some people said that boat construction materials had only risen ten fold by Emperor Wuzong's zhida 4 [1311].[24] Agricultural land prices had by da-
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de 1 risen three or four fold compared to zhiyuan 24.[25]

. . . had served as an official in the South Seas. . . . On the seacoast there was a great pirate controlling a dozen or so vessels. When he came ashore, he did a big trade in private salt and counterfeit certificates. They spread everywhere, but could not be redeemed. [An event of the early years of Emperor Shun.]" *The Way Garden Studies Ancient Record*, 41, "Stele of Zou Qusi, Chief of Chong'anxian, Jianning Circuit": ". . . the people of the mountain valleys are ignorant and do not know the laws. They snatch at profit, and counterfeiters flourish."

Yuan and Ming Certificates, 26, quotes the Yuan writer Li Cun's "Song of Counterfeit Certificates":

Neither ancient nor modern have the like of our dynasty's notes,
Far better than stringed cash like green bug motes.
If you tell youngsters to lodge them in their sleeves,
A thousand or ten thousand *li* they go alone by their leave.
At any time abuses of the morés may arise,
All too often counterfeits stick in corners.
No matter how heavy the rules that are set down,
To chase profit this way sure beats dying for your country and your mourners.

[18] *Yuan Decrees and Regulations*, 20, "Board of Revenue," 6, "Certificates: Counterfeiting."

[19] *Ibid.*, "Raising Certificates."

[20] *Yuan History*, 176, "Biography of Han Ruoyu": "At this time, those in charge of burning worn certificates wanted to get reputations for ability, and so they labeled all the notes to be burned as counterfeits, causing those in charge of the treasuries to be imprisoned for erroneously having accepted them." *Ibid.*, 182, "Biography of Xu Youwang": In zhizhi 2, "he reached Jiangxi, where the Purity Inquiry Commissioner, Miao Haoqian, was supervising the burning of worn certificates. Every day, more than a hundred people came to examine the certificates. Haoqian feared this would give rise to abuses, and had them severely whipped. These people feared punishment, and hence frequently labeled genuine ones as counterfeits so as to fulfill his expectations. The clerks in charge of the treasury and all below them were flogged till their skins were not whole, and none could make restitution. Those in charge double-checked the certificates, and they turned out to be genuine. Subsequently they were pardoned."

[21] *Yuan Decrees and Regulations*, 20.

[22] *Yuan Decrees and Regulations*, 20.

[23] *Yuan Decrees and Regulations*, 19. In Emperor Chengzong's dade 1, 6th month, there was an announcement in Jiangxi Province, Longxing Circuit: "When the south was first taken, Zhongtong Certificates in ounces were circulated. Prices in general were low. . . Now, evidently, prices have risen, and in the business emporia prices have gone up several fold." *Ibid.*, 22, huangqing 1, 5th month, an accusation by the Jiangxi Travelling Bureau to the Department of Ministries against the Board of Revenue's handling of affairs: "According to information received, in recent years prices have jumped up. Compared to former days, they have increased several dozen fold." *Outline of Ancient and Modern Good Administration*, quoting the words of Zheng Jiefu: "In the old days, if you went out carrying 10 cash in your purse, you could come home full of food and drunk. How could people avoid being rich? Now if you go out carrying 10 cash worth of Certificates, you can't even buy enough ice to slake your thirst. How can people avoid being poor?"

[24] *Great Yuan Sea Transport Record*, Emperor Wuzong's zhida 4, Department of Ministries memorial: "Thirty years ago, when sea transport was first inaugurated, the Certificates were expensive and heavily demanded, and prices in general were level. . . Now, goods are heavily demanded and Certificates are lightly demanded. Materials for building ships are ten times higher in price."

[25] *Yuan Decrees and Regulations*, 19, dade 7, 3rd month, "Communication By the Huguang Travelling Ministry to the Department of Ministries on the North Sea and South Sea Route Proclamation Guarding Office": "Leizhou Circuit Complaint Against Wu Fen": "In zhiyuan 24, elder brother Wu Qiu sold 4 *mu* 5 *fen* of fields to Tang Zheng, who became its master, for a price of 30 ounces. In zhiyuan 30, Tang Zheng sold the land at a higher price of 100 ounces to Wang Fengsun, who became its owner. In dade 1, Wang Fengsun sold it at a price of 125 ounces

There was also a tendency for transport costs to rise. There is a close link between the prices of goods and transport costs, since a number of goods prices include the cost of transportation. In addition, the level of transport costs also reflects the extent of a country's circulation of commodities and general level of economic development.

Riverine transport cost 0.03 ounces in certificates to ship a picul of grain 100 *li* downstream in Jiangxi. By zhiyuan 31 [1294] this had increased to 0.06 ounces, double the original amount.[26] During the mingchang era of Jin [1190-96] a picul (115 catties) was 40 cash 3 *fen* 6 *si*, probably paid in copper coin, or in both coin and paper. The Yuan Dynasty price was nearly the same as that earlier one.

As for land transport, in zhiyuan 26 [1289], it cost 1 ounce to send a picul 100 *li* over flat ground, and 1.2 ounces over hilly terrain. This was higher than during Jin's mingchang period, the Jin Dynasty price for foot carriage of 100 catties over 100 *li* of flat ground having been 146 cash, and 155 cash over hilly terrain. The Yuan Dynasty price was probably denominated in Zhongtong Certificates, but even so was still higher than the Jin Dynasty price. In dade 5 [1301], however, it rose further to 1.2 ounces over flat ground and 1.5 ounces over hilly terrain.[27] In the course of a dozen years, it had risen 20 percent.

As for sea transport, to transport a picul of grain during the zhiyuan period would cost 8.5 ounces in Zhongtong Certificates. By zhida 4 [1311], this had increased to 3 ounces in Zhiyuan Certificates,[28] which was equal to 15 ounces in Zhongtong Certificates. Over the course of 30 years, there had been a rise of 77 percent. Generally speaking, transportation costs had been rising slowly.

The prices of gold and silver rose relatively quickly. By zhizheng 5 (1345), an ounce of gold had risen to more than 250 strings worth of Zhongtong Certificates.[29] The next year, pure gold had risen to 300 strings worth of Zhongtong Certificates per ounce, and 900 fine gold to 270 strings.[30] This was fifteen times more than at the beginning of zhongtong.

In about zhiyuan 13 (1276) rice was 1 string per picul in Zhongtong Certificates. By the end of zhiyuan [1295] it had probably already risen to better than 10 strings.[31] In yuanzhen 1 [1295], the authorities sold rice for from 6.5 to 15 strings per picul. During the dade period [1297-1308], rice went at least as high as 10 strings per picul, and during a famine in Zhejiang in dade 10 [1306], a picul went to more than 30 strings.[32] It probably averaged 20 strings per picul.

In zhida 1 (1308), the authorities again increased their selling price for rice to 25 strings per picul.[33] The histories say that in taiding 2 (1325), it was re-

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to Han Twenty, who became its master."

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[26] *Yuan Decrees and Regulations*, 26, zhiyuan 31, 1st month, "Communication By the Huguang Travelling Ministry On Shipping 150,000 Piculs of Zhenzhou Grain to Jiangxi Province": "Previously, grain was assembled annually for transport from Zhenzhou. The old rate for sending 1 picul 100 *li* downstream was 0.03 ounces in Certificates, not including the workmen on the ship. This ministry advises obtaining an additional 0.03 ounces per picul of rice, making 0.06 in all."

[27] *Yuan Decrees and Regulations*, 26.

[28] *Great Yuan Sea Transport Record*, first part, Emperor Wuzong's zhida 4, Department of Ministries memorial: "Thirty years ago, when sea transport first began . . . to transport 1 picul of grain cost 8.5 ounces in Exchange Certificates [Zhongtong Certificates]. . . . Now . . . even Mongols must pay an increase to 2 ounces in Zhiyuan Certificates. If prices go yet higher, this route will no longer be able to be used. . . . Now, when ships from afar, from places like Wen, Tai and Qingyuan, transport grain, a picul costs an additional 1 ounce in Zhiyuan Certificates, making a total of 3 ounces. When other ships are loaded with coarse white grain, each picul costs an additional 0.6 ounces in Certificates, making a total of 2.6 ounces. A premium of 0.6 ounces is also charged for rice husk, making for a total charge of 2 ounces."

[29] Zheng Yu, *Shi Mountain Collection*, 4, "Preface to Odes on Estimating the Time When the Price of Gold Was Being Regulated in Songyexian": "In zhizheng 5, the price of gold in the market, reckoned in Certificates per ounce, was only a little over 5 ingots' worth."

[30] Sugimura Yutsuku, *Yuan Archives Filled In* records zhizhen 6, 5th month, prices for gold and silver: "An ounce of red gold is 6 ingots in [Zhongtong] Certificates. Nine parts fine is 5 ingots 20 ounces in Certificates per ounce. Seven parts fine is 4 ingots 10 ounces per ounce. Flower silver is 30 ounces in Certificates per ounce. Nine parts fine is 27 ounces in Certificates per ounce. Seven parts fine is 21 ounces in Certificates per ounce."

[31] *Superfluous Words on Agricultural Fields*, first part: "When the south was first obtained . . . rice was 1 string per picul. . . . Now [the end of Emperor Shizu's reign] rice is worth ten times what it was previously. In terms of Zhongtong Certificates, it is more than 10 strings."

[32] Liu Xun, *Water-cloud Village Confused Draft*, 14, "Petition to the Chengzhou Transport and Purity Inquiry Office on Famine Relief": "In dade 10, year bingwu, during Spring and Summer, there was a famine in Jiangzhe. . . . For years, the price of a picul of rice was only 10 ounces in Zhongtong Certificates, and even then households purchasing it from the state said they were placed in difficulties. Now the price is rising by the day. It has doubled and doubled again. . . . A picul has reached more than 30 ounces."

[33] *New Yuan History*, 89, "Relief Measures."

duced to 20 strings, and that in zhihe 1 (1328), it was reduced to 15 strings,[34] probably because there was large scale transport of millet from the south to the north. The market price was surely much higher. In zhizheng 6 (1346), upper grade glutinous rice went for 40 strings per picul,[35] which was forty times higher than when the south was first taken over.

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The degree to which prices had risen by then can also be discerned from the price of salt. Before the Mongols took over the north China plain, they paid an especially high price for salt because of their location in the northern desert.

In Emperor Taizong's (Ögedei) 2nd year (1230), 1 voucher, exchangeable for 400 catties, cost 10 ounces of white silver. By zhongtong 2 [1261], the price had fallen to 7 ounces. In zhiyuan 13 [1276], having just taken the salt-producing south, a voucher came to 9 strings of Zhongtong Certificates.[36] This was equal to 4.5 ounces of white silver. By zhiyuan 26 [1289], the currency inflation had driven 1 voucher up to 50 strings, a more than five-fold increase over the course of 13 years. In yuanzhen 2 (1296) it had risen to 65 strings. During the seven years from zhida 2 to yanyou 2 (1315), it rose to 150 strings, making for a sixteeen-fold rise over the course of forty years.[37]

In the Liangzhe region, the price of salt rose still more violently. At first, the official price per voucher was only 5 strings in Zhongtong Certificates. Later, it increased to 9 strings, 10 strings, and reached 30, 50, 60 and even 100 strings. By Emperor Zhishun's zhiyuan 5 [1339], it had risen to 3 ingots,[38] thirty times higher than at the very beginning.

The market price was still higher. A 1-string Certificate could only buy 1 catty of salt. This was 500 times higher than the Tang tianbao era [742-56] price of 2 cash per catty, and more than twenty times higher than the early Northern Song price of 40 cash per catty. It was eighty times higher than the price when the Mongols first occupied the south [1276].

Salt is a necessity for life, but historically the sale of edible salt had been a government monopoly. The profit from salt was a very considerable item in the Yuan Dynasty's annual income. In tianli 2 [1330], it came to 7,661,000 ingots.[39] This constituted 82 percent of the state's entire paper money income. It was through the price of salt that the Mongol rulers carried out their exploitation of the people.

There was also a tendency for objects of art to rise in price. When, in zhiyuan 23, Li Kan was in Zhejiang selling Wen Tong's paintings, he considered 25 strings a good price. Some thirty years later, after the death of Gao Kegong, his paintings sold for 1,100 strings apiece. While Ni Can was still alive, his small bamboo and rock landscapes sold for several dozen of metal (i.e. strings) apiece.[40]

Objects of art differed from ordinary commodities. Some said that two of Li Gonglin's paintings could be exchanged for one of Wu Daozi's, and that two of Wu Daozi's exchanged for one Gu Kaizhi or Lu Tanzheng. I suspect this was a trivial rule of thumb based on worship of antiquity, but it is evident that the trend in prices of Yuan Dynasty paintings did not lag behind prices in general.

Owing to the chaotic conditions for the circulation of money and the instability of prices, barter and the practice of commercial establishments issuing their own money substitutes appeared. Later we hear of such labels as tea checks, noodle checks, bamboo tallies and stillbeer tallies.

After the end of Emperor Shizu's

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zhiyuan period [1295], such practices probably became more widely used. In zhiyuan 31 [1294] there was an order banning such tokens,[41] but that had no

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[34] *New Yuan History*, 89, "Relief Measures."

[35] Sugimura Yutsuku, *Yuan Archives Filled In* (in *Commemorative Collection Honoring Master Fukubu's Ancient Rarities*) records that in zhizheng 6, 5th month: "For glutinous rice of the upper grade per picul it is 40 ounces of [Zhongtong] Certificates; for middle grade, 37.5 ounces of Certificates per picul; for lower grade, 35 ounces of Certificates per picul. For *zhan* rice of the upper grade, it is 37.5 ounces per picul; for middle grade, 35 ounces; for lower grade, 32 ounces."

[36] *Yuan History*, 94, "Treatise on Food and Money, 2, Salt Regulations": "In Emperor Taizong's year gengyin, the salt regulations were inaugurated. Each voucher of salt was for a weight of 400 catties. Its price was 10 ounces of silver. In Emperor Shizu's zhongtong 2, it was reduced to 7 ounces of silver. In zhiyuan 13, having taken Song, and the salt of the south having entered widely, the price of a voucher was changed to 9 strings in Zhongtong Certificates." On the Yuan salt price, there is also Ye Zhiben's "Message Requesting Reduction of the Price of Salt." Cf. Gu Yanwu, *Letters on the Profits and Ills of the Regions of the Empire*, 22, "The South, 10."

[37] *Yuan History*, "Treatise on Food and Money, 2, Salt Regulations."

[38] *Yuan History*, "Treatise on Food and Money, 5, Salt Regulations."

[39] *Major Statutes Through the Generations*, 12.

[40] Gu Yuanqing, *Cloud Grove Deeds of Those Now Dead*.

[41] *Yuan Decrees and Regulations*, "Certificate Regulations: Miscellaneous Rules."

effect. To the contrary, the situation was aggravated.

Originally shops had issued money substitutes only to make it more convenient for their customers to buy from them. Later, these tokens came to circulate in the market. Therefore, in Emperor Renzong's huangqing 1 (1312), the authorities acknowledged that prices were several dozen times higher than before.[42] In yanyou 1 (1314), the Department of Ministries sent down an order limiting the use of tokens. Stillbeer tallies issued by taverns could only be used by customers to pay for stillbeer in the establishment which had issued them. They were not to circulate on the open market.[43]

In his discussion of Yuan Dynasty paper money, Wu Qi of the zhizheng period [1341-68] employed rather odd logic. He said that during the 25 years from Emperor Shizu's zhiyuan 24 to Emperor Wuzong's zhida 4 [1311], many notes had been printed and few burned, their circulation was broad, and the Certificates had become universally used. During the 9 years from Emperor Renzong's huangqing 1 to yanyou 7 [1320], though many had been printed, many had also been burned, the number in circulation had gradually declined, and the Certificate system had begun to decay. From Emperor Yingzong's zhizhi 1 to 3 [1321-3], though many had been printed and few burned, so that even more were in circulation, the Certificate system was further spoiled. During the eight years from taiding 1 to zhishun 3 [1332], few were printed, and many burned, and their circulation ceased altogether, bringing the Certificate system to disaster.

His words are simply a muddle. Apparently when the notes are numerous they are bad, but when they are few they are also bad. When many are printed and few are burned, they are still worse. When few are printed and many burned, they are especially bad. What then would have improved matters?

He says that during 64 years a total of 59,056,000 ingots worth of Certificates were printed, over 56,200,000 were paid out, and some 36 million were burned, so that less than 20 million ingots worth remained in circulation.[44] His figures do not correspond with those from the histories, which do not record the numbers of notes burned. If we assume the truth of his statement that there were only some 20 million ingots worth in circulation, and so there was a shortage of Certificates, then what were the people using? How could prices have increased?

[Though his figures may have been wrong, Wu Qi's contemporary account may have accurately recorded evidence of a transient shortage of paper notes. When a currency inflation begins, people do not anticipate that it will continue. Hence they allow their cash balances to grow. This means that prices rise by less than the increase in the money supply. Later, people conclude that the currency inflation will indeed continue. As a consequence, they reduce their cash balances, and the resulting flood of money onto the market raises prices even faster than the rate by which the authorities are increasing the money supply. At some point, the resulting panic may force prices to rise so high so quickly that there actually is not enough money in consumers' hands to buy up all the goods at those prices. EHK]

After taiding (1324), domestic security became a problem. Resistance got under way in various places, and expenditures increased. In tianli 2 (1329), there was a famine in the near northwest, and a *dou* of rice cost 13 strings. If people took certificates to buy rice, and they were slightly damaged or old, no one would accept them. Should they bring them to a Balanced Standard Treasury to trade them in, "then overbearing and cunning conspirators would trade 10 for 5, and for days on end even this much could not be obtained."[45]

Falcons, pigeons, lions and leopards kept in the palace then ate meat which cost up to 13,800 ingots annually. This was sixty or seventy times more than the previous cost.[46] Gifts to the Imperial Guardsmen ultimately came to more than 80 ingots per man.[47] This was equal to 4,000 strings. During Han and Tang, only officials who demonstrated the highest merit could have received so large an amount, and during the Jin Dynasty of the third and fourth centuries A.D. even great officials found it hard to get so large a gift.

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[42] *Yuan Decrees and Regulations*, 22.

[43] *Itemization of the Universal Regulations*, 14, "Stillbeer Tallies Encroachments on Certificates": "In yanyou 1, 9th month, the Department of Ministries placed a notice on posts in the streets stating that taverns, teahouses and bathhouses often made and issued their own tallies made of bamboo or wood, and wrote checks denominated in Treasure Certificates. These flowed into use, thereby encroaching on the sphere of the Certificates. These stillbeer tallies

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were only to be used to pay for stillbeer in the tavern issuing them. They were not to be circulated or turned over on the streets or in the markets. The other bamboo and wood tallies and paper checks were completely banned from circulation."

[44] Wu Qi, *Full Investigation of Treasure Certificates*.

[45] *Yuan History*, 175, "Biography of Zhang Shanhao."

[46] *Yuan History*, 33, "Annals of Emperor Wenzong, 2."

[47] *Yuan History*, 33, "Annals of Emperor Wenzong, 2."

During late Yuan, rewards were given simultaneously to 13,000
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people, for a total amount of 52 million strings. At the beginning of Song, this amount would have paid the whole national budget for two or three years. At the end of dali [780], after Tang's currency inflation, the state's entire annual income was only 12 million strings, and it would have taken four or five years before a sum of 52 million could have been accumulated. All of this demonstrates the extent of the currency inflation.

From its middle period on, the Yuan Dynasty's tax income increased twenty-fold over that of the zhiyuan period,[48] but even so income did not match expenditures. By tianli 2 [1330], 7th month, the year's expenditures were already several times greater than income.[49] In zhishun 2 [1331], 9th month, Chen Siqian said that expenditures had increased several dozen fold over the levels prior to zhiyuan 30 [1293].[50]

At the beginning of zhizheng [1341], the external exchange price of Zhongtong Certificates reflected the depreciation of the money. The African, Ibn Batuta, who arrived in China in zhizheng 5, said that a 1-string Chinese note was about equal to one of his country's *dinars*.[51]

Ibn Batuta was an Islamic pilgrim from Africa, where the *dinar* gold coin was bigger than the Arabian *dinar*, weighing 4.6 grams, which was equal to 1.2 Chinese treasury ounces of white silver. According to the official price, this could only exchange for 2 strings 500 cash of Zhiyuan Certificates. If this amount of metal could buy 50 strings worth of notes in the market, then the price in Zhiyuan Certificates of gold had gone up twenty fold.

It is also possible, however, that he was referring to Zhongtong Certificates, in which case the rise had only been four fold.

The *Outline Gazetteer of the Island Barbarians* written by Wang Dayuan in zhiyuan 9 states that the Wudie silver coin weighed 0.28 ounces and was worth 10 ounces in Zhongtong Certificates. It also states that 67 bronze Jiaozhi coins were equal to 1 ounce in Zhongtong Certificates. Evidently the Zhongtong Certificate price of silver had risen eighteen fold.

The fall in the price of certificates was also due to the proliferation of private certificates. Private manufacture of notes increased in parallel with the decay of the Mongol administration. Some people grew rich making private certificates during Emperor Shun's reign [1333-68]. There was even a group of forty or fifty men who entered the government to become officials who could guard from within against informers, and this conspiracy continued for more than a decade.[52]

Owing to its use of paper money, Yuan Dynasty prices were higher than those of any other dynasty. The people's standard of living fell to a low level. Even official salaries were lower than those of earlier dynasties. The incomes of Chinese officials had been increasing uninterruptedly since Han. They had reached their peak during Northern Song, reaching a figure which people would find it hard to credit.

Southern Song started on the downward path, but first rank officials under Jin rule enjoyed a monthly real income which was still the equivalent of 200-300 hectoliters of pearl rice. The Yuan Dynasty moved down a step further. Under the zhiyuan regulations, a first rank official's income could only buy 100 hectoliters of pearl rice. The incomes of lower ranking officials and clerks were not much reduced, equaling 10 hectoliters of rice per month.

The Yuan Dynasty government's treatment of laborers and artisans was still more repressive. In zhiyuan 25, 3rd month, the authorities fixed each
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bureau's laborers' and artisans' wages. Apparently wages were paid partly in money and partly in kind. Each man was paid 3 *dou* of rice per month and half a catty of salt as well as a family allotment. Dependents were divided into three classes: Adults got 2 *dou* 5 *sheng* of rice per month. Minors and so-called ordered adults (adult slaves and servants) were paid 1 *dou* 5 *sheng* per month. Servile minors got 7 *sheng* 5 *he* of rice per month. A household could not, however, exceed four persons.[53]

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[48] *New Yuan History*, 68, "Treatise on Food and Money."

[49] *Yuan History*, 31, "Annals of Emperor Mingzong," tianli 2, 7th month, statement by the Investigatory Censor Badeqiansi: "If we compare it with the annual income from the land tax, then outgo has already exceeded it by several fold. Moreover, as of now, the courts of the princes, which under the old system would all have been given 100 million, have still not been given their appropriation."

[50] *Yuan History*, 184, "Biography of Chen Siqian," zhishun 2, 9th month. Chen Siqian said: "The entirety of wasteful expenditures, has increased several dozen fold over the levels prior to zhiyuan 30. There is a deficit for zhishun of over 2.39 million ingots."

[51] Yule, *Cathay and the Way Thither*, VI, pp. 112-113.

[52] *Yuan History*, 192, "Virtuous Clerks, 2, Lin Zuxing."

[53] *Itemization of the Universal Regulations*, 13, "Labor Grain Schedule," zhiyuan 25, 3rd month: "The Secretariat and Board of Revenue separately sent to each office the salt and grain that ought to be paid per capita. In addition to the money which it was requested be paid, there was not to be money

When this system was laid down, the price of rice was around 10 strings in Zhongtong Certificates, and the price of salt was 50 strings per voucher, or 125 cash per catty. Therefore the personal income for a laborer was only 0.29 hectoliters per month.[54] If there was a wife in the family, one son or daughter, and one adult servant, they could still only get 0.812 hectoliters per month, and this was reduced for days off. Unless there was an additional money wage, there would be no way to eke out an existence.

Treatment of river workers was a bit better. During the first two or three decades of the fourteenth century, a man got one ounce of Certificates per day, and in addition 1 *sheng* of broken rice, or 3 to 5 *sheng*, the amount varying. At that time, rice cost 20 to 30 ounces per picul.[55] Therefore, the total income for a day came to 6 *sheng* of rice, and a month's income was about 1.7 hectoliters. Such work was temporary, and so this was not normal income, but since these river workers were all peasants, they had normal agricultural income in addition. They probably performed river work during the agricultural off season. Hence their river work wages were supplementary income. In other words, their total income was somewhat greater than this.

During the first half of the fourteenth century, tenant farmers in some places in England paid money in place of performing labor service. In Winter, the rate was half a pence per day. In Autumn, it was one pence. The daily rate averaged 0.75 pence. Assuming a six day work week, then monthly income would be 19.5 pence, or 26 grams of pure silver, which could only buy a little over 0.6 hectoliters of wheat.

Comparisons between an English tenant farmer's labor service substitute cost and the wages of a Chinese river laborer are inapposite. There were laborers in Europe then whose incomes were greater than a tenant farmer's. Frankish woolen workers' wages were, for example much higher.[56] They could have been higher than the wages of a Chinese river worker. It would, however, be unfair to compare a Chinese river worker, whose labor was so simple, with the relatively complex work of a woolen worker. Moreover, in a feudal society, peasants after all constitute the great majority.

Therefore, before the middle of the fourteenth century, the income of Chinese laborers seems to have been a bit more than that of European laborers.

After the middle of the fourteenth century, conditions were no longer the same. There was no particular change on the Chinese side, but during the forties of the fourteenth century in Europe there appeared the great Bubonic Plague. More than half of the

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English population died, which caused a shortage of labor and a great increase in wages.

By the end of the fourteenth century, an English laborer could get three pence per day.[57] The silver content of a pence was 1.188 grams. If we assume 26 working days per month, the total wage was 92 grams. The price of wheat during the last half of the fourteenth century averaged 34 grams per hectoliter.[58] Therefore, such a laborer could purchase 2.72 hectoliters of wheat. At that time a grain harvester could get 8 pence per day.[59] In a month he

requested in terms of the household size. It was assumed there would be four persons per household, including the worker himself. In addition to the four person household rule, the number of people in the household would be considered as a group. No household was to exceed four persons. Those smaller were to be checked to confirm their size. The person himself was to be paid 3 *dou* of rice per month and half a catty of salt. Adult dependents were to receive 2 *dou* 5 *sheng* of rice per month. Minor dependents and servile adult dependents were to receive 1 *dou* 5 *sheng* of rice per month, and servile minors 7 *sheng* 5 *he* per month. Artisans who printed paper certificates and river dike builders and repairers were each year to have their residences provided and be paid at the same rate as labor service actually received for monthly and daily work. Each individual was to be paid 3 *dou* of rice per month and half a catty of salt. The capital and provinces were to select them."

[54]During the Yuan Dynasty a picul was 0.9488 hectoliters; one ounce was 37.3 grams. Cf. Wu Chengluo, *History of Chinese Weight Measures*. Yuan sometimes, however, employed the Song picul. *Yuan History*, 93, "Treatise on Food and Money: Taxes in Grain" states: "In zhiyuan 19, at Yao Yuan's request, tax grain in the south was allowed to be commuted into silk and various other goods in accord with the old Song measures. . . . Those who paid in rice, used only the Song *dou* and *hu*, so that 1 Song picul was equal to 7 current *dou*."

[55]*Yuan History*, "Record of River Dikes."

[56]In 1345 (zhizheng 5), the Frankish woolen trade guild had as its 40th regulation that beginning from the day of presenting candles until the festival of the Eucharist, a weaver's daily wage was not to exceed 16 *Heller*. At other times, it was not to exceed 14 *Heller*. The *Heller* is a monetary unit which is very difficult to pin down, since it varied by place, and its fineness frequently changed. In 1356, it must have weighed 0.76 grams, and it may have been only six parts fine. This would have made it equal to 0.456 grams of pure silver. If we assume 26 working days per month, a weaver could have made 177 grams, which would have been equal to 4.745 Chinese treasury ounces.

[57]Ellis T. Powell, *Evolution of Money Market (1385-1915*.

[58]According to the figures in James E. Thorold Rogers, *A History of Agriculture and Prices in England*.

could purchase over 7 hectoliters of wheat, but this was a phenomenon peculiar to the aftermath of the Bubonic Plague, and a transient one.

[59]Cf. note 57, above.

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4. The Late Yuan Zhizheng Certificates' Depreciation

After Emperor Shun succeeded to the throne in 1333, the domestic administration lost its effectiveness, and there were repeated floods and droughts in various circuits. At first, grain continued to be used for relief. Later, the government relied entirely on the issue of paper money. Nevertheless, the more that was issued, the less it was worth, and eventually scattered revolts broke out among the starving.

The Yao of Hunan's Daozhou resisted the longest, and the authorities had no way to put them down. The Yannan uprising in Shandong of zhizheng 1 [1341] spread to more than 300 locations. In zhizheng 8 [1348], Fang Guozhen rebelled in Taizhou.

The Secretary of the Board of Revenue in zhizheng 3 requested curtailment of wasteful expenditures because of insufficient revenues. Three years later it was requested that free and easy making of gifts be halted. None of these requests had any effect. Price figures went ever higher. Someone wrote a verse satirizing the then current situation which went: "Pols make false money, Folks make crooks plenty; Jia Lu opens the river, And the whole Empire stirs up he."[1] By zhizheng 10 [1350], in the south rice cost 67 strings of Zhongtong Certificates per picul, 67 times more than at the beginning of zhongtong times [1260].[2] New certificates were issued that year, and this was in fact Jia Lu's idea.

The issue of new certificates did not yet represent a large scale further inflation. Their face value vis à vis the Zhiyuan Certificates was only set at one for two, which cannot be considered high compared to the Zhida Certificates, and could not have as much as doubled prices. Their aim was probably to lower nominal prices, since prices were still being expressed in terms of Zhongtong Certificates. When they shifted over to expressing prices in terms of the new certificates, this reduced nominal prices to 10 percent of their former level. If this had not been the aim, then the issue of the new certificates would have had no significance.

After the issue of the new certificates, the domestic situation became still more strained. The new certificates were issued in zhizheng 10 [1350], 10th month. In the 5th month of the following year, rebellions by Han Shantong, Liu Futong and Xu Shouhui began almost simultaneously. In the 1st month of zhizheng 12, they issued another 1.9 million ingots of new certificates and 100,000 ingots of Zhiyuan Certificates, both of which, added to the Zhongtong Certificates, made a total of 24 million ingots. Except for the issue of zhida 3, this was the largest single issue during the Yuan Dynasty.

Xu Shouhui won one victory after another. In zhizheng 12 [1352], 2nd month he took Jiangzhou; in the 3rd month, Ruizhou; in the 3rd intercalated month, Ji'an Circuit; in the 4th month, Jianchang Circuit; in the 5th month, rebellions broke out all over Henan; in the 6th month, the Red Turbans took Daozhou; in the 7th month, Hangzhou Circuit fell; in the 8th month, Jingmen and Yuezhou fell. Monk Peng took Raozhou, Xinzhou, Hangzhou and Huizhou. The Mongols were losing the Mandate.

A picul of rice was 20 strings, and 10 catties of salt were 2 strings.[3] It is said that before long prices had risen more than ten fold.[4] In some places, 1-

[1]Ye Ziqi, *Grass and Tree Master*, 4, first part, "Concerning the Marshes."

[2]*Superfluous Words on Agricultural Fields*, first part: "By zhizheng year gengyin, the Zhongtong [Certificates] had long since been abolished, and the Zhizheng had been made instead. Zhongtong Exchange Certificates were printed and called New Certificates, with 1 string equal to 10 strings of the old, or 1,000 cash. A picul of rice cost 67 strings of the old Certificates, 67 times more than at the time the state was founded. Then soldiers were employed, and they were hastily printed to purchase things demanded by the armies and to purchase rice. They would no longer be countenanced for trade among the people. When the masses had been exploited, they would no longer employ them."

[3]*Yuan History*, 144, "Dao Tong."

[4]*Yuan History*, 97, "Treatise on Food and Money, 5, Certificates," zhizheng 11: "Treasure Spring Intendants Offices were established, and Zhizheng Circulating Treasure coins were frequently minted, and Exchange Certificates printed, and ordered circulated among the people. Before long, prices became turbulent, and went up ten fold." *New Yuan History*, 87: "During zhizheng, the Chancellor, Tuotuo, served as countercyclical purchasing authority, and put forward Jia Lu's theory, calling for the separate establishment of the Zhizheng Exchange Certificates. The material out of which the Certificates were made was

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string could only buy 14/24 of an ounce of salt.[5] This was a price of 27 strings per catty, the equivalent of 270 strings of Zhongtong Certificates, and one or two thousand times the price at the time of the Mongol conquest of the south. In the 1st month of the following year, there was another paper money issue of the same amount.

At this point, a crowd of rebels arose in the Yangtze and Huai region: Zhang Shicheng took Gaoyou; Han Shantong took Linhao; Xu Shouhui, Ni Wenjun and Chen Youliang attacked Hanmian. Chancellor Tuotuo led a 400,000 man army out onto the attack, and the price of Certificates must have fallen as a consequence. Because of squabbling and grasping for profit among the officials, the morale of the army fell, and many soldiers slipped away to surrender to the Red Turbans.[6]

When cavalry mounts were compulsorily purchased in zhizheng 14 [1354], the official price was 10 ingots of Certificates per head, equal to 5,000 strings of Zhongtong Certificates, and naturally the market price was still higher. The price of a horse averaged 20,000 cash during Northern Song. During Yuan's zhiyuan period, it was probably some 50 strings of Zhongtong Certificates, or more than 10 ounces of white silver. A good horse cost 90 strings, equal to 18 ounces of silver.[7] This was already an inflated price.

By zhezheng 14 [1354], it had risen fifty or sixty fold. If we take the Northern Song price as our reference point, the rise had been 250 fold. In Hongwu 1 of Ming, a horse was 10,000 cash. With this as our reference point, the Yuan price was 500 times more.

The Yuan Dynasty maintained close links with the horse-breeding region of the western frontier, and so horse prices should have been cheap, but the Mongols' demand for horses was also expecially large, especially in times of war.

In England during the 140 years corresponding to the Yuan Dynasty, a draft horse averaged 12.82 ounces of white silver.[8] This was about the same as the normal price for a horse in China.

The price of an ox in China then was 1.5 ounces of silver. During Tang's huichang era [841-47], a stockaded ox cost 500 cash.[9] Compared to this, the Yuan Dynasty price was much higher. At the same time, however, an English bull cost from 7 to 8 or 9 ounces, and a milk cow was 6.25 ounces. The Mongols probably did not make much use of cattle, and so Yuan cattle prices were relatively low.

People were recruited for garrison fields in zhizheng 15 [1355], and each recruit was paid 2.5 ounces in Certificates per day. He was also given an ox and agricultural tools.[10] Of course this did not mean that the popular standard of living had risen, but that the Certificates were no longer worth much in coin. At the time the new certificates were issued, 1 ounce's worth of them were said to be equal to 1,000 copper cash, but by this time they had long since lost the ability to maintain level prices. Otherwise, a laborer's monthly income would have been 75,000 copper cash, which would have been more than the salary of a Tang kaiyuan period first rank official.

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inferior, they were easily damaged, and so they were hard to redeem. Subsequently they were obstructed, and did not circulate. When armed disorder occurred, there was not enough for the state's requirements. More certificates were printed to buy things for the soldiers. Certificates became cheap, and goods expensive, and no one would accept the Certificates. They were subsequently abolished."

[5]Zhou Tingzhen, *Stone Beginning Collection*, 5, "Notes of Events": "Recently, merchants have competed to rush south with 10,000 *dou* from the Northern Salt Office on the coast. Last year [zhizheng 12], on this day, the price in the city was 1 string of cash for only 14 grains." When the Mongols took the south, the price in the north was 9 strings per voucher, and 5 strings per voucher in the south.

[6]*Grass and Tree Master*, "Concerning the Marshes."

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[7]Zhu Shijie, *Calculation Techniques Primer* contains three horse prices. In the first chapter, "The Method of Horizontal Cause," has a price of 90 strings per head. "The Nine Returns Division Method" also contains a price of 90 strings for a good horse. The last chapter, "Making Up for Deficiencies Method," has a price of 53 strings 700 cash per head. There is also a price of 3 strings 600 cash per head. That last price is suspect. This book was completed during the dade period. The prices it contains are a bit confused, and do not seem to be dade prices. There are rice prices of from 110 to 185 cash per *dou*, but prices were never this low during dade. The silver price of 5 strings per ounce (first chapter, "Commuting Double Mutual Difference Method") is the price at the time the Zhiyuan Certificate was issued. In another place, however (middle chapter, "Seeking Difference Divide Equally Method"), it gives a price of 125 cash per ounce for silver, and 875 cash per ounce for gold. These could not have been Yuan Dynasty prices. The gold-silver exchange price in the book is 1:7, which must have been the ratio prior to the issue of the Zhiyuan Certificates.

[8]James E. Thorold Rogers, *A History of Agriculture and Prices in England*, p. 245. This was the average price during 1261-1400.

[9]Li Degu, *Duke Li Wei's Collected Works*, 15, "Petition on Chastising the Uighurs" (which occurred in huichang 2, 5th month, 5th day).

[10]*Yuan History*, 44, "Annals of Emperor Shun, 7."

It was in this year that Liu Futong raised Han Lin'er and Zhu Yuanzhang to the rank of general. In the 6th month, the authorities acquired military provisions from the rice-producing regions for a price of 5 ounces in new certificates per picul. Undoubtedly this was a forced purchase at a controlled price.[11] In the 12th month, they printed another 6 million ingots' worth of Certificates for the following year, which was an increase of several fold in one jump. This had become a nasty currency inflation. There were paper notes everywhere. There was a popular wisecrack then, "Men eat men, and Certificates buy Certificates."[12]

The labels for paper notes were as numerous as those for the Northern and Southern Dynasties'
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private coins. There were Guanyin Certificates, Painting Certificates, Broken-waist Certificates, Wave Certificates and the *Lubulan*.[13] These sound like Northern Wei's Blue-red, Thick-body, Constricted Coin, Auspicious Coin, Live Obstructed and Red Back coin names, but the harm these notes caused was far in excess of that inflicted by the Northern Wei coins.

During Yuan, copper coins had retreated across the frontiers, or been melted down, or transported to foreign countries.[14] There were places that still used copper coins. This separated them from paper money and allowed them to form independent arrays of prices.

From zhizheng 16 [1356] on, the military situation became still more critical. In the 3rd month, Xu Shouhui attacked Xiangyang, and Zhu Yuanzhang took Zhenjiang. In the 7th month, Zhang Shicheng again attacked Hangzhou. In the 9th month, Li Wu and Cui De smashed Tongguan. Mongol controlled territory was becoming ever smaller in extent, and their expenses for rewards to the army required daily printing of notes in incalculable numbers. It was being said that rice was becoming as expensive

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[11]The *Ding Ju Calculating Methods* (written in zhizheng 15) contains the following prices (expressed in Zhizheng Certificate ounces):

rice	picul	2.63	salt	catty	0.28
seed	picul	3.5	thin silk	chi	0.126
grain	dou	0.125	Xiaochun hemp bolt food, 7 dou		
wheat	catty	3.7776	silk	catty	3.252
salt	voucher	13		catty	6.94
flour	catty	0.4		catty	12.0
pepper	catty	2.369		catty	35.0
hay	catty	5.6	hemp	chi	0.193
wax	catty	2.35		length	10.036
gauze	chi	0.162	sugar	catty	6.48
	chi	0.234	chicken bird		2.5
	bolt	12.5	heavy silk bolt		12.88
wheat	catty	2.4	cotton	catty	5.74

These are not necessarily zhizheng 15 prices. For some articles there are two or more prices with rather large differences between them. This is something that would have actually happened when prices were rising without interruption. For example, the price of an ounce of silver was 5 ounces in Certificates, and two prices of gold were given, 81.12 and 150, the second being nearly double the first. Under the circumstances of those times, it would not have required much time for the price to have doubled. Another example would be the price of silk floss, for which the figures per catty given are 3.252, 6.94, 12, and 35. These must be explainable in the same fashion.

[12]*New Yuan History*, 87: "The Certificates accumulated in public and private hands were in appearance like bad mulberry paper, and the state's needs were placed in difficulty. At the time there was a popular satirical verse that went,

Halls upon halls,
Great Yuan, Nasty and fawning power grasping men,
They open rivers, change the notes and spoil their origin,
Provoked Red Turbans in myriads then;
System's under strain,
Punishments heavy again,
Men's resentments plain,
Men eat men,
Certificates buy certificates again,
Can thieves officials remain,
And toffs turn thief,
Virtue and dirt a muddle gain,
Alas, what a shame!
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[13]Kong Qi, *Peaceful Studio Straight Record of Zhizheng*, 1, "Suffering from Mulberry Paper Money": "In zhizheng year renzhen [12th year], the Empire was in great disorder, and the Certificate system was in difficulties. In year guixi, it was again in difficulty and was obstructed. By year yiwei, the Certificates were about to be abandoned. Subsequently there were such names as Guanyin Certificates, Painting Certificates, Broken-waist Certificates, Wave Certificates and *Lubulan* Certificates. The Guanyin Certificates bore an unpainted sketch which resembled a beautiful Goddess of Mercy [Guanyin]. Painting Certificates were like paintings. The Broken-waist Certificates were torn in half in use. The Wave Certificates were popularly said to have a hurried gait, that is they left one without bestowing any pleasure. The *Lubulan* were like broken sinews, but were not used when broken. Exchange was carried on only with copper coins."

[14]*Yuan History*, 44, "Annals of Emperor Shun, 7," zhizheng 16, 2nd month, yichou: "It was forbidden to melt down or sell copper coins."

as pearls.[15]

In zhizheng 17 [1157], six Public Convenience Treasuries were established in the capital to which people could bring damaged Certificates to exchange for new ones. The following year there was a military crisis in Shaanxi, but because Shaanxi was too distant from the capital for the capital to find it convenient to respond to its needs, an office was set up there to print Treasure Certificates.

In zhizheng 19, rice sold for up to 25 strings per *dou* in Hangzhou.[16] In his ode "The People of the South," Wang Mian (1287-1366) has the phrase "A *dou* of grain is worth thirty thousands."[17] It was this period he was probably referring to. He was from Zhuji, Zhejiang. In Yanjing, even 10 ingots worth of Certificates would not buy you a *dou* of grain.[18]

If we accept as accurate the Hangzhou rice price of 250 strings per picul, equal to 2,500 strings of Zhongtong Certificates, then the price had gone up 2,500 fold since the beginning of Yuan. To move a bribe in the capital required loading a cart with mulberry paper money.[19] This was the same sort of thing that happened with the iron coins of Emperor Wu of Liang, but at least iron coins had some intrinsic value. The histories say that the people no longer used the notes, and that exchange was carried on either with copper coins,[20] or by means of barter.[21]

We lack figures for the amounts issued after zhizheng 16 [1356], and our material on prices stops with zhizheng 19. As to whether thereafter, they did not use paper money at all, or merely did not use damaged certificates, or certain places did not use them at all, we may conjecture that conditions differed by locality.

In Hongwu 1, there was published a commodity price table for use in calculating the value of stolen goods.[22] Prices in this table are in strings. An ounce

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[15]Yuan Yan, *Zhang Shulin Outer Collection*, 5, year bingshen [zhizheng 16]: "

The Chinese Longhairs gallop, fifty and more,
Difficulties arise wherever one's looks bore;
A generation abandoned as never before,
Rice these days as dear as pearls or more.

[16]*South Village Rest from Plowing Record*, 11, zhizheng year yihai, Winter, 12th month: "Inside the city rice jumped to a high price of 25 strings per *dou*.

[17]*Bamboo Studio Ode Collection*, 2. The text of the ode reads:

The south's people,
Truly pitiable,
Pestilence added to fire.
Millions of troops sit on their pyre,
A *dou* of grain is worth thirty thousand to hire . . .

[18]*Yuan History*, "Treatise on Food and Money, 5, Certificates": "And All Within the Seas was in great disorder. Army supplies, gifts and rewards required daily printing of incalculable amounts. They were transported by boats and carts, the latter travelling axle to axle they were so numerous. So fully distributed among the people were they that there was no place without them. Damaged ones were no longer to be used. In the capital, even 10 ingots worth of notes would not buy a *dou* of grain. That being the case, in other localities everywhere else, goods were used to exchange for goods. Certificates accumulated in public and private hands eventually no longer circulated at all. People looked upon them as bad mulberry paper, and for this reason the state's requirements were not met."

[19]*Yuan History*, 139, "Biography of Niudegai," zhizheng 18: "A rich commoner of Xinghe Circuit had been accused of flirting with children and women. He loaded a cart with mulberry paper money and carried it to the capital as a bribe. As a consequence, the officials of the Board of Punishments delayed a long time in reaching a decision in the matter."

[20]*Peaceful Studio Straight Record of Zhizheng*.

[21]*Yuan History*, 97, "Treatise on Food and Money: Certificates."

[22]*Ming Collected Statutes*, 179, "Temporary Calculation of Plunder": "An order of Hongwu 1 stated that whenever evaluating booty, the prices of the goods at the time of the offense should be the basis. If evaluating rented objects which had been stolen, this too was to be done in accord with the objects' prices at the time of the offense. No matter how many times the good was rented, it was not permitted to be evaluated higher than the original price of the object.

"Gold, silver copper and tin category: 1 ounce of gold is 400 strings; 1 ounce of silver is 80 strings; 1,000 copper cash are 80 strings; 1 catty raw pure copper, 4 strings; 1 catty iron, 1 string; 1 catty tin, 4 strings; 1 catty black lead, 3 strings.

"Pearls, jewels and jade category: 1 plate of jade, 2 *cun* long, 1 wide and 5 *fen* thick, 80 strings; precious pearl, 1 seed, weight 0.01 ounce, 16 strings; treasure stone, 1 seed, weight 0.01 ounce, 8 strings; green jade, 1 piece, 10 strings.

"Gauze, satin, plain cloth, heavy silk, silk floss, cotton category: *sha* thin silk, 1 bolt, 80 strings; 1 bolt thin silk, 120 strings; 1 bolt sackcloth silk, 250 strings; 1 bolt gauze, 160 strings; 1 bolt *gaiji* changed loom, 160 strings; 1 *chi* cotton, 8 strings; 1 bolt Korean linen, 30 strings; 1 bolt large blue three shuttle linen, 55 strings; 1 bolt large white three shuttle linen, 40 strings; 1 bolt middle fine white cotton-linen cloth, 20 strings; 1 bolt *ying* cotton-linen, 10 strings; 1 bolt *ying* sackcloth linen, 22 strings; 1 bolt fine sackcloth linen, 24 strings; 1 bolt coarse woolen cloth, 40 strings; 1 bolt brocade of thin silk, 50 strings; 1 bolt large cotton-linen, 20 strings; 1 bolt hempen cloth, 8 strings; 1 bolt grass cloth, 20 strings; 1 bolt large heavy silk, 50 strings; 50 silk; 1 bolt small heavy silk, 20 strings; 1 bolt fine brown wool, 240 strings; 1 length fine damask, 50 strings; 1 length Ti-

of gold had a face value of 400 strings. An ounce of white silver or 1,000 copper cash was priced at 80 strings. The strings here must be strings of certificates.

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betan serge, 50 strings; 1 catty floss cotton, 24 strings; 1 catty clean cotton bolls, 3 strings; 1 catty hemp, 500 cash.

"Grain category: 1 picul nonglutinous and glutinous rice, 25 strings; 1 picul wheat, 20 strings; 1 picul barley, 10 strings; 1 picul sesami, 25 strings; 1 picul glutinous millet, 12 strings; 1 picul yellow, black or green peas, 18 strings; 1 picul *sumi*, yellow rice, 18 strings; 1 catty wheat flour, 500 cash.

"Livestock category: 1 horse, 800 strings; 1 mule, 500 strings; 1 donkey, 250 strings; 1 camel, 1,000 strings; 1 water buffalo, 300 strings; 1 yellow ox, 250 strings; 1 large pig, 80 strings; 1 sheep, 40 strings; 1 deer, 80 strings; 1 small pig, 12

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strings; 1 dog, 10 strings; 1 roebuck, 20 strings; 1 cat, 3 strings; 1 rabbit, 4 strings; tiger and leopard skins, 40 strings each; horsehide, 16 strings each; cowhide, 24 strings each; deer's skin, 20 strings; 1 catty of horsemeat, muleflesh, beef, donkey meat, pork, mutton, roebuck or deer flesh, 1 string; 1 goose, 8 strings; 1 duck, 4 strings; chicken and wild chicken, 3 strings each; pigeons, quail or dove, 500 cash each; wild swan, 20 strings; 1 catty fish, turtles, shrimp or crab, 1 string.

"Vegetable and fruit category: 1 catty walnuts, peaches or hazelnuts, 1 string; 1 catty jujube, chestnut, or persimmon cakes, 1 string; 1 catty water caltrop or chicken-head, 1 string; 1 catty pine cones, 1 string; 1 catty grapes, 1 string; 1 catty arbutus, 1 string; 10 watermelons, 4 strings; 100 peaches or pears, 2 strings; 100 apricots, plums or grove-apples, 1 string; 20 oranges, tangerines or stone pomegranates, 1 string; 30 persimmons, 1 string; 100 catties green vegetables, 2 strings; 10 catties ginger, 1 string; 10 lotus roots, 2 strings; 20 lotus heads, 1 string; wintermelon, 500 cash apiece; 100 garlic sprouts, 500 cash.

"Turbans, hats, clothing category: Thin silk hat, 20 strings each; 1 barbarian hat, 8 strings; sable shoulder throw, 40 strings; 1 [?] grass hat, 8 strings; scholar's and clerk's turban, 8 strings; sackcloth, silk, gauze hats, 6 strings each; felt hat, 4 strings; sash, 1 string; felt socks, 4 strings per pair; felt shirt, 40 strings; deerskin boots, 24 strings per pair; hornless deerhide boots, 40 strings a pair; cowhide boots, 10 strings a pair; *weng* shoes, 2 strings a pair; slippers, 1 string 500 cash a pair; sackcloth, silk floss or gauze purse, 1 string; 1 square of wrapper, 1 string; 1 handkerchief, 2 strings; mesh turban, 3 strings; cotton, sackcloth, or silk floss coverlet, 100 strings; light silk coverlet, 40 strings; thin or heavy silk coverlet, 20 strings; felt strip, 40 strings; 1 strip flowered carpet, 80 strings; cotton, sackcloth, or silk floss bedding, 10 strings; linen bedding, 16 strings; fine linen or cotton boll coverlet, 30 strings; linen or cotton boll coverlet, 20 strings; used set of sackcloth, or silk clothing, 30 strings; new set of sackcloth, or silk clothing, 80 strings; used set of gauze clothing, 24 strings; new set of gauze clothing, 70 strings; used thin silk garment, 20 strings; new thin silk garment, 60 strings; used cotton garment, 5 strings; new cotton garment, 16 strings; used sackcloth and silk small coat, 20 strings; new sackcloth and silk small coat, 40 strings; used thin silk and gauze small shirt, 10 strings; new thin silk and gauze small shirt, 30 strings; used sackcloth and silk skirt, 25 strings; new sackcloth and silk skirt, 50 strings; used gauze and light silk skirt, 20 strings; new gauze and light silk skirt, 40 strings; thin and fine silk garment, 20 strings; fine wool garment, 80 strings; used Xia linen garment, 5 strings; new Xia linen garment, 10 strings; cotton small shirt, 5 strings; cotton skirt, 5 strings; cotton pants, 4 strings;

"Utensils category: Doors, 5 strings apiece; board screen, 10 strings; window, 30 strings; wooden board, 1 *chi* wide, 5 *chi* long, 5 *cun* thick, 4 strings; table, 10 strings; stool, 4 strings; square stool, 2 strings; armchair, 24 strings; *qin* lute, 60 strings; fan, 1 cash; wooden box, 8 strings; large screen, 24 strings; bamboo screen, 2 strings; shuttle [?] clothing, 30 strings; bamboo hat, 1 string; 2 rain umbrellas, 1 string; waterproof basket, 1 string; 1 *zhang* length of bamboo fencing, 10 strings; large pottery vase, 1 string; large pottery crock, 10 strings; lacquer plate, 4 strings; small lacquer plate or bowl, 1 string; 10 pair ebony chopsticks, 4 strings; 10 pair bamboo chopsticks, 500 cash; 10 pottery small plates or bowls, 2 strings; large wooden bucket, 5 strings; large wooden basin, 3 strings, with 1 *hu* capacity, 5 strings, with 1 *dou* capacity, 2 strings, of 1 *sheng* capacity, 500 cash; large iron wok cooking pot, 8 strings; copper wok cooking pot, 20 strings; iron hoe, 2 strings; iron plough, 2 strings; iron spade, 2 strings; large cart, 300 strings; small cart, 24 strings; boat with capacity of 100 piculs, 500 strings; horse saddle, 60 strings; drum, 5 strings; grinding stone, 30 strings; woman's palanquin, 80 strings; scales, 500 cash; 1 length iron cable, 1 string; lock, 500 cash; bow, 8 strings; 1,000 arrows, 4 strings; spear, 4 strings; sword, 5 strings; knife, 2 strings; crossbow, 8 strings; fish fork, 1 string; grain fork, 1 string; large musical stone, 20 strings; cymbals, 4 strings; small cartload of firewood and kindling, 15 strings; 100 catties firewood, 8 strings; 10 catties lime charcoal, 1 string; 1 catty charcoal/coal, 8 strings; 100 tiles, 10 strings; 100 bricks, 16 strings; 1 tree

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(1 *chi* around, 1 *zhang* long), 6 strings; beam, 4 strings; *miao* bamboo, 2 strings; rush mat, 1 string; brush bamboo, 500 cash; 1 large cartful of millet, hemp or grain hay, 40 strings; 1 catty white wax, 10 strings; 1 catty yellow wax, 2 strings; 1 catty sesame oil, 1 string; 1 catty tea, 1 string; 1 jar stillbeer or vinegar, 1 string; 1 catty true powder, 500 cash; 10 catties salt, 2 strings 500 cash; 1 catty honey or powdered sugar, 1 string; 1 catty thyme wood, 8 strings; 1 catty pepper, 8 strings; 1 catty flower pepper, 1 string; 1 catty silver vermilion, 10 strings; 1 catty alum, 500 cash; 1 ounce coarse vermilion sand, 4 strings; 1 catty *liu* yellow, 1 string; 100 sheets poster paper, 40 strings; 100 sheets lining paper, 10 strings; 100 sheets memorial paper, 16 strings; 100 sheets hand paper, 7 strings; 100 sheets various colored writing paper, 20 strings; 1 catty ink, 8 strings; 10 brush pens, 2 strings."

These prices for estimating the values of stolen goods were probably determined on the basis of the circumstances of different locations, and these amount to average prices. Prices could be higher in particular places.

Using these average prices, we may conclude that during the last eighteen years of Yuan, paper money's purchasing power fell to

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one-eightieth of that of silver. During the century of the Yuan Dynasty, prices had risen by nearly a thousand fold. Nevertheless, during the nine years from zhizheng 19 to Hongwu 1 [1368], our information about the circulation of money and prices is virtually nil. Did the Zhizheng Certificates have even that high a purchasing power?

Yuan Dynasty price records are fewer than those for other dynasties. Therefore, if we calculate prices in terms of gold and silver for that hundred-odd years, we can only make estimates based on a small number of items.

The silver price of rice during the last half of the thirteenth century was probably 0.9 ounces per hectoliter.[23] During the first half of the fourteenth century, it seems to have risen to 1.2 ounces per hectoliter.[24] Over the entire course of the Yuan Dynasty, the value in silver of a hectoliter was around 1.05 ounces or 39 grams.

Before zhiyuan 24 (1287), the Yuan Dynasty's gold-silver exchange ratio was 1:7.5. From that year on it moved toward 1:10. During the last half of the

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[23]During Southern Song's baoyou period [1253-1259], a hectoliter of rice cost 1.04 ounces of silver. Cf. chapter 5.2.6, note 4. *Yuan History*, 93, "Treatise on Food and Money, 1, Tax Grain": "Zhongtong 2 . . . commoner households which hasten to the river granaries to pay their taxes may commute each picul to 7 *qian* in Zhongtong Certificates." This refers to the price of rice in the husk. In the south, the price of unhusked rice was normally three-fourths that of husked rice. (Cf. note 22 above, "Estimating the Current Value of Stolen Goods.") In the north, however, it probably took two piculs of unhusked rice to be equal to 1 of husked rice. Therefore, the price of the latter must have been 1.4 ounces in Zhongtong Certificates per picul. This would make its silver price 0.7 ounces.

Superfluous Words on Agricultural Fields says that when the Mongols first occupied the south, rice was 1 string per picul. Cf. chapter 6.2.3, note 31. *Yuan History*, 13, "Annals of Emperor Shizu, 10," also says that before Lu Shirong set up the alcoholic beverage impost, people bought rice to make stillbeer for an official price of 1 string of Certificates per picul. In zhiyuan 24, when the changeover to Zhiyuan Certificates occurred, rice cost 10 strings per picul, or 1 ounce of silver.

Yuan History, "Treatise on Food and Money, Relief Measures," says that in yuanzhen 1 [1295], rice was expensive in the capital. The government sold off rice and white non-glutinous rice for 15 ounces in Zhongtong Certificates per picul, and white rice for 12 ounces, but these prices are reductions of from 3 strings to 5 strings from the market prices per picul. If, prior to zhiyuan 16 [1279], 1 ounce of silver was priced at 2 strings of Zhongtong Certificates, then thereafter it was priced at 5 strings. Beginning in zhiyuan 24, it was priced at 10 strings. In yuanzhen 1, it went for 15 strings, and was discounted variously for different sorts of rice. Thus, during the latter half of the thirteenth century, a picul of rice was about equal to 0.83 or 0.84 ounces, and a hectoliter was 33 grams of silver.

[24]The cost of rice during the first decade of the fourteenth century was 1 ounce per picul, since *Yuan History*, 96, "Treatise on Food and Money," contains under dade 7, "If there is no rice, then on the occasion, the equivalent price will be given, but no matter how expensive that is, no more than 20 ounces per picul [in Zhongtong Certificates] will be given." *Water Cloud Village Confused Draft*, 14, states that in dade 10 [1306], the normal times rice price of 10 strings per picul had risen to 30 strings per picul. (Cf. chapter 6.2.3, note 32.) One might also encounter rice at 20 strings per picul.

During the second decade of the century, the government made relief sales of rice for 25 strings per picul. (*Yuan History*, "Treatise on Food and Money, 4, Relief Measures.") The market price must have been 28 strings. This was equal to 1.1 ounces of silver.

During the third decade, the government's relief price for rice in taiding 2 was 20 strings per picul. (*Yuan History*, "Treatise on Food and Money, 4.") The market price was 23 strings. In zhihe 1, a picul was 15 strings, and the market price 18 strings. On the average, this equalled 1 ounce of silver.

During the fourth decade, there was the zhishun 2 [1331] commutation. According to the *Yuan History*, 35, "in the 10th month, an official was sent to help with 100,000 ingots worth of Certificates and 35,000 salt vouchers. . . . 300,000 piculs of rice were purchased harmoniously at an aid price." In tianli 2 [1331], the price of salt was 150 strings per voucher. Therefore, the price of rice was equal to 34 strings per picul, and this was equal to 1.1 ounces of silver. For the fifth decade, we have the figures from Sugimura Yutsuku. (Cf. chapter 6.2.3, notes 30 and 35.) Each picul was equal to 1.24 ounces of silver.

For the prices of gold and silver during Yuan, we have only the price of 2 strings per ounce of silver and 15 strings per ounce of gold at the time of issue of the Zhongtong Certificates, and Sugimura Yutsuku's gold and silver prices for zhizhen 6. Over some 80 years, the price of gold rose twenty fold, and silver rose fifteen fold. Rice rose 30 to 40 fold. Therefore, on average, silver rose in price by 1 string every three years. Based on this rule, in dade 7, the price of silver would have been 20 strings per ounce, and in zhida 4, the official price would have been 25 strings. The following year, however, the Zhida Silver Certificates were abolished, and prices fell back. Hence the price of silver also changed to 20 strings per ounce. In tianli 3, it was 30 strings. The gold-silver exchange ratio was 1:10.

thirteenth century, it was 1:8. During the first half of the fourteenth century, it was 1:10.

The cost of rice during the last half of the thirteenth century was 4 grams of gold per hectoliter. During the first half of the fourteenth century, it was 4.47 grams. The average for the whole period was 4.2 grams. During that period, the price of wheat in Europe was 14 grams of silver per hectoliter and 9 mg of gold, which was lower than the Chinese price. In terms of gold, the price of wheat in Europe was less than half the price of rice in China.

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6.3 Monetary Studies

1. Monetary Theory

There were no particular intellectual accomplishments during Jin and Yuan. Nor did these dynasties contribute anything to monetary theory.

The thirty year reign of Wanyan Yong, Emperor Shizong [1161-90], was the Jin Dynasty's most flourishing period, and this was true of money as well. Coins and certificates were still both being used then, and the value of money was fairly stable, but a tendency toward inflationary doctrine had already seeped into all discussions of monetary policy. In dading 10 [1171], Emperor Shizong said to the men of the Ministry of Finance:

> The official coins are gathered in, but are not dispersed, and so coins are heavily demanded among the people, and trade must be suffering difficulties. Gold, silver and various commodities ought to be ordered to be marketed. (*Ruzhen-Jin History*, "Treatise on Food and Money.")

This statement shows that he saw clearly that money was only of use when it was in circulation.

There were many men of ability during the Yuan Dynasty, but from beginning to end, the Yuan Dynasty's monetary system was mainly based on paper money. As a consequence all discussions centered on questions involving paper money.

In zhiyuan 3 [1337], a foreign merchant wanted to buy up the metal backing for the paper money, and himself undertake the task of keeping the value of money stable, saying that this would increase the government's annual income. The Minister of Finance, Ma Heng, opposed this. He said:

> The Exchange Certificates may regulate the myriad of commodities as a matter of law. These laws are the instruments of the Ruler. If now one merchant is given control over this, if law is abolished in favor of private power, what will remain to be used to control the Empire?[1]

This was a Legalist argument.

Xu Heng (1209-1281) was an opponent of paper money. He was a courtier who enjoyed Emperor Shizu's trust. For such a man to express opposition to paper money might seem strange. Though he had a high reputation, he only held the post of Director of Education, and was not someone holding direct political authority. He was frequently in conflict with those who did hold power directly, including such men as Wang Wentong and Ahema. Wang Wentong upheld the Zhongtong Certificates. Xu Heng

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considered Wang Wentong to be talking of profit, whereas he himself put his emphasis on righteousness.

By zhiyuan 15-16 [1278-79], the Zhongtong Certificates had become depreciated. To the "Directive on Mulberry Paper Money" he drafted for someone, he added a merciless attack on paper money. He considered the issuance of Hide Money by Western Han to have been the result of Emperor Wu's wastefulness, and to have been a petty scheme which could not be relied upon. During the ensuing 1300 years no one had dared try it again. He raised a new idea: That paper money was a debt owed by the government to the people. The more paper money fell in price, the larger the government's debt to the people:

> A store of paper and ink standing for a quantity of coins may be exchanged for the goods of the common people of the Empire. Since it can be printed easily, the process may be repeated endlessly without exhausting its raw materials. The popular story of the immortal who had the ability to turn pottery into gold had nothing on this. . . . The rule during the jiading period [1208-1225] of exchanging one for two took away half of the people's property. The exchange of one for five during the duanping period [1234- 1236] increased the burden on the people's property four fold, a terrible instance of unrighteousness.[2]

This was congruent with his view of fiscal policy. He believed that

> to exploit those below so as to serve those above, to impose cruel taxes and vexatious imposts, will fill the granaries and the treasuries,

and the state's needs might seem to have been fulfilled, but

> the land daily will be pared away, the fields will revert to weeds, floods will be followed by droughts, sighs of distress will emanate from the villages, and the people will freeze and starve, with brothers, wives and children being separated and dispersed.

Can this, he asks, be said to have been in the interests of the state's prosperity? Rather, this is what the

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[1] *Yuan History*, 163, "Biography of Ma Heng." Cf. also *Investigation of Literary Remains Continued*.

[2] *Posthumous Works of Duke Xu Wenzheng*, 7, "Instruction on Mulberry Paper Money."

lesser men call profit. As for what the gentleman calls righteousness, this lies in

> reducing that which goes to those above so as to increase that which goes to those below, remitting anonymous taxes, abolishing inequitable levies, being frugal in expenditures, and reducing waste of food.

Then, though the state might not seem to be able to have enough to manage,

> nevertheless, land will be opened, fields will be brought into good order, annual harvests will be abundant and rising, the storehouses will be full to overflowing, and the people numerous and flourishing.

Can this be said to be the state's poverty? In sum, he believes that cruel taxes and vexatious imposts to relieve a temporary emergency are inferior to increasing production so as to provide for the long term.

He believed that there was no way to support the paper money of that time except by using actual commodities to gather it in. By actual commodities he meant salt. Though what he said about paper money proceeded from the standpoint of an opponent, it constitutes one of the most vigorous arguments against currency inflation in the whole course of Chinese history.

There were others, like Zhang Zhihan, who wrote a 200 word "Discussion on Mulberry Paper Money" after the Mongol takeover of the south.[3] By that time the Zhongtong Certificates had already depreciated in value. He advocated their redemption for cash, and joint issue of copper cash and paper money, with new certificates being issued. His view of paper money was close to that of Xu Heng. He wrote:

> As for mulberry paper money, a square inch of paper is cut off to make flying cash, and a profit of many hundred fold is in fact obtained. Established by the sovereign power which ordains that it be heavily demanded, it is circulated according to regulations, and regulations are never anything but crafty. Nevertheless, before long, if not for measures to rescue it, the circulation of this money becomes obstructed.

He believed that the larger the quantity of money, the lower would be its purchasing power:
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> Mulberry paper daily becomes more numerous, and daily becomes cheaper. Gold, silk, pearls and jade daily grow scarcer, and daily more expensive.

This exudes something of the air of quantity theory.

Wang Yun (1227-1304) also devoted some attention to monetary questions. He discussed the Zhongtong Certificates in his *Middle Hall Affairs Record*.

He wrote from the perpective of the rulers, and did not oppose paper money. He believed that the Zhongtong Certificate system was basically a very good one, but he did not look at the problem theoretically. Instead, proceeding pragmatically, he believed that because the size of the original issue was small, the notes were fully backed by silver, and counterfeits were few in number, and prices were stable. Later on flaws appeared.

He put forward a "Petition on the Management of the Exchange Certificate Treasuries of the Circuits."[4] When the Zhongtong Certificates had become still more severely depreciated, he wrote another 500 words "On the Certificate Regulations."[5] His emphasis, however, was on technical problems, and he raised no theoretical issues.

Ma Duanlin (c.1228-1322) was also an opponent of paper money. When he discussed the Song monetary system in his *Investigation of Literary Remains*, he was very harsh toward paper money. He blamed paper money for the rise in prices, the starvation of the soldiers, and the inability of the officials and clerks to preserve their integrity.

> Official grain purchases were made with mulberry paper; salt was dealt with in mulberry paper; official salaries were paid in mulberry paper; army officers were rewarded in mulberry paper; local government expenditures were without exception made with mulperry paper. Copper coins, because rarely seen, became precious. Nothing further was ever said about the backing accumulated in former days. This inevitably caused prices to soar, and brought down the price of mulberry paper. The people's lives were made distressful, and the soldiers frequently suffered from hunger. That the petty clerks of local governments were without the wherewithal to nourish their integrity was entirely because of the abuses of mulberry paper.

Actually, the abuses he mentions are merely the bad consequences of currency inflation, and were not caused by paper money as such.

Ma's father had been a chancellor of the Song Dynasty. After Song's fall, Ma devoted himself solely to scholarship and writing. He was extremely

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[3] *Xiyan Collection* (*Complete Works of the Four Treasuries* edition), 13.

[4] *Complete Collected Works of Mister Qiurun*, 89.

[5] *Complete Collected Works of Mister Qiurun*, 90, "Thirty-five Things to Convenience the People."

dissatisfied with the paper money circulated near the end of Song times. He seems to have believed that circulation of paper money must lead to currency inflation and soaring prices.

In practice, this was in fact the case, but theoretically, this position cannot be maintained. This is because once paper money has been placed into circulation, naturally all payments may be made with it. The problem lies in excessive quantities of paper money. Ma Duanlin raised no criticism on this point.

2. *Monetary History*

The development of the techniques of scholarly research is not uniform over the course of history, and we must examine the various factors involved in its evolution. Nevertheless, the work of scholarship can never be broken off. The impulse to seek true principles is like an eternal flame which is always burning somewhere. No matter under what difficulties, there will always be dauntless men who will bend their heads to the work and will accomplish something.

The Yuan Dynasty was just such a period. The Mongol aristocratic political authority understood only that they wanted to cultivate better grazing lands, and did not know how to promote scholarship and the literary arts. For the most part they repressed the Chinese, and Chinese culture went through a period of neglect, but this unfavorable climate did not destroy Chinese culture.

To a certain extent it even produced opposite results: In literature, the formal poetry of the bureaucratic class was transformed into the theatrical songs of the townsmen. In scholarship, it caused some who were dissatisfied with the current situation but lacked the power to change it, to throw themselves into the work of research with redoubled energy.

So far as research into monetary history went, the Yuan Dynasty was not far inferior to other epochs, having general histories, histories of particular periods and monographs which dealt with money.

The "Investigation of Coins" in Ma Duanlin's *Investigation of Literary Remains* may be classified as a general history of money. The subtitle of the "Investigation of Coins" is "Coinage Systems Through the Ages." It is divided into two chapters, comprising 30,000 characters. So great a length was without precedent.

The "Investigation" begins with the origins of money and continues stright through to the paper moneys of Southern Song. Its arrangement differed from that of the previous two encyclopedic treatments, in that it took the form of a detailed outline. After a summary narrative, it would quote one or a few segments from other writers, but these quotations generally were not used to explain the previous summary narrative. This made for some degree of heterogeneity.

In addition to coins, each kind of paper money is treated separately, including Exchange Notes, Account Notes, Sichuan Vouchers, Huai Exchange, and Hu Account Notes, which renders the "Investigation" a compendium of reference materials which is convenient to consult.

Its first point of superiority consists in its clear statements. In this respect it is unlike the *Universal Statutes* and *Universal Record*, which simply copied things out

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as though their compilers' own opinions were identical to those of their sources.

Its second point of superiority lies in the large number of its quotations, which raises its historical value to a higher level than previous works of the same kind.

Third, though its contentents were essentially transcriptions of the works of previous writers, even to preserving their errors, the author sometimes had ideas of his own, and expressed these in the form of appended notes.

For example, after quoting the section of the *Rituals of Zhou* on credit, there is a note by the author giving his own explanation of this section in opposition to those of Wang Anshi and later Confucians.

Ma Duanlin also states his opposition to the prohibition on hoarding ready cash of the Tang yuanhe era [806-820]. He believed that since the politicians could not "regulate the people's production in order to equalize poverty and wealth," it would be improper to merely limit the wealthy and powerful. He said that while it was possible to limit the number of the fields people held in their own names, it was going too far to constrain the hoarding of coins. This was because the aim of people in purchasing fields was to take possession of them, and so it was necessary to establish regulations if it was desired to limit their total acreage; whereas the ambition of a man hoarding coins is to circulate them, and there is no reason to establish regulations teaching him to trade them off, when that is precisely what he will do without such instruction.

Ma also believed that it was poor policy for Southern Song to have established limits for household

holdings of coins in shaoxing 29 [1159]. He also criticized Southern Song's paper money systems. All of this shows that he opposed oppressive government by the ruling class.

To sum up, Ma's *Investigation* was not inferior in value to the *Universal Statutes* of Du You or Zheng Qiao's *Universal Record*. Historians in later epochs have, of course, for the most part acknowledged this point, but some people put Ma's work below than of Du and Zheng. They said that the value of Du's *Universal Statutes* lay in the fact that it created a new form, and that Zheng's *Universal Record* value lay in its idiosyncratic point of view, in its uniquely creative nature, and even in what has been called its "arbitrary scholarship." They go so far as to suggest that its theses did not require evidence.[1]

Actually, none of these three books can be considered as anything other than as compilations of materials. As a reference work, Ma's book has the advantage of being more convenient to consult. In addition, a reference book must be well attested. If one raises one's requirements to a still higher level to require that a work serve as the text for a whole school of thought, then it is still more necessary to lay hold of correct source materials. If one's sources are unreliable, how can one form correct explanations?

The section on money in the "Treatise on Food and Money" of the *Song History* may be taken as representative of the monetary histories of particular periods written during the Yuan Dynasty. This section's contents are divided into two parts, "Copper and Iron Coins" and "Account Notes."

The "Copper and Iron Coins" subsection is a little over 10,000 characters long; the "Account Notes" subsection is some 4,000 characters long.

This section is not much longer than the "Investigation of Coins" section of *Investigation of Literary Remains*, and is very badly organized, amounting to no more than a pile of source materials. In reading it one cannot get a clear grasp of things.

Though the subsection on paper money is labeled "Account Notes," it actually includes

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Exchange Notes, Coin_Vouchers, Communicating Medium, Account Notes, Ready Cash Communicating Medium, Silver Account Notes, Huai Exchange and Hu Account Notes, but it discusses them with unclear logic and in a disorderly fashion.

This is because its authors were compiling it under orders. They themselves felt no urge to do this work, hence did not shoulder the responsibility, and did their job carelessly. This was a universal failing of bureaucratic writing down through the ages.

The *Liao History* and *Ruzhen-Jin History* were compiled by the same group of men. Each contains a "Treatise on Food and Money," but the one in the *Liao History* does not have much material on money.

The *Ruzhen-Jin History* "Treatise on Food and Money" contains one chapter of some 9,000 characters on "Coins," which is the most detailed work on the monetary history of Jin, beginning with the first printing of Exchange Certificates and minting of Zhenglong coins and continuing right down to the fall of the dynasty.

Its organization is similar to that of the *Song History* "Treatise on Food and Money," but because the Jin monetary system was much simpler than that of the Song, its narrative comes out somewhat more clearly. The section on coins is, however, only 1,000 characters long. As a consequence, it could not avoid many omissions and neglect of many points.

For example, it is not clear concerning the

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[1]Zhang Xuecheng's *Clarification of Literary History*, 5, inner section 5, "In Defense of Zheng," states: "Lord Zheng [Qiao] . . . unfortunately is praised along with Ma Duanlin's *Investigation of Literary Remains*, but the latter work is carelessly done, and is far inferior to Zheng's work. Ma has not studied much and is superficial. Fundamentally he lacks definite understanding. If one follows and carefully judges his work's contents, one finds it is reckless in its judgments. If one then compares the two works in terms of the actual content of each for the same years, weighing the short and discussing the long, it is like comparing a mountain tower with an inch of wood, and Ma's work is not comparable in strength even where it does not commit errors."

Zhang Xuecheng's standards for evaluating an historical work involve "creation of precedents," or "vast principles," and the so-called "seeking of righteousness." He pays no attention to laxity in presenting evidence or to indefiniteness in selecting material. Zhang even goes so far as to say that Zheng's theses did not require evidence. This is like the practice of those Chinese artists during Yuan and Ming who talked only of style, and were not interested in actual forms. Zhang Xuecheng's ideas were, however, designed for the purpose of opposing those people engaged in detailed and minute investigations of special topics during the latter two-thirds of the eighteenth and early years of the nineteenth century, and were also conditioned by his times.

After Liang Qichao had heaped praise upon Du You's *Universal Statutes*, he went on to say, "after him, Ma Duanlin of the Yuan, in imitation of him wrote *Investigation of Literary Remains*. Though complete in its scope, and broad in its range of quotations, it nevertheless lacked fresh understanding and penetration. It is merely convenient for reference."

Cheng'an Treasure Money silver ingot, and of the copper coins it discusses only the Zhenglong and Dading, and does not even mention the Taihe coin. Fortunately, numismatics can provide a great deal of supplementary material on the Jin coinage.

For paper money, we have nothing but the *Ruzhen-Jin History* "Treatise on Food and Money" on which to rely.

It is necessary to point out that Ma Duanlin's "Investigation of Coins" and the *Song History*'s "Copper and Iron Coins," like Du You's *Universal Statutes*, Zheng Qiao's *Universal Record* as well as the sections on money in the old histories of successive eras were all merely small sections of much larger works, and their authors were not specialists in monetary history.

Each of these authors held a different view of the place occupied in history by money, and each devoted a different amount of energy to this topic. Hence it would not be very appropriate to criticize an entire work on the basis of so small a portion of it.

For example, the *Universal Record* has more material than *Investigation of Literary Remains* on literature and the classics, but when we are discussing the history of money, we reach our conclusions only on the basis of this small section of each work.

There were also some monographs on monetary history during the Yuan Dynasty. Zheng Qiao and the compilers of the *Song History* cannot be said to have been specialists on monetary history. The author of such a monograph ought to be someone who has devoted special study to monetary history.

During the Yuan Dynasty there was Fei Zhu, who lived during the zhizheng period [1341-1367], and had served as Provincial Judge of Hanzhong and Manager of Chongqing Prefecture.[2] He wrote a *Coin Catalog* [*Qianbi pu*] in one chapter and a *Mulberry Money Catalog* in one chapter. The *Coin Catalog* is a monograph on the monetary history of Sichuan from the Han Dynasty through the chunxi year period [1174-1189] of Southern Song.[3] The *Mulberry Paper Money Catalog* is a monograph on Sichuan's Exchange Notes and Coin Vouchers up until the qingyuan year period [1195-1200] of Southern Song.[4]

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In addition to these there was Wu Qi's *Full Investigation of Treasure Certificates*, in eight chapters. There are no details on its contents. It is said that it narrated the history of the Certificate system during the eighty odd years from the zhongtong period on.[5] When the Zhizheng Exchange Certificates were issued, Wu Qi was serving as Minister of Finance.

[2]Cf. Qian Cengwang, *Notes of Diligent Searches in Reading Books*.

[3]Cf. *Pan-Sichuan Belles Lettres Record*.

[4]*Sichuan Gazetteer*.

[5]Cf. *Complete Works of the Four Treasuries General Contents*.

3. Numismatics

The Yuan Dynasty did not make extensive use of coins. Hence it is easy to explain the lack of development of numismatics then. It is said that there appeared in zhida 3 [1310] a one chapter *Coins Through the Ages*. This was the year after the circulation of copper coins was proclaimed. This work is not, however, extant, and we have no details on its contents. It is possible that it resembled the "Investigation of Coins" of the *Investigation of Literary Remains*, and so was not a genuine numismatic work.

The Yuan Dynasty circulated paper money, and so there are several Yuan works dealing with paper money. This is a distinctive aspect of Yuan Dynasty numismatics. Among such works are Fei Zhu's *Mulberry Money Catalog* and Wu Qi's *Full Investigation of Treasure Certificates*. Since Fei Zhu's work had appended to it a description of a Coin Voucher, we can tell that it was a numismatic work, but since this was not an illustration,[1] the reader still does not know what a Coin Voucher actually looked like after perusing this work. The author lived a century or two after the beginning of Southern Song, but as he was born and lived in Sichuan, he may have seen actual Coin Vouchers.

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Wu Qi's *Full Investigation of Treasure Certificates* does not fall within the scope of numismatics.

Basically there is no strict boundary between monetary history and numismatics. Serious students of monetary history must give equal weight to both written and material primary sources, and in practice the superior sort of numismatist invariably studies the historical records as well.

Very few of those who studied monetary history in ancient times ever, however, came into contact

[1]Cf. *Sichuan Gazetteer* (Qianlong 1 [1736] woodblock edition), 46. The *Shu Broad Record* which it cites was undoubtedly

with the coins themselves, while those who studied the coins generally placed the written sources in a place of secondary importance. Of course even when pure numismatists take up the study of historical written sources, it is to obtain starting points for numismatics. This is because numismatics is itself an independent science. Hence the problem of establishing a boundary between monetary history and numismatics is not really a very difficult one in practice.

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by the same author.

6.4 Credit and Credit Institutions

During the twelfth and thirteenth centuries Europe's feudal system began to break up, and the rate of progress accelerated. In the credit trade money exchange shops, loan societies, and pawnbroking appeared.

The gradual development of commerce had begun to unravel the feudal system. City states arose one after the other. Coins from different places flowed into these cities. Their fineness and weights were not uniform. Inferior coins were very numerous, and illicit clipping of coins' edges was a common practice.

It was for these reasons that money exchange shops arose. They not only calculated the fineness, weight and value of coins for merchants, they also guaranteed coins for them, and cleared debts on their behalf. Later on, they expanded their clearing operations from their original sphere to locations outside their home cities. This gave rise to a form of remittance. By the end of the twelfth century, Italy was already using bills of exchange. In contrast, the use of paper money retarded the development of the remittance trade in China.

The growth of the city-states in Europe also gave rise to constant warfare among them. To fight such wars they recruited mercenary soldiers. This differed from the situation under the feudal system, where such service was obligatory for the people. It was now necessary to employ cash to hire these soldiers, which required large sums of money, much of which those city governments could not undertake to raise themselves.

As a consequence, they frequently resorted to extortion of loans from local rich merchants, and it was such men who would organize a corporate group to manage the loan accounts, and to collect on their behalf the taxes pledged for the loans. Sometimes they profited by employing these tax funds to make further loans. Such partnerships evolved into yet

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another type of financial organization. Such organizations had already appeared within the twelfth century Venetian Repubic.

There were no important new developments in the Chinese credit trade during this period. Under Jin rule, credit was still mostly a matter of loans made privately.[1] Although the governmental authorities had fixed the rate of interest at no more than 3 percent per month, and total compounding was to come to no more than twice the original principal, in actuality interest of more than 300 percent per month was sometimes taken.[2]

Secured credit, as of old, relied on pawnshops, which were called pledge treasuries [*zhidianku*] or release treasuries [*jieku*]. These were carried on as private businesses. There were also public pawnshops, called "flowing springs" [*liuquan*]. This was a rather important development in the history of credit in China.

In dading 13 (1173), because pawnshop interest had become too heavy, reaching as high as 5 or 7 percent, and sometimes being compounded, Emperor Shizong ordered that in the Middle Capital and Southern Capital (i.e. Bianjing), and in Dongping and Zhending pawnshops be established under the name Flowing Springs, with specialists to manage them.

The regulations also obliged the chief of each establishment and his deputy to personally evaluate the articles offered as pledges. The amount of the loan was to be 70 percent of the value of the pledge, and monthly interest was to be 1 percent. For loans of less than a month, interest was to be reckoned by the day. The pledge could only be sold if it was not redeemed within two years and one month.

The pawn ticket was called a check [*tiezi*]. On it was clearly written the full name of the person pawning the object, the name of the object pawned, and its nature, or the grade and weight of gold or silver of which it was made, as well as the date and amount of the loan. If the pledge was lost, its owner was to be recompensed on the basis of the cost of a new object of that type. In dading 28 [1188], 10th month, an additional 28 Flowing Springs Offices were established.[3]

Because the Jin simultaneously employed silver, coins and paper money, the money exchange trade

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[1] Hong Hao, *Record of Things Heard at Pine Desert*, "Great King Yinzhuge": "There was a man named Great King Yinzhuge [a Jin person] who had displayed much nobility in war, but who was not familiar with the people's affairs. He was made Defender of Yanjing. He had several tens of silver. His family owed to a rich monk 6 or 7 million strings of metal which they were unwilling to repay." (*Old Stories*, Collection D, 4.)

[2] *Ruzhen-Jin History*, 50, "Treatise on Food and Money, 5, Harmonious Purchase": "The Dynasty set up regulations for those who raise wealth specifying that their monthly interest should not exceed 3 percent, and that it should accumulate only to a total of twice the original amount. Now it sometimes happens that interest of 300 percent is taken for less than one month. It is desired to clearly order the offices to enforce the old regulations. In days of abundant harvest, increase Harmonious Purchase of grain. Thereby the public authority will have an abundance without private interests suffering."

[3] *Ruzhen-Jin History*, 57, "Treatise on Officials, 3."

became somewhat more developed. Though the government had established Exchange Certificate Treasuries to redeem paper money for cash, ordinary people found it very difficult to come into the local government offices, and preferred to let merchants handle their money exchange requirements.[4] Given the chaotic conditions under which money was circulating, this was probably a business which it was profitable to undertake. A money changer could make a substantial profit from the discrepancy between his selling and purchasing prices.

Because of the Yuan's military campaigns toward all points of the compass, its taxes were especially heavy, and many people had to borrow money to pay them. As a consequence, lenders raised their interest rates. The most famous form of high interest loan was the so-called "lamb interest" or "lamb profit," which doubled the principal in a year. Those who made such loans seem to have been Uighurs from the northwest. This practice was already occurring before the Mongols became rulers of China.

In Emperor Taizong's (Ogodei's) 12th year (1240), 76,000 ingots of public funds were used to pay off such loans.[5] It was ruled that from then on, no matter how long a loan ran, the interest could not exceed the amount of the original principal.[6] In zhiyuan 3 [1266], 2nd month, another edict emphasized the principle of having no more profit than the original amount of a loan.[7]

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[4]*Ruzhen-Jin History*, 48, "Treatise on Food and Money, 3," taihe 7, 11th month: "[Gao] Ruli said in reply, 'Now treasuries have been set up in various places, most in public buildings, which ordinary people find it rather difficult to move in and out of. Though there are merchants who exchange them, the Certificates suffer from their lack of abundant backing.'"

[5]*Yuan History*, 2, "Annals of Emperor Taizong," 12th year: "This year because officials and commoners had borrowed money from the Uighurs to reward officials, and the amount of the principal was doubled in the course of a year, a practice called lamb interest, terrible harm was being done. An edict called for official goods to be used to repay these loans. In all 76,000 ingots were employed. It was further ordered that for all loans longer than one year, only as much interest as was equal to the principal be paid."

Yuan History, 146, "Biography of Yelü Chucai": "[During the reign of Taizong]. Prior to this, the senior clerks of the prefectures and districts had been borrowing silver from merchants. Interest at the official rate had accumulated to several times the original principal. This was called lamb profit. Even if they had sold their wives and children into slavery, they still would not have had enough to repay these loans. Chucai memorialized that it be ordered as a permanent rule that interest amount to no more than the original principal. For those among the people who owed the most, the officials would repay in their stead."

Yuan History, 191, "Good Clerks, 1, Biography of Tan Deng": "The officials were making loans with interest accumulating to several times the principal. None of the people could repay them. Deng came in for audience and described the harm of this to the minister Yelü Chucai. Emperor Taizong was sympathetic. To avoid forcing people to flee from their creditors, no matter how many years a private loan had run, interest could no more than double the principal."

Yuan History, 155, "Biography of Shi Tiance": "[During the time of Emperor Taizong] when Tiance returned to Zhending, the administration was vexatious to the people, and taxes were heavy. People were borrowing from northwestern merchants so as to pay their taxes, and interest accumulated to several times the amount of the principal. This was called lamb profit. The people could not repay such loans. Tiance memorialized to request that the officials pay these off, with principal
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and interest being limited to the same amount."

Yuan History, 151, "Biography of Wang Yu": "There were people who were in debt to northwestern merchants for silver, interest had doubled the original amount of these debts, and they were unable to repay them. Wang put forth 5,000 ounces of silver to repay the loans for them."

Yuan History, 152, "Biography of Wang Zhen": "[In the time of Emperor Taizong] Zhen said to the Emperor, 'Daming is in difficulties from taxes, and has borrowed 80 ingots of silver from northwestern merchants. Tax obligations of 50,000 *hu* of grain have been evaded. If that amount is levied again, some people will have nothing to live on.' There was an edict to the officials to repay the silver that had been borrowed."

Yuan History, 156, "Dong Wenbing": "Previous orders had not been enforced because of military action. Loans had been made to people, and interest was doubling the amount of the principal within a year. The district used the people's silkworms and wheat to repay them."

[6]*Yuan History*, 105, "Treatise on Punishments, 4, Prohibitions": "For all loans, no matter how many years or months they may run, the interest may not exceed the principal. If more is taken from people or a new contract is taken out so as to take interest on the interest, or if a person's livestock or other forms of wealth are taken, or if his children and women are taken as servants, the punishment will be still more severe. If more is taken as interest, both principal and interest are to be forfeited to the officials. Even if pledges are not placed in a licensed pawnshop, and a pawn ticket is not issued, taking interest in contravention of the rule is prohibited."

Yuan History, 125, "Buluhaya": "When Emperor Shizu took the throne . . . Buluhaya was ordered to Zhending. There were rich men in Zhending who made loans for unlimited periods, and took interest totalling more than the original principal. Buluhaya rectified these abuses and limited the amount of interest paid to the amount of the principal. Later this was fixed as a law."

[7]*Itemization of the Universal System*, 28, "Taking Interest in

In zhiyuan 19 [1282], because the power
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of the great families was allowing them to exploit their debtors, the methods of the Jin were imitated, and it was ruled that in making private loans interest would be limited to 3 percent.[8]

However, most lenders employed the so-called "interest matching the principal" rule. For every loan, the interest was to match the principal at the time of repayment.[9] If he went past a year, the borrower often had to write another debt contract which subsumed the accumulated interest into the principal, and hence legally turned the loan into one involving compound interest. If the debtor could not make repayment, the creditor would frequently take over the debtor's property, and might even take control of his children and women as slaves.

In zhiyuan 21 (1284), Lu Shirong memorialized to request that the circuits set up Balanced Standard Annually Rotating Emergency Treasuries with the aim of balancing out the value of money and making low interest loans available to the people. He believed that though there were already institutions for smoothing out prices, nobody could use their capital stock, and that this caused a fall in the value of Certificates and rises in prices. If this capital could be used for loans at interest, not only would there be many borrowers, there would also be no loss of capital.

Lu Shirong's many schemes were a step ahead of Wang Anshi's methods. These Balanced Standard Annually Rotating Emergency Treasuries would have been like national banks. He called for establishing one of them in each circuit, which would have been like the provincial branch banks of later ages.

Several months later, Lu Shirong was impeached, and thrown into prison, where he died, and of course these procedures were not put into effect, but in zhiyuan 30 [1293], 5,000 ingots worth of Certificates were put up as the capital for public pawnshops, called Broad Favor Treasuries, which made secured loans at interest.[10]

The main private credit institution was still the pawnbroking trade. Pawnshops were called "release pledge treasuries" [*jiedianku*],[11] "release pledge

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Violation of Rules": "In zhiyuan 3, 2nd month, an imperial decree was received limiting a loan's profit to the amount of the principal. Even if a new loan contract was exchanged for the old one, it could not be enforced. Nor could the borrower be forced make up the deficiency from his property. Violators were to suffer punishment."

[8] *Yuan History*, 12, "Annals of Emperor Shizu, 9," zhiyuan 19, 4th month: "Regulations were established for lending to the people at interest. A rate of 3 percent was set." *Itemization of the Universal System*, 28: "In zhiyuan 19, 4th month, there was a Department of Ministries memorial stating that because loans being made in the various circuits by powerful families were causing a crisis, and taking interest of as much as .05 ounces per ounce, or as much as twice the principal. If the debtor had no money to make repayment, in addition to the interest already paid, he had to make another written contract which compounded the interest. It was permitted to detain the person himself and his property. This was truly hard on the people. Henceforth anyone involved in a loan was to pay no more than .03 ounces per ounce in interest."

Xu Zaisi, *Qing River Prefaces* ("Xiangsi"): "Xiangsi had a small loan for which he dunned every day, and for which he carried a burden of worry. He could not exceed interest of 3 percent, and he could only count on getting as much as the amount of his original capital in profit."

[9] The musical drama "The Affectionate Couple's Coverlet," act 1, preface. Cf. also, "Moving Heaven and Shaking Earth Dou Eyuan," preface: "(Old Woman Bu'er Cai recites a poem) . . . There was some money in the house. There is a lower exam graduate named Dou who borrowed 20 ounces of silver last year. As of now the principal and interest come to 40 ounces. I have several times sought to collect repayment, but that Graduate Dou merely says he is poor and in difficulties." (*Selected Yuan Songs*) Cf. also "The Band of Children of Cuihong Township," act 2: "(Dr. Wang Shou says) . . . This is Uncle Han Hongdao from Baiying Village. I shorted him 10 ingots worth of Certificates. Principal and interest should be 20 ingots." (*Selected Yuan Songs*.)

[10] *Yuan History*, 89, "Treatise on Officials."

[11] The musical drama "The Affectionate Couple's Coverlet," preface: "(The jingban Executive Liu says) Your humble student is surnamed Liu. My double given name is Yanming. My family is fairly well-off. Everybody calls me Executive. Today I'm opening up this release pledge treasury. Let's see what sort of fellow turns up." (*Selected Yuan Songs*) Cf. also "Killing the Dog to Instruct the Man," act 4: "(The zhengmuo rises and says) Today my elder brother is teaching me how to manage a release pledge treasury. I'll be sitting on easy street." (*Ibid.*)

"The East Hall Elder Exhorts the Breaking of the Disciples," preface: "[The zhengmuo says] Old fellow, you're mistaken. You have a thousand *qing* of fields outside the wall, and inside the city an oil-pressing establishment and a release pledge treasury. You have sons and a wife. You are the first or second richest man in Yangzhou." (*Ibid.*) Cf. also "The Cloth Sack Monk Bears the Word," preface: "(The zhengmuo says) I've ticked off the stillbeer. The old one always says one should drink a little less if you want to know a little more. As for me, I sit here at my leisure in the release pledge treasury seeing who comes by." (*Ibid.*) Cf. also "Ma Danyang Escapes Liu Xing," act 3: "(The jingban Executive Lin rises and says) Your humble pupil is surnamed Lin, has the given name Sheng, and the alternate name Maozhi. It this city of Bianliang I have opened a release pledge

shops" [*jiedianpu*],[12] or "release treasuries" [*jieku*].[13] They not only made secured loans, but seem also to have made general unsecured loans. A character in a musical drama goes to a release pledge treasury to borrow travelling expenses.[14] These sources also show the personnel of a release pledge treasury going outside the establishment to collect a debt.[15] In this case, of course, it was not the redemption of a pledge that was involved, but the pressing for repayment of an ordinary loan.

In addition, there were also instances of using the release pledge treasury as a center for setting up a numaber of other shops. These shops were either under the supervision and management of the release pledge treasury or it would routinely send people to audit their books.[16] In this they resembled modern investment companies or trust financial institutions.

Monthly interest rates charged by Yuan Dynasty release pledge treasuries mostly ranged from 3 to 3.6 or 3.7 thousandths. That is, for each string of cash per month they took from 30 cash[17] to 36 or 37 cash.[18] For ordinary loans, however, the rate seems to have only been 2.5 thousandths.[19] There may have been a reason for this discrepancy:

Though the pawnshop had the pledge as security, it faced additional expenditures, such as the expense of safeguarding the pledge. Moreover, the pawnshops recognized the ticket and not the man. After the man who had pawned the object had left the establishment, the pawnshop had no way to control him. It could not force him to return to redeem the pledge, though he retained the right to do so.

Though ordinary loans often

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treasury." (*Ibid.*)

[12]The musical drama "With Sweat Shirt," act 1: "(The zhengmuo says) This old fellow is surnamed Zhang, and I have the given name Yi, and the alternate name Wenxiu. I'm originally from Nanking. . . . I live here in Bamboo-tube Lane, Horse-travel Street, and I run a release pledge shop." (*Selected Yuan Songs*)

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[13]The musical drama "The East Hall Elder Exhorts the Breaking of the Disciples," act 4: "(A Yangzhou female servant says) Does this release pledge treasury at the mouth of the sea still make loans? (The zhengmuo sings) In the release treasury there is gold and accumulated silver." (*Selected Yuan Songs*)

[14]The musical drama "The Affectionate Couple's Coverlet," preface: "(Prefecture Head Li says) Ah, Nun Liu, you've come. I have to hurry now to the capital to listen to the examination of a criminal case. But what should I find but that I'm a bit short for travel expenses. To come to the point, I've asked you here to lend me ten pieces of silver for travelling expenses. (The nun says) I have it. I have it. There is Executive Liu's establishment, which makes private loans on a broad scale. Not to speak of ten pieces, he is even good for twenty. I'll just go over there. (The jingban Executive Liu says) . . . Today I've opened this release pledge treasury to see what sorts of people turn up." (*Selected Yuan Songs*)

[15]The musical drama "With Sweat Shirt," act 2: "(Zhang Xiaoyou along with the xing'er rises and says) . . . Brother has gone to collect a debt. I am sitting at ease in this release pledge treasury." (*Selected Yuan Songs*) Cf. also, "The Cloth Sack Monk Bears the Word," act 1: "(Liu Junyou leading the various pledges rises and says) Your humble pupil is Liu Junyou. Ever since elder brother (Liu Gui, the proprietor of the release pledge treasury) acknowledged me as his adopted brother, there has been half a year. To begin with, elder brother was normally a stingy and hard to control person. He wouldn't put out one cash nor use half a cash. Now the making of loans is all up to me." In the same musical drama "(The zhengmuo sings of reduction of cheating) Then of these hundred and ten families owing money, some thirty have delivered it."

[16]The musical drama "Seeing the Cash, the Servant Girl Buys Back Her Family From Their Creditor," act 2: "(The waiban, Chen Depu, rises and recites a poem) . . . There's a man in this place, old Executive Jia 'tis, who's family fortune ten-thousand strings is, fields and businesses a crow can't fly past, an oil-press shop, a release pledge treasury, gold, silver, pearls and feathers, light silk, gauze, damask by the bolt, and I don't know what else could be. . . . I'm today sitting in the hall of his home. And it's not a school hall either. It is just that I'm settling the accounts in his release pledge treasury. . . . Today there's nothing much going on, so I'm going to the release pledge treasury to take a look. (Exits)

"(The jingban Little Two of the shop rises and recites a poem) . . . This wineshop of mine is Executive Jia's. His firm has a gate hall master named Chen Depu, who comes every three or five days to audit the books. . . (Jia Ren rises to speak to Little Two) . . . Ever since I dug out a wall for that small family and found a picul-sized trough of gold and silver unbeknownst to the master's family, all of it was stealthily moved home by me. Beginning with that, these houses and cottages, release pledge treasury, flour house, grinding house, oil house, wineshop, the business they all do, grows like water flowing. . . In this release pledge treasury of mine there is a gate hall master called Chen Depu. He collects money from loans for my establishment." (*Selected Yuan Songs*)

[17]Zhu Shijie, *Calculation Techniques Primer*, first chapter, "Treasury Release Tax Gate": "Now there is a man pawning something for cash of 85 strings 700 cash. Per string the monthly interest is 30 cash. It has now been 8 months. The question is how much interest has accumulated?"

[18]Zhu Shijie, *Four Original Jade Mirror Detailed Draft*, latter part, 4: "Now there is a man pawning something. . . . For each string the monthly interest is 36 cash and four-fifteenths."

[19]*Ibid.*, "Now there is a man who has borrowed 25 ounces of silver. For each ounce the monthly interest is .025 ounces."

lacked security to back them, the creditor and debtor were frequently acquainted with each other, and there was no great possibility of defaulting on the debt. In fact, most debtors were under the domination of their creditors.

In zhiyuan 16 [1279], not long after the conquest of the south, pawnshops came under official harassment, and so only influential people dared run release treasuries. As a consequence, the authorities sent down orders prohibiting the local offices from blindly interfering in business, and from collecting things from private households.[20] In yuanzhen 3 [1297], an order was issued that only if pawned gold and silver had not been redeemed after two years could it be taken over. This was because at that time some release treasuries were not permitting pledges to be redeemed after a year.[21]

Proprietors of pawnshops included, in addition to officials and merchants, a significant number of Buddhist monks from temples and priests from Daoist monasteries. The affairs of such temples and monasteries were multifarious. In addition to pawnshops, they also ran gardens and forests, mills, shops, stalls and bath houses. These businesses were all under imperial protection. Based on surviving imperial edict steles we know that such arrangements existed in Henan, Hebei, Shandong, Shaanxi, Shanxi, Jiangxi, Hubei and Yunnan provinces.[22]

The deposit trade was not at all developed during the Yuan Dynasty. We do not know if forwarding and safe deposit by shops was still being practiced, but counting houses seem to have fallen into decay. Counting houses had originally appeared during Sui and Tang times in Chang'an, and they were also present in Northern Song's Bianjing and Southern Song's Lin'an. Chang'an had suffered destruction during the civil wars at the end of Tang. Bianjing was looted by the Jin. Its former glories had long since disappeared. The Yuan Dynasty's political center had shifted to Yanjing. Given the warfare and currency inflation, the deposit trade could not have developed there.

The monetary exchange trade, therefore, gradually developed out of necessity. The Yuan Dynasty's monetary exchange trade was run by the silver shops or silversmith shops.[23] Since Jin and Yuan times, more silver has been used than gold. Hence the gold

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[20] *Itemization of the Universal System*, 27, "Release Treasuries": "In zhiyuan 16, 6th month, the Department of Ministries received an Imperial decree. Shi Zhaotao had memorialized that at the time of Song's fall, there had been private households which the official bureaus had heard were running pawnbroking businesses. Since the takeover, only influential families had dared to run release pledge businesses. Firms without influence did not dare to open such treasuries. This was because they feared official harassment. As a consequence, the people were blocked from reasonable ways of making a living. It was requested that the circuits consult on ways for allowing local residents to follow the most convenient ways to earn a living, and that the offices be forbidden to blindly interfere in such matters and oppress private households. Even if errors had been made over pledges and thefts had occurred, there should only be confiscation of the offending objects. This should be no means be the occasion for launching criminal prosecutions."

[21] *Ibid.*: "In yuanzhen 3, 2nd month, the Department of Ministries' Jiangzhe branch communicated via Yao Qigao. Those who take jewels, feathers, silver utensils and clothing to the pawnshops set up under the old regime to exchange for Certificates are not being permitted to redeem them after one year. The ministry, having deliberated on the matter rules that henceforth when people pawn gold and silver, and after two years have not redeemed them, the articles may be taken over."

[22] The Frenchman, Dr. Edouard Chavannes, has collected a number of Yuan Dynasty stele texts. Eight of these mention

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release pledge treasuries. Chavannes translates the Chinese word for pawnshop [*jiedianku*] as "library" ("bibliotheques"), which is what one might expect of a pedant. He did not realize that the temples and monasteries of China were not like Medieval Europe's churches in being places for the exercise of scholarship. The Chinese centers of religion emphasized the running of businesses. The dates of the eight stele texts run from yuanzhen 2 (1296) to zhizheng 1 (1341). Their locations were Shandong, Hebei, Shanxi, and Hubei. Their texts are half indecipherable, since they were in Chinese as written by Mongols. Cf. Edouard Chavannes, "Inscription et pièces de chancellerie chinois de l'époque mongole," *T'oung Pao*, Serie II, Vol. IX, pp. 356-411. Cf. also Cai Meibiao, *Yuan Dynasty Colloquial Language Steles Collected Record* (Academia Sinica, Institute of Philology), which contains additional stele texts mentioning release pledge treasuries encompassing a still wider territory.

[23] The musical drama "Luo and Li Make a Disturbance at the Xiangguo Temple," act 2: "(The waiban silversmith rises and says) My family are silversmiths. Bright and early I arise, and open up my little shop to see what people come. (The jing rises and says) On the road all my travel money has been used up. I have these two pieces of silver which I'm taking into the silversmith shop to exchange for some cash Certificates to use. (The jianke says) Elder brother, I bow in greeting. (The wai says) What do you wish? (The jing says) I have an ingot of silver to exchange for some travel expenses. Do you want to handle the job? (The wai says) Bring it over and I'll look at it. (The jing says) This isn't silver. Take a look at it. ((The wai looks and the ke says) Elder brother, do you have anything else? (The jing says) I have another one here. (The wai says) Bring it over and I'll look at it. Alright. It's simply a counterfeit silver piece, which is clearly prohibited. Let's you and I go to the official headquarters." (*Selected Yuan Songs*)

and silver shops of Tang and Song times came to be called silver shops, and this trade was called the silver guild [*yinhang*, the word that was much later somewhat redefined for use as the Chinese term for Western-style bank].[24]

Naturally, the main business of a silver shop would be the making of silver utensils, but money exchange was probably also very important for them, and this was not limited to silver. Gold could also be exchanged.[25] Later, copper coins came back into use among the people, and so the copper coin exchange business probably also became somewhat developed. In Emperor Shun's zhizheng 16 (1356), there was a ban on selling copper coins.[26]

The price of gold during Yuan was 15 strings worth of Zhongtong Certificates per ounce, 20 strings of Zhiyuan Certificates, 10 ounces worth of Zhida Silver Certificates, or 10,000 copper cash. The price of silver per ounce was 2 strings worth of Zhiyuan Certificates, 1 ounce worth of Zhida Certificates, or 1,000 Zhizheng copper cash.

Nominally, however, the Yuan Dynasty did not permit the people to use gold and silver, and since few copper coins were minted, paper money prices frequently changed.

The gold-silver exchange price changed from 1:7.5

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to 1:10. The upward tendency in the price of gold was the consequence of the authorities' policies. The price of gold was low in gold producing regions. For example, in some places in Yunnan the gold-silver exchange price was 1:8, and in other places it was 1:6 and 1:5.[27] Probably the supply of gold continued to increase. Japan continued to ship gold to China without interruption. Sometimes this gold was exchanged for Chinese copper coins, as occurred on one occasion in zhiyuan 14 [1277]. Sometimes it was brought to China to exchange for other commodities, as when the Kamakura Jomyo Temple had the people of Anzen bring 100 *yi* of gold to China to purchase the Great Treasury Sutra published in Fuzhou.[28]

The Yuan employed copper coins to exchange with overseas countries for gold and jewels.[29] There were also frequent prohibitions on export of domestic gold.[30] Therefore, gold could only flow in. In zhiyuan 26 [1289], 1st month, the Jianghuai provincial governor, Pingzhang Shamuding, requested that the merchant ships office annually pay in 3,400 ounces of gold.[31] At that time this office was supposed to collect 10 percent of the value of imported foreign goods. If this 3,400 ounces of gold represented 10 percent of one year's importation of gold, then the quantity of gold imported during the Yuan Dynasty was considerable.

As for the remittance trade, with the adoption of paper money there was no longer any great need for it, and so the convenient exchange method was gradually forgotten by people.

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[24] *Liangzhe Epigraphic Record*, 15, records a stele of yanyou 1, set up in the Eastern Prison of the Travelling Palace in Changxingzhou. On it are the phrases "Dragaon King Office, Silver Guild, Wu Yong, Yang Xin." The meaning of this is: Making charitable contributions to the Dragon King are the silver trade's Wu Yong and Yang Xin.

[25] The musical drama "Three Tigers Descend the Mountain to Contend for Requiting Mercy," act 1: "I'll give you this gold hairpin for travelling expenses. You go into that silver shop to exchange it. Hush up your complaining." (*Selected Yuan Songs*)

[26] *Yuan History*, 44, "Annals of Emperor Shun, 7."

[27] *The Travels of Marco Polo*, Book II, chaps. XXXIX, XL, XLI and XLIII.

[28] *Great Treasury Sutra Location Record* (quoted in *History of Sino-Japanese Communications*, p. 138).

[29] *Investigation of Literary Remains Continued*, "Investigation of Market Purchases: Commercial Vessels' Marketing," zhiyuan 19: "It was ordered that coins be exchanged for overseas gold, jewels and commodities."

[30] *Ibid.*, zhiyuan 23: "It is prohibited to send gold, silver and copper coins across the sea for mutual trade." *Ibid.*, dade 7, 2nd month: "It is prohibited for anyone to take gold, silver, silk and brocade across the frontiers." *Ibid.*, Emperor Wuzong's zhida 2, 9th month: "There was an edict prohibiting seagoing ships from carrying gold, silver, copper coins, brocade, silk, hemp and cotton overseas."

[31] *Ibid.*

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7.0 THE MING DYNASTY'S MONEY

7.1 The Monetary System

1. Paper Money

At the beginning of the Ming Dynasty, the methods of early Yuan were imitated: Certificates were used, but not coins, and the people were forbidden to use gold and silver to make exchanges. Before long, however, coins and Certificates were both being circulated, with paper money as the main currency and coins as auxiliary money. Later on, paper money was inflated and fell in value, so that all payments came to be made in silver and in coin.

The Ming Dynasty's paper money was first issued by Emperor Taizu in hongwu 8 (1375). It came in six denominations: 100-cash, 200-cash, 300-cash, 400-cash, 500-cash and 1-string [Cf. Plate lxx at end of this subsection]. Each string was equated with 1,000 copper cash or 1 ounce of silver. Four strings were equal to 1 ounce of gold. Gold and silver could only be used to acquire paper notes. In other words, they could only be sold to the government.

A regulation of hongwu 10 allowed use of copper cash for payments of less than 100 cash. Payment of excise taxes was to be 70 percent in Certificates and 30 percent in cash. In hongwu 22, small denomination certificates were also issued. There were five denominations: 10-cash, 20-cash, 30-cash, 40-cash and 50-cash [Plate lxxi].

There is one aspect of the Ming Dynasty paper money system which is worthy of note: Over the course of more than two centuries, only one type of note was ever used. Though the Yuan had unified the heterogeneous Song and Jin currencies, its own notes changed names several times over the course of a few decades. The Ming achieved still greater unity, a unity never present before.

In addition, 1-string was the highest denomination of the Ming paper money. Even during the later currency inflation, they never issued large denomination certificates. Both Song and Jin paper money included large face value notes. Yuan's paper money had a 2-string note as its highest denomination.

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The Great Ming Treasure Certificate was also made of mulberry bark paper. It was 0.364 meters long and 0.22 wide, which makes it the largest Chinese monetary note ever made, but that holds only for the 1-string note. The lesser denominations were much smaller.

In other respects there were not many differences between the large and small certificates. On all sides there was a border of curved lines and flowers. On the top, written horizontally, are the six characters for "Great Ming Universally Circulated Treasure Certificate." Inside the ornamental border on the two sides are two vertical lines of four characters each in seal script, which read "Great Ming Treasure Certificate, All-Under-Heaven Universally Circulated."

In the center is a drawing of a string of cash. On the smaller bills, a complete string of cash is not depicted, but rather the appropriate number of individual coins, arranged in rows. Below is the statement "Department of Ministries memorial accepted to be printed. To be universally circulated along with standard coins. Counterfeiters are to be beheaded. Informers to be rewarded with 250 ounces of silver."[1] At the end is the year of the hongwu year-period, the month, and the day.

In hongwu 13 [1380], the Department of Ministries was abolished, and the Six Boards were raised in its stead. The manufacture of certificates was placed under the Board of Revenue. Minting of coins was placed under the Board of Works. Hence the words Department of Ministries on the certificates were changed to Board of Revenue.

According to the notes themselves and surviving printing blocks, the informer's reward was to be 250 ounces, but the histories make it 25 ounces. The Yuan Dynasty reward for informing on counterfeiters of Treasure Certificates was 5 ingots of silver, which was equal to 250 ounces. During Ming, however, 1 ingot was 5-strings. Perhaps when the reward was first set, the standard was 5 ingots. Later, discovering that 25 strings was too small a sum, they would have changed the figure to 250 strings. Nevertheless, the statement about 25 ounces could also have been an error of transcription.

I have never seen any Treasure Certificates or printing blocks dating before hongwu 13. Though they continued to be issued after the hongwu year-period, the notes still bore the hongwu year-period designation.[2]

Down through the ages, there had always been some way of turning over certificates, that is of bringing damaged or old notes in to be exchanged

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[1] *Ming History*, "Treatise on Food and Money," and *Ming Collected Statutes* both say that the reward was 25 ounces of silver.

[2] *Ming History*, 81, "Treatise on Food and Money, 5": "When the Emperor [Chengzu] first ascended the throne, the Secretary of the Board of Revenue, Xia Yuanji, requested additional certificate printing blocks in seal script, using the yongle year-period. The Emperor ordered that they continue to use the old designation. Thereafter until the end of the Ming, the hongwu year-period was always used."

for new certificates. The government would collect a small paper and ink, or labor and ink, or string-head fee for this service.

When Northern Song Exchange Notes were turned in, a paper and ink fee of 30 cash per string was charged. In shaoxing 11 (1141) of Southern Song, this was increased to 64 cash. When Jin Exchange Certificates were redeemed for cash, a labor and ink fee of 15 cash was charged. Beginning in dading 23 [1183], only 8 cash per note was charged. Later on, the fee was further reduced to 2 cash. During the Yuan Dynasty, at first it was 30 cash, and in zhiyuan 3 [1266] it was reduced to 20 cash. In zhiyuan 22, it was restored to the old rate of 30 cash.

The Ming Dynasty carried on with the Yuan precedent. For each string they collected a labor and ink fee of 30 cash, and levied a reduced charge for notes of 500-cash and lesser face values. But because the Ming Treasure Certificates lacked expiration dates and, unlike Jin and Yuan, the Ming government did not carry out frequent monetary reforms requiring the issue of new certificates, as a consequence, old certificates became ever more numerous, and the problem of turning over certificates became a more vexing one than was the case in previous dynasties because people frequently brought in for redemption notes which were not damaged or worn out.

Of course this sort of situation was the result of currency inflation. Merchants treated new and old notes differently. At the same time, the taxation officials engaged in malpractices, and took advantage of the difference in price between new and old certificates to force people to pay their taxes with new certificates, for which they then substituted old and worn ones before sending them on to the national treasury, thereby taking a middleman's profit. Some people did not realize what was happening, and supposed that there was some flaw in the note redemption procedure itself.

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As occurred with the Yuan Exchange Certificates, a portion of the Great Ming Treasure Certificates flowed out to foreign countries, because when countries came to China to trade, the Ming court often gave them gifts in the form of certificates and ingots.

In hongxi 1 [1425], the tribute emissary from Ceylon was given 159,050 ingots worth of certificates.[3] During the chenghua era, the King of Manshujia came to China several times, and was given a total of from 500,000 to 600,000 strings of certificates.[4] Fan Ji said then that "the Great Ming Treasure Certificate is circulated everywhere in China and among the barbarian states."[5]

Except, however, for Korea, which issued its own mulberry paper certificates at the beginning of Ming, we have no evidence that Great Ming Treasure Certificates circulated in any other countries. Moreover, in tianshun 8 [1464], a Board of Ceremonials memorial stated that certificate ingots were not convenient for barbarians, and requested that gifts to them be made in bolts of heavy silk and plain cloth.[6] Obviously, paper notes did not necessarily circulate in foreign countries. Perhaps certificate ingots the foreign emissaries received as gifts from the Ming court were exchanged for goods in China, and the certificates themselves did not flow into foreign countries.

From the zhengtong period [1436-50] on, Treasure Certificates no longer generally circulated, and only official salaries were commuted to payment in certificates. Over the course of the several hundred years of their use, however, the word Certificate had deeply entered into men's minds. By the end of Ming, it was still being used as a synonym for money.[7] Sometimes they still also used the word

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[3]The European mendicant monk Odoric records that in yongle 18 [1420], the Ming court gave a gift in certificates to foreign ambassadors. ". . . whilst we find that Shah Rokh's embassy to the Ming Emperor in 1420 receives amongst other presents eight balish of silver. Another of the presents is five thousand 'chao', which was the genuine Chinese name for the paper money." (A. C. Yule, *Cathay and the Way Thither*, Vol. II, *The Travels of Friar Odoric*, p. 195.) *Hongxi Veritable Record*, 10, hongxi 1, 5th month: "Day gengwu. There was given to the Ceylon Tribute Emissary, Yaliehuangfuxin, 159,050 ingots in certificates."

[4]*Investigation of Literary Remains Continued*, 10, "Investigation of Coins": "Chenghua 9 [1473], 9th month. King Ma'erjin came to court. Upon his departure, he was given 400,000 strings of certificates. . . . Chenghua 22, 4th month. King Ma'erjin again came to court, and was given more than 30,000 ingots worth of notes. From this time on, certificates circulated outside the frontiers." *Ming History*, 325, "Foreign States, 6, Manshujia," records the same information for the chenghua 9 occasion.

[5]*Xuande Veritable Record*, 6. Fan Ji's essay's style is hyperbolic.

[6]*Investigation of Literary Remains Continued*, 10, "Investigation of Coins, 4."

[7]*Unusual Things Seen in Ancient and Modern Times*, 5, "Tenth Mistress Du's Anger at Shen Hundred's Treasure Box": "There is a list of the disorders committed by Japan in Guanbai during wanli 20 [1592]. . . . Tenth Mistress said, 'Although the young master has wasted certificates on guests, I presume the 300 in metal [300 ounces of silver] are still in hand.'" *Ibid.*, 7, "The Oil

qianchao, literally meaning coin-certificate,[8] or *chaoyin*, meaning certificate-silver,[9] when payment was actually being made in silver or coin.

The provisions of the monetary reform proposed by Qiu Jun in chenghua 16 [1480] superficially appeared to involve a silver standard, but actually would have involved circulation of paper notes and copper coins.[10]

Because of fiscal difficulties during the tianqi period [1621-28], the Reviewing Policy Adviser, Hui Shiyang, recommended employing certificates. In chongzhen 8 [1635], the Reviewing Policy Adviser, He Kai, once again requested circulation of certificates.[11] Neither proposal was adopted.

In chongzhen 16 [1643], when the Ming Dynasty's authority was shaky and it was about to fall, Jiang Chen once more advised circulating certificates. He obtained the approval of the Secretary of the Board of Revenue, Ni Yuanlu, and the Executive, Wang Aoyong. Simultaneously Jiang Chen was promoted to the Board of Revenue and his proposal was recommended by the Board of Revenue to the Zhuanglie Emperor.[12] The proposal called for issue of 50 million strings worth of notes in the course of a year.[13] Their issue would permit a reduction of 5 million in the land tax. After four years of continuous issue of paper money, the new training provisions contribution could be entirely remitted, and by the fifth year, the Summer-Autumn Double Tax could also be reduced.

They seem to have estimated that the total quantity of silver in the country then was around 250 million ounces, and so they advocated continuously issuing notes for five years so as to bring this entire amount of silver into the national treasury. The figure of 250 million ounces probably includes all silver objects and jewelry held by the public as well.

They advocated that merchants only be required to turn over 0.97 ounces of silver for each string of certificates, which in turn could be used to pay taxes at a face value of 1 ounce. They supposed this would induce people to rush in like a flock of ducks.

At the same time, they also wanted to mint copper coins, with a 1-string certificate equated with a thousand cash coins.[14] The Chongzhen Emperor ap-

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Seller Takes on the Flower Chief Woman": "It is often said that whores love pretty things, and that female servants love certificates."

[8] *Unusual Things Seen in Ancient and Modern Times*, 14, "Song Jinlang's Band Smashes the Felt Hat": "(During the zhengde era [1506-1522]) Liu Weng and his wife's band got a fine idea. They did not want to waste another coin-certificate. They just demanded obedience." *Journey to the West*, chapter 40: "The massed spirits said . . . and the small demons searched so often for the lines of coins. Those who walked by said, 'You are all dark demon fairies. What coin-certificates do you have?'" *Ibid.*, 53: "The elder called on the monk to open his purse and take out several cash-certificate coins to give him." *Golden Lotus*, chapter 56: "Cassia said . . . Just take that lewd little Qixiang. . . Her family earns cash, earns certificates, and piles them up so as to alarm us."

[9] *Golden Lotus*, chapter 60: "They turned over ten big carts full of goods, but only got 30.5 ounces of certificate-silver."

[10] Cf. subsection 7.3.1 below.

[11] *Investigation of Literary Remains Continued*, "Investigation of Coins." *Ming History*, "Treatise on Food and Money, 5."

[12] In chongzhen 16, 10th month, dingchou, the Board of Revenue employed the office chief Jiang Chen's "Eight Reasons for Recommending Circulation of Certificates." For the full text, cf. *Chongzhen Long Draft*, 1.

[13] *Ming History*, 251, "Biography of Jiang Dejing" says that the annual issue was to be 30 million strings. Sun Chengce, *Remaining Dreams of Spring Brightness* says that the first year's issue was to be 30 million, and succeeding years' annual issue was to be 50 million strings.

[14] *Remaining Dreams of Spring Brightness* contains a fairly detailed account of the course of the preparations for this issue of certificates. It says: "In chongzhen 16, the Tongcheng licentiate, Jiang Chen, said that certificates might be circulated. He also said that 30 million strings worth might be made annually, with 1 string worth 1 [ounce] in metal. In a year, 30 million ounces of [silver] metal might be obtained. The Executive of the Board of Revenue, Wang Aoyong, would be solely in charge of coin-certificates. He too believed that certificates must be issued, and said that 30 million strings worth should be made in the first year, which could substitute for over 20 million in contributions so as to aid poor people. After this, 50 million strings would be made annually, for which 50 million in metal could be obtained. In addition to remission of contributions, 1 million strings would be issued by each province and distributed among local officials to nourish their integrity. His words were terribly fine, but could not in fact be put into effect. The Emperor set up within the Inner Palace a special Treasure Certificate Office to supervise their manufacture day and night. Merchants were recruited to issue them through sale. It was decided to sell 1-string for 1 in metal. No one was willing to respond. Aoyong requested that each string sell for only 0.97 ounces. The capital merchants were stirred up. The silk shops all rolled up their cloth, put it into boxes and decamped.

"The Inner Secretary said, 'The people may be stupid, but who among them would be willing to buy a piece of paper with an ounce of silver?' The Emperor replied, 'How could the Founding Emperor on High have acted in so biased a fashion?' The Inner Secretary responded, 'The Founding Emperor on High would seem also to have used the Way of the Spirits to establish his teaching. At that time only gifts and salaries employed certificates. They were not used for other things, like

proved of this procedure. Though the Censor Bo Baoyi and the Secretariat official Jiang Dejing opposed it,

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the Emperor would not listen to them.[15] He ordered the establishment of a special Inner Court Treasure Certificate Office to work day and night to hurry the job.

In the end, however, no one would buy the certificates. The shops all closed their doors and ceased doing business. It was at that point that rumors spread that Li Zicheng was about to launch an attack on the capital. Only then, in chongzhen 17 [1644], 2nd month, was the work halted. Jiang Dejing said, "the people may be stupid, but who among them would be willing to use an ounce of silver to buy a piece of paper?"

Though the government's issue of paper money on this occasion was not successful, there were in fact paper notes in circulation among the people, since after the halt in use of the Great Ming Treasure Certificates, all payments would have had to be made in hard money, and this must have been felt to be an inconvenience. A number of organizations engaged in large transactions in silver and coins, such as pawnshops and money shops, must have been able to take advantage of the principle of credit money to issue paper notes.

Drafts [*huipiao*] were one such instrument. A Draft resembled a Bill of Exchange [also *huipiao*, but with a different character for *hui*. According to L.S. Yang, *Money and Credit in China* (Cambridge: Harvard, 1952), p. 56, the first term evolved into the second. EHK], but like Southern Song's Account Notes, they were later allowed to circulate among the people, and turned into paper money. When Ni Yuanlu discussed Jiang Chen's scheme for paper money during the chongzhen period, he said that that was the same as the Draft current among the people, which in Song times was called a Coin Voucher.[16]

Since silver was being circulated during late Ming, the monetary units for paper notes must have been both copper cash and ounces of silver. That is, there would have been cash bills and silver bills. Among the public, such paper notes probably assumed the form of deposit receipts, so as to assure that the holder of a bill could redeem it for cash at any time.

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provisions for the soldiers.' The Emperor said, 'It is only necessary that the rules be strict.' The Secretary replied, 'Even strict regulations will be hard to carry out. Since we say that the people are already in extreme difficulties, they ought to be left in peace.' He said quite a bit more, but the Emperor had already decided to make the issue.

"Then the Inner Treasure Certificate Office said that to make the certificates would require 2 million catties of mulberry stalks . . . and they were sent separately to hasten to inspect things. . . The censors of five cities said that in addition to the 500 certificate workers presently employed, another 2,500 men would be required. Each city was trying to attract them, but most were not well versed in the trade. . . . The Emperor was not pleased, and issued nothing but changed notes. Finally, the Secretariat official, Jiang Dejing's memorial was accepted, and the issue was halted.

"Someone said that in the past there was a Baoju licentiate, Jiang Chen, who had warmly spoken of coin-certificates. . . . When a decision was reached to use paper certificates, there were ministers who set forth dozens of advantages of paper money. The Sagely Will was pleased and assented. Blocks were carved and certificates made. . . . There was a deadline for preparing the workplace, shifting the officials, selecting the workmen, and planning the work. . . . In the midst of the preparations, suddenly there was a report that wandering bandits were about to despoil the capital, and as a consequence the project was halted. This occurred in chongzhen 16 [1643], 12th month."

Cf. *Investigation of Literary Remains Continued*, "Investigation of Money." Huang Zongxi, *A Plan For the Prince*, "Financial Plans, 2," also narrates this incident in substantially the same way.

[15] *Investigation of Literary Remains Continued*, 10, "Investigation of Coins, 4."

[16] *Emperor Huaizong's Chongzhen Veritable Record*, 16, chongzhen 16, 9th month.

圖版七十 大明通行寶鈔(壹貫)

大明寶鈔不但是全國通行的紙幣，而且是明朝唯一的一種紙幣。大明寶鈔自洪武八年(公元1375年)發行起，使用了約兩百年；由於面額只一貫爲最高，所以後來通貨膨脹時大概是用到許多張，在手邊保存一張

PLATE LXX. GREAT MING UNIVERSALLY CIRCULATED TREASURE CERTIFICATE (ONE-STRING)

The Great Ming Treasure Certificate was not only paper money circulated over the entire country, it was the Ming Dynasty's only type of paper money. Beginning in hongwu 8 (1375), when it was first issued, the Great Ming Treasure Certificate was used for about two centuries. Because its highest face value remained 1-string, during later inflationary times, there probably arose difficulties in using it, with 1,000 notes being called 1 dollar [*kuai*].

圖版七十一　大明通行寶鈔(伍拾文)

大明寶鈔的面額原分爲六等，即一貫、五百文、四百文、三百文、二百文、一百文。但洪武二十二年(公元 13[illegible]年)又發行小鈔五種，即十文、二十文、三十文、四十文、五十文。票面除金額和銅錢圖案不同、以及幅廣較小外，餘文字完全和大鈔一樣。

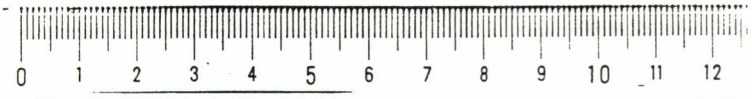

PLATE LXXI. GREAT MING UNIVERSALLY CIRCULATED TREASURE CERTIFICATE (FIFTY-CASH)

Originally, there were six denominations of Great Ming Treasure Certificates: 1-string, 500-cash, 400-cash, 300-cash, 200-cash and 100-cash, but in hongwu 22 (1389) five smaller certificates were issued: 10-cash, 20-cash, 30-cash, 40-cash and 50-cash. Except for the number of the denomination and the drawing of the number of copper cash, as well as the smaller dimensions of the note, the inscriptions were exactly the same as those on the large certificate.

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2. Coins

There are more Ming Dynasty coins than there are Yuan, but they are fewer in number than those of all other dynasties. Particularly prior to the wanli year-period [1573-1620], not only are the numbers smaller than for the Song, they are even far from being up to the level of Han and Tang.[1]

Even before he proclaimed himself Emperor, Zhu Yuanzhang had minted the Dazhong Circulating Treasure. In zhizheng 21 (1361), he set up a Treasure Origins Office. At that point Zhu Yuanzhang was still called the Duke of the state of Wu. This was a feudal title he had received from Han Lin'er. In principle, he should not have been minting coins, because Han Lin'er was himself minting the Longfeng Circulating Treasure.

[1]We can show how small was the number of coins produced during the Ming Dynasty from the figures for coins actually minted. This can also be discerned from the copper coins in circulation during later ages. In addition, secondary confirmation may be obtained from coins excavated in Japan. Japan had continuously imported Chinese copper coins ever since Tang and Song times and right on down to mid-Ming. A large number of such copper coins have been unearthed in recent times. By examining the coins excavated, we can tell which hoards were buried at the end of Ming, and it is evident that the proportion of Ming period coins in these hoards is very small. For example, based on the ancient coins excavated in Yimura, Hitachikuni, Nakagawa Kinrei has compiled the following figures (*Types of Coins Circulating During the Muromachi Era*):

	No. of Kinds of Coins	Number of Coins
Japanese	2	3
Tang	2	31,008
Northern Song	25	292,098
Southern Song	17	928
Yuan	1	31
Ming	4	3,077
Korean	4	128
Other	18	729
TOTAL	73	328,002

Also, in Shōwa 5 (1930), Irita Totonami provided a statistical analysis based on copper coins excavated at some 48 locations on Tsushima. Excluding those which could not be identified, there was a total of 554,714 coins, of which Chinese coins comprised 553,802, or 99.8 percent. They may be categorized as follows:

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	No. of Kinds of Coins	Number of Coins
Tang	2	47,299
Former Shu	5	68
Latter Jin	1	3
Southern Tang	2	445
Latter Tang	1	11
Latter Zhou	1	72
Northern Song	31	456,086
Liao	4	6
Western Xia	1	5
Southern Song	22	8,065
Jin	2	1,016
Yuan	3	163
Han Chen Youliang	1	4
Ming	4	40,559
TOTAL	80	553,802

We can learn from this that Northern Song coins constitute 82.4 percent of the total, and Tang coins constitute 8.5 percent, while Ming coins only amount to 7.3 percent. The ten most numerous types of coins are as follows:

Yuanfeng Circulating Treasure 69,771
Imperial Song Circulating Treasure 69,483
Xining Original Treasure 58,765
Inaugural Circulating Treasure 45,696
Yuanyou Circulating Treasure 42,055
Yongluo Circulating Treasure 29,225
Tiansheng Original Treasure 21,214
Sagely Song Circulating Treasure 20,835
Xiangfu Original Treasure 18,860
Shaosheng Original Treasure 15,593

To list only the Ming coins:

Dazhong	129	Yongluo	29,225
Hongwu	10,631	Xuande	574

These excavation reports from Japan could very well reflect the relative importance then of Ming coins compared to Tang and Song coins, and also to a fair degree be a reflection of what sorts of coins were in circulation in China during the middle years of the Ming Dynasty. They cannot, however, reflect what sorts of coins were circulating in China after the wanli period, since from xuande times [1426-36] on Japan no longer formally received gifts of copper coins from the Ming court, and illicitly transported coins were mainly private coins. From wanli times on, Japan began minting its own coins, and no longer imported Chinese coins.

The histories say that 400 of the Dazhong Circulating Treasure made 1 string, that 40 cash made one ounce, and 4 cash made 0.1 ounce. This point has not been stated clearly by the historians, causing posterity to find it hard to unravel what they meant.[2] During the Yuan Dynasty, the string and the ounce were often used interchangeably as monetary units, particularly with the Zhongtong Certificates. There was, however, no instance of 1-string being equated with a value of 10 ounces, unless the Zhizheng period Exchange Certificates' price in terms of Zhongtong Certificates was being referred to. By zhizheng 21, however, the Zhongtong Certificates had long since gone out of use.

I surmise that 1 string likely referred to copper cash, since by the end of Yuan the paper money circulation system was approaching extinction, and the public had abandoned the Certificates in favor of copper coins. Moreover, the string unit probably was not made up of actual coins, but rather was an abstract unit of account. When making a payment, different quantities of actual coins would be used in different locations. The Dazhong Circulating Treasure happened to be fixed at 400 cash to the string. Perhaps from zhiyuan 19 [1282] on, another new Certificate was issued using the string as its unit, with 1 string equal to 10 ounces worth of Zhizheng Exchange Certificates. This is an hypothesis, and cannot be taken as proven.

In any event, the ounce unit here cannot be a reference to silver. At that time the price for silver was so inflated that it simply could not have fallen to 40 cash per ounce.

It is also possible that this is a reference to the Legal Tender Certificate coin of the late Yuan zhizheng period [1341-1368]. This coin circulated in the south, and since they were probably melted down and reminted by Zhu Yuanzhang, relatively few of them have survived. Five of the Legal Tender Certificate coins weighed 4 treasury ounces, and were worth 20 Dazhong Circulating Treasure coins. This was only equal to around 2 ounces, resulting in a minting profit of two fold.

There are some small Legal Tender Certificate coins which had been reduced in weight, but the Dazhong coins were also short in weight. At that time Exchange Certificates were probably still in circulation in particular localities, and in order to capture people's loyalties, Zhu Yuanzhang would not have abolished the paper money which they had in their hands. So he might have allowed 1 ounce worth of Exchange Certificates to be used as equivalent to 40 cash in actual coin, and 10 ounces in Certificates to circulate as the equivalent of 1 string. Nominally, the value of the Exchange Certificates had fallen to one-tenth of their former value, but they had actually fallen to one-twenty-fifth.

After seven years, the string used to calculate the value of stolen goods

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no longer corresponded in purchasing power to this string, its value having fallen still further.

In zhizheng 24 [1364], after he had defeated Chen Youliang, Zhu set up a Treasure Spring Office in Jiangxi to mint five kinds of Dazhong Circulating Treasure coins, a small 1-cash, a 2-cash, a 3-cash, a 5-cash, and a 10-cash. Treasure Spring branch offices were also set up in each province to mint these coins.

The coins minted on this occasion bore the provincial branch office name on their reverses. These included *Beiping, Yu, Ji, Jing, Zhe, Fu, E, Guang*, and *Gui*. Each office turned out all five denominations. The small 1-cash coin reverses mostly just bore the office name. The 2-cash coins and higher denominations also bore numerals, as for example the 2-cash coin minted in Guangxi, which bore the inscription *Gui* 2, or the 3-cash coin minted in Fujian, which bore the inscription 3 *Fu*.

In hongwu 1 (1368), the Hongwu Circulating Treasure coinage was proclaimed [Cf. Plate lxxii at end of this subsection]. In addition to the capital, Nanjing's, Treasure Origins Office, Treasure Spring Offices were also set up in all the provinces to mint Hongwu Circulating Treasures, which also came in five denominations.

To the right of the hole of the reverse of the 1-cash coin were the two characters 1-*qian*, or 1-cash, to designate the coin's weight. The 2-cash coin was labeled 2-*qian*; the 3-cash coin 3-*qian*; the 5-cash coin 5-*qian*; and the 10-cash coin 1-ounce. In addition to the two characters for 1-ounce, this 10-cash coin's reverse also had the Chinese numeral ten above the hole. It was read as "ten 1-ounce," which meant that the 10-cash coin weighed 1 ounce.

This too was inspired by the Yuan Dynasty's Zhizheng coin, particularly the 10-cash coin, imitat-

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[2]The Japanese Mikami Koya says that the Hongwu coin's reverse inscriptions of 1-qian, 2-qian, 3-qian, 5-qian and 1-ounce mean that 4 cash were equal to 1-qian, i.e. 0.1 ounce, and 40 cash were equal to 1 ounce. Hirao Shusen's *Shōwa Coin Catalog* goes along with this interpretation, but this undoubtedly is to confuse the Dazhong coin with the later Hongwu coin. The Chinese histories say that 400 of the Dazhong coins made 1-string, 40 of them made 1 ounce, and that the Dazhong coin reverses absolutely did not

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bear the inscriptions 1-*qian* or 1-ounce.

ing the three characters "one ounce heavy" on the Zhizheng 10-cash coin's reverse. These coins recording their weights were probably minted in the capital. The provinces continued to pattern their coins on the Dazhong Circulating Treasure, and merely cast onto them the office name and denomination.

If we examine the Hongwu coins' reverse inscriptions, in addition to the character *jing*, standing for the Nanjing Treasure Origins Office, of the provincial Treasure Spring Offices which cast their names on the coins, we have only the *Ji* (Shandong), *Gui* and *Guang* (both Guangdong), *Yu* (Henan), *Beiping*, and *Zhe* (Zhejiang). Apparently the furnaces in Shaanxi, Sichuan, Shanxi and Jiangxi provinces did not cast the mint name on the coins they produced.

In addition, according to the histories, Fujian did not begin to mint coins until the yongle period, and Huguang not until the hongzhi years. And yet, there are Hongwu coins which bear the characters *Fu* and *E*. This is a problem which awaits further investigation for its clarification.

Of these reverse inscriptions, *Jing*, *Ji* and *E* are rare. Evidently the majority of coins minted in the Nanjing Treasure Origins Office lacked reverse inscriptions.

Aside from these, there are some coins which bear the Chinese numeral "1" above the hole on their reverses. This probably means these are 1-cash coins. Small coins minted in Guangxi have two kinds of reverse inscriptions. The first is the character *Gui* above the hole. The other, in addition to the *Gui* above the hole has a Chinese numeral "1" below the hole. This "1" also denotes its value.

The Dazhong and Hongwu 1-cash coins will occasionally be seen with the characters *jia*, *zhi* or *mu* on their reverses. These are coins minted in Kajiki [Chinese: Jiazhimu] by the Japanese during the last half of the sixteenth century. Those bearing the character *zhi* are the most numerous.

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In hongwu 4 [1371], the large Dazhong and Hongwu coins were reminted into small 1-cash coins. Because of the issue of Treasure Certificates, in hongwu 8 minting was halted in the Treasure Origins Office, and in the following year provincial minting was also halted. The provincial Treasure Spring Offices were reinstated in hongwu 10.

Beginning in hongwu 20 [1387], 3rd month, minting was again halted for more than two years. In hongwu 22, 6th month, the coinage system was revised and minting was resumed. The small coin weighed 0.1 ounce, the 2-cash coin weighted 0.2 ounce, the 3-cash coin 0.3 ounce, the 5-cash 0.5 ounce, and the 10-cash weighed 1 ounce. They were minted of pure copper.

The following year, however, the coinage system was again revised. Some say that each 1-cash unit was changed to a weight of .02 ounce. Others say that a 1-cash unit became 0.12 ounce.[3] Judging from the coins themselves, there are no Hongwu small coins as light as 0.02 ounce; so the 0.12 ounce theory must be the correct one.

However, the Treasure Certificates had already fallen in price by then, and it would be hard to explain why the weight of the copper coins would have been increased. Perhaps the authorities wanted to make a gesture to increase the importance of the Treasure Certificates.

Actually, however, by that time the Treasure Certificates and copper coins had become two independent moneys. The value represented by the Treasure Certificates no longer corresponded to their face value. Therefore, changes in the weight of the copper coin would not reflect changes in the purchasing power of the Treasure Certificate.

Minting in the provinces was again halted in hongwu 26 [1393]. In hongwu 27, because of the fall in price of the Treasure Certificates, use of copper coins was prohibited.

Though minting of the Hongwu coins was frequently halted, there were a number of different types of the small 1-cash coins, the number of variant forms of the blank reverse type being extraordinarily large. There were also a number of variants among the provincial coins like the *Gui*, *Fu* and *Beiping*. In addition, the office names on the reverse inscriptions often do not correspond with the ones recorded in the written sources.

According to the written sources,[4] there were then ten or eleven (including Yunnan) provinces

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[3]The *Ming Veritable Records* and *Ming Collected Statutes* say that it weighed 0.02 ounce, but *Investigation of Literary Remains Continued*, 11, "Investigation of Coins," says that it was changed to 0.12 ounce per cash. In terms of the logic of the situation, it would have been very natural to have carried out a weight reduction in the copper coins then, but there do not seem to be any Hongwu coins as light as 0.02 ounces, and no one has ever mentioned a 10-cash Hongwu coin weighing 0.2 ounce. Elsewhere, the *Ming Collected Statutes* says that each cash used 0.02 ounce of lead, and perhaps this was in accord with the hongwu 22 system. In addition to 0.1 ounce of pure copper, they might have added another 0.02 ounce of lead, which would have yielded a total weight of 0.12 ounce.

[4]*Ming Collected Statutes* and *Date Grove Miscellaneous Table*. Cf. subsection 7.2.2, note 14, below.

minting coins, but the office names of Shaanxi, Sichuan, Jiangxi and Yunnan have not been found on coins. None of the texts say whether Fujian minted coins, but there are Hongwu coins on which the character *Fu* appears, and indeed this is the case on all the denominations from 1-cash to 10-cash. Unless the histories are guilty of an omission, these must have been minted after hongwu 26, since what is recorded in the histories pertains to the situation in hongwu 26.

Ming Dynasty coins were not labeled "Original Treasure" because Zhu Yuanzhang's personal name included the character *yuan*, meaning "original," and so that became a taboo word. Hence all coins, whether large or small, from the Dazhong through the Yongli, were called Circulating Treasure.

According to what the histories record as to the purity of metal of the Hongwu coins,[5] they would appear to have been pure copper, but in fact this was not the case. The copper used then had not been freshly smelted, but rather was from discontinued coins and copper implements. This used copper was by no means pure. It was merely the case that the minting offices did not add any additional lead or tin to it. Beginning in hongwu 23 [1390], however, 0.02 ounce of lead was added to each 1-cash unit minted. Hence the purity of Hongwu coins is not uniform.

Coins do not seem to have been made during the jianwen period [1399-1403]. Some people have said they have seen Jianwen coins, and thus claim minting was actually going on then, but that these coins were later

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melted down by the Yongle Emperor.[6]

Given the fact that Emperor Hui was on the throne for four years, it is plausible that he would have minted coins, but at that time they were single-mindedly pushing the circulation of Treasure Certificates, and from the government's point of view there was no advantage to be derived from minting coins. Minting had been halted several times during the hongwu period, and even use of copper coins had been prohibited. Later on, none of the Emperors began to mint coins until after they had been on the throne a number of years. Hence it would not have been strange if Emperor Hui had not minted coins. If it is argued they were all melted down, surely this could not have been accomplished so completely.

The sources differ on when minting of the Yongle Circulating Treasure began. Some say it was in yongle 6 (1408).[7] Some say it was in yongle 8.[8] Others say it was in yongle 9.[9] It is possible that minting began in the capital in yongle 6, and that in yongle 8 or 9 minting began in the branch offices in Zhejiang, Jiangxi, Guangdong and Fujian.

Yongle coins only come in the small 1-cash form [Plate lxxiii,1-2]. There are no 2-cash or higher denominations, and all of them, whether minted in the capital or the provinces, have blank reverses. Not only are they finely made, they are also uniform, with very few variant forms. The few variants which do exist are all based on very subtle differences.

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[5]According to *Ming Collected Statutes*, 194, "Minting of Coins, Rules During Hongwu":

10-cash coins, per thousand, to coat the molds there would be used 11.3 ounces of oil; to mint the coins there would be expended 66 catties 6.5 ounces of pure copper, 53 catties 15.2 ounces of charcoal.

5-cash coins, per 2,000, to coat the molds 1 catty 4 ounces of oil; to cast the coins 66 catties 6.5 ounces of pure copper and 53 catties 15.2 ounces of charcoal.

3-cash coins, per 3,333, to coat the molds 1 catty 14 ounces of oil; to cast the coins 65 catties 9.25 ounces of pure copper and 53 catties 8.35 ounces of charcoal.

2-cash coins, per 5,000, to coat the molds 2 catties 5.5 ounces of oil; to cast the coins 66 catties 6.5 ounces of pure copper and 53 catties 15.2 ounces of charcoal.

Small 1-cash coins, per 10,000, to coat the molds 1 catty 4 ounces of oil; to cast the coins 66 catties 6.5 ounces of pure copper and 53 catties 15.2 ounces of charcoal.

One catty of copper minted different numbers of coins. (There was smelting wastage of 1 ounce. In hongzhi 18, permission was granted to add 2 ounces of good tin to each catty of copper.)

Sixteen 10-cash coins were equal to 160 1-cash coins.

Thirty-two 5-cash coins were equal to 160 1-cash coins.

Fifty-four 3-cash coins were equal to 160 1-cash coins.

[6]Weng Shupei, *Collected Investigations of Ancient Coins* says that Wang Xirong once got hold of a 1-cash Jianwen Circulating Treasure, and that it was no different in construction, face and reverse, or fineness from either the Hongwu or Yongluo 1-cash coins. In addition, Gao Huanwen (*Miscellaneous Record of Discussions on Coins*) says that he once had a genuine one, and also a 2-cash specimen. He goes on to say, "The coins minted under Jianwen were of the Hongwu style, and also came in five denominations, large and small. Later they were sought out and melted down by Emperor Chengzu, and not handed down to posterity. Hence they are hard to obtain. I earlier saw a Jianwen 5-cash coin laid out among a number of old coins in a stock of goods in Nanjing. It was genuine. Evidently at that time all five denominations existed."

[7]*Ming Collected Statutes*.

[8]*Investigation of Literary Remains Continued*, quoting *Remaining Dreams of Spring Brightness. Famous Mountain Hoards*.

[9]*Ming history*, "Treatise on Food and Money."

There do not seem to have been any coins minted during the hongxi year-period [1425-6].[10]

It was not until xuande 8 (1433) that minting began again, and the Xuande Circulating Treasure was produced [Plate lxxiii,3-4]. Its minting was divided between the Boards of Works of the two capitals and the branch mints in Zhejiang, Jianxi, Fujian and Guangdong.

The quantity and number of variant forms of Xuande coins are both rather large, but in fineness and regularity of construction they are far inferior to the Yongle coins. When we recall the beautiful porcelain of the xuande period, and then turn back to these coarse and common copper coins, we cannot avoid being disappointed.

After the xuande period, there were probably several decades during which no coins were minted. The purchasing power of Treasure Certificates was falling substantially then, and people were using copper coins in trade.

The authorities wanted to promote the use of Treasure Certificates, and so in zhengtong 13 (1448) they banned use of copper coins. They once more permitted circulation of copper coins in tianshun 4 (1460), and in chenghua 1 (1465) they encouraged the circulation of copper coins by ordering that excise taxes be paid half in coin and half in Certificates.

In chenghua 11 [1475], rates were fixed for commuting salaries into copper coins. Because, however, of the fall in price of Treasure Certificates and the flourishing of private coining, the public turned to silver, and official coins did not circulate very much. As a consequence, no coins were minted during the zhengtong, jingtai, tianshun and chenghua year-periods [1436-88].

A number of regions employed commodity moneys: Yunnan used sea cowries [*haiba*]; Sichuan and Guizhou used aniseed flower, silver, salt and plain cloth; Jiangxi and Huguang used rice, silver and plain cloth; Shanxi and Shaanxi used both feathers and plain cloth.[11]

It was not until hongzhi 16 (1503) that minting was restored, and the Hongzhi Circulating Treasure was produced [Plate lxxiii,5-6]. In addition to the northern and southern capitals, and in Shandong and the other eight provincial locations, these coins were minted in Huguang, Fujian, Yunnan, and Guizhou

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provinces, but in actuality production never reached the quota set, and their circulation was not smooth.

New standards for the weight and purity of metal of the Hongzhi coins were set in hongzhi 18 [1505]. Each cash weighed 0.12 ounce, and for each catty of pure copper 2 ounces of good tin was added. It was the opinion of the Reviewing Policy Adviser Xu Tianxi that the addition of tin when minting coins would speed and make easy their circulation. Hence from the hongzhi period on, Ming Dynasty copper coins were all made of brass. There are also quite a few variant forms among Hongzhi coins.

There do not seem to have been any year-period coins minted during the zhengde period [1506-22], but no small number of Zhengde Circulating Treasure have come down to us, and in a number of variant forms. Judging by the quality of their metal content, they could not have been made by the official furnaces, since the great majority of them are grey in color, a sign that their copper content is very low. Judging by their inscriptions and rims, however, they are in the style of Ming coins, and I surmise that they are privately minted coins dating to the Ming period.

Naturally, a large number were minted in later ages, since in the old days there were current among the people a number of traditions and superstitious beliefs concerning Zhengde coins, such as the tradition that there were only two and a half genuine Zhengde coins in the Empire, or the superstition that if one carried a Zhengde coin on one's person one could win at gambling. These beliefs would, of course, have evoked counterfeiting.

The Jiajing Circulating Treasure was issued in jiajing 6 (1527) [Plate lxiii,7-8]. It was 90.9 percent brass [yellow copper] and 9.1 percent water-tin. Each cash weighed 0.12 ounces, but in jiajing 42 [1563] the fineness was changed to 9 parts copper and 1 part tin, with each cash weighing 0.13 ounce.[12]

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[10] *Emperor Wuzong's Zhengde Veritable Record*, 72, zhengde 6, 2nd month, gengyin. A Board of Revenue memorial mentions Hongxi coins, but *Investigation of Literary Remains Continued*, says nothing about Hongxi coins in its coverage of the same matter. nor have any such coins survived.

[11] *Emperor Xiaozong's Hongzhi Veritable Record*, 197, hongzhi 16, 3rd month, wuzi.

[12] *Ming Collected Statutes*, 194, "Minting of Coins," subsection on the jiajing period sets out the following:

Six million of the Circulating Treasure coins altogether used: twice-fired brass, 47,272 catties; water-tin, 4,728 ounces,

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fried pieces, 145,000 catties; wood charcoal, 30,000 catties; firewood, 2,350 catties; white hemp, 750 catties; bright alum, 70 catties; pine incense, 1,566 catties; cattle hoofs, 100,000; rough jars, 3,520; coin minting artisans' provisions, 0.038 ounces of silver per hundred cash. In jiajing 42, however, they fixed for the same number of coins 50,000 catties of copper, 5,000 catties of tin, including a wastage of 4,000 catties, deducting 3,000 cat-

There are a very large number of different kinds of Jiajing coins. Just to mention those recorded in the histories, there are such names as gold-reverse, fire-lacquer, and lathed-edge.

Some say that the label gold-reverse meant that the reverse was actually plated with gold.[13] In fact, it is merely likely that the copper in these coins was of better purity, or that they were rather better made, so that the body of the coin shone like gold, giving rise to this name.

Some say that the fire-lacquer coin had its reverse smoked black by fire. Others say that a black chemical was used to make it black.[14]

The lathed-edge had its edge ground smooth by a lathe wheel. Later, because its cost of production was too great, a file was used instead, and the raised outer rim became rough in texture.

In jiajing 23 [1544], large coins were minted in imitation of the hongwu period practice. There were 2-cash, 3-cash, 5-cash and 10-cash denominations. Of each, 30,000 were stored in the treasury. Some of these coins have survived, but in extremely small numbers. Their reverses bear inscriptions recording their weights.

The histories say that in jiajing 32 [1553] a supplementary minting of the nine year-period coins from hongwu to zhengde was carried out, with 1 million ingots worth being made for each year-period, except for jiajing, for which an additional 10 million ingots worth were minted.[15] This is one of the mysteries of Chinese monetary history.

First, as was said previously, there are no surviving coins for the hongxi, zhengtong, tianshun and chenghua

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periods.[16]

Second, the quantities minted of all Ming coins were very small, and to have carried out a supplementary minting on this occasion of 19 million ingots' worth, or 95 million strings, would in fact have been impossible. The period during Chinese history when the most coins were produced was Northern Song's yuanfeng year-period [1078-1086], when only something over 5 million strings per year were turned out. Obviously this supplementary minting was at most a proposal, and even so, the quantity mentioned could still be an error.

The Longqing Circulating Treasure was issued in longqing 4 (1570) [Plate lxxiii,9]. Each 1-cash weighed 0.13 ounce, and there were some gold-reverse and fire-lacquer variants.

The Wanli Circulating Treasure was issued beginning in wanli 4 (1576) [Plate lxxiii,10-12]. The two capitals minted gold-reverses and fire-lacquers, and the provinces turned out lathed-edges. The gold-reverses were made from four-times fired brass, and the fire-lacquers used twice-fired brass. These differences were probably already present with the Jiajing coins. The alloy contained 93.8 percent brass and 6.2 percent water-tin. Each cash weighed 0.125 ounce. A lathed-edge coin weighed 0.13 ounce.[17]

The histories say that Hao Jing memorialized to request minting a Wanli Original Treasure large coin or 10-cash coin, 30-cash coin, or 50-cash coin. On its reverse was to be cast the penalty for private coining and the reward for informers.[18] This recommendation was not adopted, but there are large Wanli Circulating Treasures which undoubtedly are 2-cash coins.

The sources generally describe the Wanli coins as fine and regular.[19] Actually, there are some especially fine and regular examples of the Wanli coin, but variant forms are extraordinarily numerous, and the high quality examples were probably minted in the early years. Later, war broke out, and the coins became light, small and coarse. A fair number were privately coined.

The Ming coinage was simplified after the hongwu period. The quantity minted was probably not large, and still fewer have survived. Since there were no large coins, there were also no reverse ins-

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ties of copper and tin in all so that 6 million cash of copper coins actually weighed 48,000 catties, with wastage at approximately 8 percent. Each cash would actually weigh 0.128 ounce. If the wastage was also 8 percent in jiajing 6, then each cash weighed 0.12 ounce.

[13]Tan Rumu, *Date Grove Miscellaneous Table*.

[14]*Date Grove Miscellaneous Table* says that fire was used to smoke it black. Zhu Guozhen, *Yongchuang Small Articles* says that it was smeared with a chemical to make it black.

[15]*Ming Collected Statutes*, 194, "Minting Coins." *Ming History*, 81, "Treatise on Food and Money."

[16]All the Hongxi, Zhengtong, Tianshun and Chenghua coins I have seen were forgeries. A few thin and small ones were Vietnamese coins. *Rousing the Age Marriage Affinity* mentions a Chenghua coin, but this is probably because the author thought it natural to do so, and not on the basis of actually having seen the coin.

[17]Cf. *Ming Collected Statutes*; *Investigation of Literary Remains Continued*; *Ming History*, "Treatise on Food and Money."

[18]Wang Ben, *Universal Investigation Continued* makes it a Wanli Original Treasure. The other woodblock editions call it a Great Ming Circulating Treasure.

[19]Gu Yanwu, *Henglin Collected Works*: "As for the Wanli, it was extra fine. The coins' style is such that a hundred weigh 13 ounces. The outer edge is a smooth circle. The inscription is bright and lustrous."

criptions. The five denominations of Jiajing coins were the exception, but they may not have been actually put into circulation.

This simplification was entirely due to the authorities' desire to promote the Treasure Certificates rather than coins. During the wanli period, however, Treasure Certificates were no longer in use, and since expenditures were up, there was also an impulse to begin to increase the quantity minted, and coin reverses again began to bear inscriptions. Wanli coin reverse inscriptions include the characters *hu*,[a] *gong*,[b] *gong*,[c] *zheng*,[d] *tian*,[e] *he*[f] and *he*,[g] but reverse inscriptions on Wanli coins are relatively rare.

Emperor Guangzong was only on the throne for several months (1620), and did not mint coins, but after Emperor Xizong ascended the throne, there was a supplementary minting of Taichang Circulating Treasure, and the quantity produced was not small [Plate lxxiii,13-14].

Tianqi Circulating Treasure were issued in tianqi 1 (1621) [Plate lxxiv]. From this time on, the Ming Dynasty's coinage began to become complicated. Not to speak of the obverse variant forms, there were quite a few reverse variant forms. Among these were the

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issuing office names, and place names. These included *hu*,[a] *gong*,[b] *jing*,[h] *Zhe*,[i] *Fu*,[j] *Yun*,[k] *Mi*,[l] *Zhen*,[m] *fu*,[n] *yuan*,[o] and *xin*.[p] The weight notations include one-*qian*, 1-*qian*, 1-[],[q] 1-*qian* 1-*fen*, 1-*qian* 2 *fen*, Xin 1-*qian* 1 *fen*.

To commemorate the ancient monarchs, they used an old year-period, but the tianqi year-period [1621-1628] had actually been used several times, though the Secretariat of that time did not know this, since the chief ministers were not scholars. These men have as a consequence come down to posterity as laughingstocks.

It is said that the Secretary of the Board of War, Wang Xiangqian, recommended minting 10-cash, 100-cash and 1,000-cash large coins using dragon patterns in imitation of the three White Metal system of ancient times.[20] Like the three Western Han White Metal moneys, none of these have survived either. The histories say that later on people spoke of the abuses they gave rise to, and that they were called in for reminting.[21] Probably the three large coins were never minted, and even if they were minted, they were never issued, but merely later reminted into ordinary 10-cash coins. Most people later on confused these three large coins with the ordinary 10-cash coin.[22]

There was a 2-cash Tianqi coin, but not many were minted. There are quite a few types of 10-cash coins of different sizes and weights. Some have blank reverses, but most bear inscriptions on their reverses, like 10, 10 1-ounce,-*fu*,[n] *fu*[n] 10, *Zhen*,[m] *Zhen*[m] 10, *Mi*[l] 10. *Fu*[n] was probably an abbreviation for *Xuanfuzhen*,[r] and *Mi* for *Miyunzhen*.[s]

A Chongzhen Circulating Treasure was minted in chongzhen 1 (1628) [Plate lxxv]. At first, each coin weighed 0.13 ounce.[23] In chongzhen 3 the coinage was revised. Coins minted in the north weighed 0.1 ounce. Those minted in the south weighed 0.08 ounce.

The Chongzhen coins are the most complicated type of Chinese copper coin. Their inscriptions, construction, sizes, weights, and thicknesses were ever changing. To speak just of the inscriptions on their reverses, there are several dozen variations.

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[20]Cf. *Ming Veritable Records*, *Investigation of Literary Remains Continued*, *Ming History*.

[21]*Ming History* 81, "Treatise on Food and Money, 5": "In tianqi 1, Taichang coins were minted. The Secretary of the Board of War, Wang Xiangqian, requested the minting of 10-cash, 100-cash, and 1,000-cash large coins. They employed dragon patterns, somewhat in imitation of the three White Metal moneys. Thereupon the two capitals both minted large coins. Later, there were those who discussed the abuses associated with large coins, and the Southern Capital was ordered to halt their minting, and bring them back into the issuing office for reminting."

Investigation of Literary Remains Continued, 11, "Investigation of Coins," says that they began to be minted in tianqi 1, 8th month. The following year in the 7th month, the Board of Revenue began to mint the new large coins. It was not until tianqi 5, 10th month that the two capitals were ordered to halt minting of large coins. This must refer to the 10-cash large coin.

[22]The standard histories all neglect the Tianqi Circulating Treasure 10-cash coin, but Feng Menglong, *Mystical Observation Hall Collectanea*, "Record of the Events of Jiashen: Recommendations on the Coinage," states: "At the beginning of tianqi a 10-cash large coin was minted. The coin weighed 1 ounce."

[23]*Investigation of Literary Remains Continued*, 11, "Investigation of Coins, 5," tianqi 7, 12th month (by which time Emperor Zhuanglie had already assumed the throne): "The Boards of Revenue and Works presented a new style of coin for the chongzhen era. The Emperor ordered that each coin weigh 0.13 ounce, and those responsible ordered that it be of fine purity, and that it not necessarily bear the style of the Boards of Revenue and Works." However, Hou Xun, *Matters Concerning Minting* says that it was 0.125 ounce: "In chongzhen 1, the advice of the Coin System Executive, Sun Junxiang, was accepted, and the weight of the coin was changed to 0.125 ounce. The coins were to be made thick and strong. The making of the molds and their casting was not to be delayed so that people might be satisfied."

Those standing for office names include *hu*,[a] *gong*,[b] *xin*,[p] *jiu*,[t] *hu*[a] *jiu*,[t] *bing*[u] (the Nanjing Board of War), and *jiang*[v] (the Nanjing Superintendancy of the Yangtze).

Place name abbreviations include *guang*,[w] *qing*,[x] *gui*,[y] *jia*,[z] *jia*[aa] (for Jiazhou), *lu*[ab] (for Luzhou), *zheng*[ac] *ying*[ad] (for Yingtianfu), *yu*[ae] (for Yulinwei), and *chong*[af] (for Chongqing).

Heavenly Stem notations include *jia, yi, bing, ding, wu, ji* and *geng*.

Weight notations include *chong*[af] 1-*qian*[q] (*chong* standing for Chongqing), *jiu*[t] 1-*qian*[t], 1-*qiu*[t], *yi-qian*.[t]

In addition there are words like "received system" (*fengzhi*[ag]), "received edict" (*fengzhi*[ah]), "great peace" (*taiping*), "new coin" (*xinqian*), *qian*[t], 8-*qian*[t], "pure and loyal" (*qingzhong*), *zhi*,[ai] *fu*,[n] *guan*,[aj] *ju*,[ak] *gong*,[al] long form of eight (*ba*[am]), *ji*,[an] *bu*,[ao] *xing*,[ap] *dao*,[aq] edict (*zhi*), *ning*[ar] and numeral 8.

For the most part, these thin bodied but uniform coins were minted in Nanjing. There are some relatively thick and small ones most of which were minted in Sichuan.

There is a type of Chongzhen coin minted in Nanjing which bears a picture of a running horse on its reverse below the hole [Plate lxxv,13]. It is known as the running horse Chongzhen. This is an abnormal phenomenon in the history of Chinese monetary systems, since Chinese coins only very rarely bear pictures of animals. Prior to this there were only some Tang coins which bore the form of a flying bird on their reverses. These and this Ming coin may be said to have constituted a unique pair.

However, in

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the view of people then, this sort of thing was considered either lucky or strange. There was a topical folk rhyme then which went "a horse brought disorder to the Empire," and later men have forced onto this the meaning that Nanjing was later lost by Ma Shiying (whose surname means "horse").

Others said that Ming fell to Li Zicheng because the first character, *chuang*, of his nickname, the "rushing prince" [*chuangwang*] is made up of a horse entering a gate.

All of these associations merely show the dissatisfaction of people then with the current situation, particularly their hatred for Ma Shiying, of whom it was said that he "swept up all the coins of the south to pile them up at the door of the Ma family."

There are three denominations of large Chongzhen coins, a 2-cash, a 5-cash and a 10-cash. These three denominations were not minted simultaneously. The histories mention only the 5-cash.[24] There are also some coins they discuss, but which never got to be minted.[25] These are errors and omissions by the histories.

The 2-cash coins' reverses bear two characters or a dot above the hole. This type of coin is large, each weighing 7 grams. There is a *jian*[as] 2 which is even larger. There are also 2-cash coins with reverses having just a dot and no inscription. In addition, there are ones bearing the labels *hu*[a] 2, *gong*[b] 2, *jiang*[v] 2, *ju*[ab] 2, *ji*[an] 2, and *chi*[at] 2. These are almost the same size as the larger 1-cash coins.

There is still room for investigation as to whether such coins were 1-cash or 2-cash. They may be 2-cash coins which had undergone weight reduction.

The 5-cash coins come in three types, *hu*[a] 5, *gong*[b] 5 and *jian*[as] 5.

The 10-cash coins have blank reverses. Very few of them survive. Judging from their alloy and construction, they would seem to have been minted in Yunnan, and possibly not during the chongzhen year-period.

Of these large coins, probably only the 2-cash coins entered circulation. The 5-cash and 10-cash coins are thick and heavy, weighing more than five and ten 1-cash coins respectively. They could not have been put into circulation then.[26]

The various Ming princes all minted coins. Among these coins are several types of Great Ming Circulating Treasure. We do not know during what year-period these were minted. Their reverses bear such inscriptions as *hu*,[a] *gong*,[b] *shuai*[au] and *nan*.[av]

The histories record that preparations were made during the jiajing period to ming Great Ming Circulating Treasure.[27] Yang Jiaxiang, who lived dur-

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[24] *Emperor Sizong's Chongzhen Veritable Record*, 17, chongzhen 17, 2nd month, dingmao: "The Certificates' use was halted. The previously circulated Zhe notes could still be paid in at the capital. As a consequence, 1-cash and 5-cash coins were minted."

[25] *Ming History*, "Treatise on Food and Money, 5."

[26] *Qing Dynasty Emperor Shizu Zhang's Veritable Record*, 6, shunzhi 1, 7th month, xinchou, section states: "The Left Executive of the Board of Works, Ye Chuchun, stated that 0.01 ounce of silver was being spent to newly mint each 7 standard coins. The price of the coins was rising by the day. The people were not being convenienced thereby, and so he requested that the treasury distribute the old 5-cash coins, and also mint 2-cash coins to meet the people's needs. This was not accepted." What was referred to here was probably the Chongzhen 5-cash.

[27] *Ming Collected Statutes*, jiajing 6: "It was ordered that this be proclaimed inside and outside the capital city, but new coins were being collected. Within a month, the whole amount was to be brought in to the prefectures and districs and each cavalry

ing the longqing period [1567-73], also recommended minting a Great Ming Circulating Treasure, but this recommendation was not accepted.[28] It is said that Tan Lun (1520-1577) requested minting of Great Ming Circulating Treasure, and obtained an edict assenting to their issue.[29] During the wanli period, Hao Jing also recommended minting Great Ming Circulating Treasure,[30] but the several Great Ming Circulating Treasure I have seen were probably minted at the end of Ming by the Prince of Lu,[31] since they bore such reverse inscriptions as *hu*[a] and *gong*[b] [Plate lxxvi,1]. They only circulated abundantly after the tianqi period. There are large Great Ming coins which are very scarce.

Using the names of dynasties as the names of coins began with Latter Shu and Southern Tang of the Five Dynasties and Ten Kingdoms period. Every dynasty thereafter had some of these coins.

What is strange is that none of these dynastic coins was minted at the beginning of a dynasty, but rather at its end, and even after it had fallen.

For example, the Tang Dynasty failed to mint a Great Tang Circulating Treasure for several hundred years, but Southern Tang of the Five Dynasties and Ten Kingdoms period did mint one.

The Song Dynasty did not mint a Great Song Original Treasure during Northern Song, when the country was still unified, but only when Southern Song was holding on to half the original territory in the south.

It was not during the time of Temujin, or at least during the time of Khubilai that the Mongols minted a Great

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Yuan Circulating Treasure, but during the reign of Emperor Wuzong, when they were about to lose their grip on the monetary system.

The Ming Dynasty did not mint a Great Ming Circulating Treasure during the hongwu or yongle periods, but only at the end of Ming, when the dynasty was about to fall. We can tell from all this that the closer the rulers came to the point where their sovereignty became insecure, the more they liked to brag. The Great Ming Circulating Treasure was not the last time that this psychology of fool oneself so as to fool others manifested itself.

In chongzhen 17 [1644], the Prince of Fu took the throne in Nanjing. The next year he changed the era name to hongguang, and minted the Hongguang Circulating Treasure in 1-cash and 2-cash denominations [Plate lxxvi,2]. In addition to blank reverses, the 1-cash denomination also bore dotted reverses, and sometimes also the character *feng*.[aw] It is possible that these were minted when Ma Shiying was governor of Fengyang.

When the Prince of Tang occupied Fuzhou, he changed the era name to longwu (1645), and minted a Longwu Circulating Treasure, also in both 1-cash and 2-cash denominations [Plate lxxvi,3]. In addition to blank reverse versions, the 1-cash coin also bore such characters as *hu*[a], *gong*,[b] *liu*[ax] and *nan*.[av]

In Qiqing, the Prince of Yongming changed the era name to yongli (1647), and minted a Yongli Circulating Treasure [Plate lxxvi,10-11]. The yongli year-period lasted for a rather long time, and there are quite a few kinds of coins of that type. Aside from *hu*[a] and *gong*,[b] reverse inscriptions include *yu*,[ay] *chi*,[az] *du*,[ba] *bu*,[bb] *dao*,[aq] *fu*,[n] *liu*,[ax] *ao*,[bc] *fu*,[bd] *ming*,[be] *ding*,[bf] and *guo*.[bg] These characters seem to have been selected from the phrases used in orders. The coins bearing them, however, were not minted at the same time or in the same place. Not only are there a variety of variant forms, their numbers also vary greatly.

Some of the Yongli coins have face values in silver. These were probably minted rather later. They are divisible into several denominations according to their sizes. The reverses of the small coins bear the inscription 2-*li* [i.e. 0.002 ounce]. Higher denominations have 5-*li* and One-*fen* [i.e. 0.01 ounce] labels. The latter comes in small and large versions. Prob-

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horse office was to issue them first . . . and await the minting of the Great Ming Circulating Treasure." Wei Shiliang petitioned: "I continue to request that at the provincial level . . . the coins minted use the four characters Great Ming Circulating Treasure to make their general use convenient." Cf. Hu Wokun, *Circulation of Coins*, 2, "Correct and Perverse Unified, first part."

[28]*Ming History*, "Treatise on Food and Money, 5": "At the beginning of longqing . . . the Supervisor of Zhili, Yang Jiaxiang, requested minting of Great Ming Circulating Treasure, which would take no account of year-period designations. The Board discussed this, but did not carry out the recommendation."

[29]*The Dynasty's Statutes Compiled*: "In longqing 1, the General Supervisor of Su and Yuan, the Executive Tan Lun, said he requested the minting of coins known as Great Ming Circulating Treasure. He obtained an edict assenting to their circulation."

[30]*Investigation of Literary Remains Continued*, quoting *Remaining Dreams of Spring Brightness*: "During wanli times, the Reviewing Policy Adviser Hao Jing made recommendations on the coinage: Each coin . . . was to be called Great Ming Circulating Treasure."

[31]Huang Zongxi, *Travelling Court Record*: "In chongzhen 17 [1644], the Prince [of Lu] returned to Yue, and minted the Great Ming Circulating Treasure coin." Sanyushi, *Five Frontiers Veritable Record*: "The Prince of Lu was named Yihai, and went as a refugee to Taizhou. In year yiyou, 6th month, he was set on the throne, and in the 12th month, minted a Great Ming Circulating Treasure."

ably they were minted successively. The One-*fen* Yongli coin weighs 0.64 or 0.65 ounces, so of course its weight was not what the inscription was recording.

The Yongli coins also come in many sorts of calligraphy. They come in sealscript, regular script and cursive styles. The sealscript and cursive script Yongli coins were probably used by Zheng Chenggong on Taiwan, and had been minted for him by the Japanese at Nagasaki.

Zheng Chenggong had accepted the yongli year-period name in yongli 3 [1649]. In yongli 5, he sent an emissary to open relations with Japan, and Japan had helped him by alloying copper with lead to mint Yongli coins for him. Later, in kangxi 5 [1666] and 13 [1674], Zheng Jing once again opened relations with Japan and had more Yongli coins minted.[32]

Therefore, during the period Zheng Chenggong was on Taiwan resisting the Qing armies, he employed Yongli coins. It was not until after kangxi 27 [1688] that the Qing began to mint Kangxi coins on Taiwan, and even then Yongli coins remained in circulation.[33] Therefore, the Yongli coins cireculated for a longer period of time on Taiwan than on the mainland.

Both Li Zicheng and Zhang Xianzhong minted coins [Plate lxxvi,12-14]. Li Zicheng was proclaimed prince in Xi'an in chongzhen 17 [1644], changed the era name to yongchang, and minted Yongchang Circulating Treasure.[34] They came in 1-cash and 5-cash denominations.

In the same year, Zhang Xianzhong ascended the throne in Chengdu,

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changed the era name to dashun, and minted Dashun Circulating Treasure.[35] Their reverses bear the characters *gong*[b] and *chuan*.[bh]

In addition, after Zhang Xianzhong was killed, his adopted son, Sun Kewang, entered Yunnan, proclaimed himself East Pacifying Prince (1665), and minted a Prosperous Dynasty Circulating Treasure.[36] It came in three denominations. The 1-cash coin weighed 0.15 ounce, and had a blank reverse. A somewhat larger one weighed 0.26 ounce, and its reverse bore the two characters 5-*li* [0.005 ounce]. The largest weighed 0.64 ounce, and its reverse bore the two characters 1-*fen* [0.01 ounce]. These too were coins with values commuted to silver.

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[32]Jiang Risheng, *Taiwan Unofficial Record* (shunzhi 8, 12th month): "An emissary was sent to open relations with Japan using the ceremonial of a nephew. Wang Guo was greatly pleased. Copper and lead were blended. Officials were ordered to aid in minting copper into Yongli coins. . ." Also (kangxi 5, 7th month, when Zheng Jing was occupying Taiwan): "The Ruler communicated with Japan . . . and minted Yongli coins." Also (kangxi 13, 4th month, when Zheng Jing was in Amoy): "The man in charge of supervision of the soldiers, Li Dejia, was sent to Japan by boat to mint Yongli coins."

[33]Liu Xianting, *Guangyang Miscellaneous Record*, 1: "Kangxi 22 of Qing was yongli 35 of Ming. The coins were larger than the Kangxi coins, weighing 0.16 ounce. They were made of red copper. A thousand were worth 2 ounces of silver." (Original note: 35 should read 37. It was 21 years after the end of yongli that the Zhengs were still minting Yongli coins.)

Qing Dynasty Investigation of Literary Remains, "Investigation of Coins," kangxi 27: "The Governor of Fu, Zhang Zhongju, noted that because the false era name coins used by the Prince Gui of Ming in Taiwan were so terribly numerous, if they were abruptly all banned, the poor people would have nothing to rely on. He sent up a communication requesting the opening of furnaces for minting. The false coins would be bought up and melted down for reminting. The Board of Classics advised assent to this."

Pan Lei, *Suichu Hall Collection*, "Outline Record of Ying Gongwu": "When Taiwan was under the Zheng family, Yongli coins were circulated. Since they entered into domination, the officeholders requested that more coins be minted. The Board proclaimed the coin style bearing the characters for Taiwan, and melted down the old coins to make them."

[34]There are quite a few traditions concerning Li Zicheng's minting of coins, and they are mutually contradictory. *Ming History*, "Biography of Li Zicheng": "Zicheng cast an imperial seal and Yongchang coins, neither of which was completed." *Yandu Record*: "On the 2nd day of the month, the minting of the Yongchang coin was proclaimed. On the 4th, the Yongchang coin was minted. It was thin and small. More were ordered minted." Cf. *Mystical Observation Hall Collectanea*, "Record of the Events of Jiashen."

Jiashen Faithful Record, 6, "Qing Coin Axles": "[Chongzhen 17, 4th month], 8th day, the Yongchang coin and 2-cash coin were minted. The person in charge of the Coin Office was the Expectant Executive of the Board of War, Liu Guzi." *Tranquilizing Bandits Outline Record* states that Li Zicheng minted a large coin worth 1 ounce of silver, as well as 10-cash and 5-cash coins.

[35]Peng Zunsi, *Shu Green Jade*, 2: "[Year jiashen] . . . At this time, the bandits set up a minting office. They took the ancient ritual vessels and antiques treasured in the frontier prefectures and the copper statues of the temples inside and outside the city, and melted them down for coins, the inscriptions on which read Dashun Circulating Treasure."

[36]*Ming History*, 279, "Biography of Yang Weizhi": "At this time, the Prince of Yongming had already proclaimed himself Emperor at Zhaoqing, and none had responded to his call. The former Censor and Advisor in Lin'an, Zun Kewang, became the head of state. He used the system of Stems and Branches to denote the years, and minted the Prosperous Dynasty Circulating Treasure coins."

Ming coins only constituted a minority of the copper coins which circulated during Ming times. The majority were Tang and Song coins, especially Song coins.[37] Even private coiners would not necessarily turn out Ming coins, but instead often produced Tang and Song coins.[38]

As to what places used which coins, that was a very complicated matter. Not only was each place different,[39] but even in the same place there could be frequent changes. When Gu Yanwu discusses the situation in Fujian's Zhangpuxian, he says that in jiajing 3 and 4 [1524-5] they used Yuanfeng coins; in jiajing 7 and 8, they abandoned the Yuanfeng coins and used Yuanyou coins. In jiajing 9 and 10, they gave up the Yuanyou coins for Tiansheng coins. In jiajing 13 and 14, they gave up the Tiansheng coins for Chongning 3-cash coins and Xining 2-cash coins. In wanli 3 [1575], they gave up the Chongning coins, and solely used the Xining coins. In wanli 5, they did away with the Xining coins and used Wanli system coins. A year later, they were not even using the Wanli coins, and instead resorted to private coins. Still later, they went over to use of silver.[40] It was really a mad situation.

Ming Dynasty coins possess no artistic value to speak of. Especially after the middle period, coins were thrown completely outside of the sphere of objects of art, and no longer reflected the artistic level of the time.

Ever since the Yuan Dynasty, painting, which had assumed the most important place among the fine arts, was gradually being taken over by the literati. Literatus painting has its virtues. Sometimes the point of the exercise would really be the poem in the midst of the painting, but that was only the case for literati who were also painters, and it was by no means true that all literati could paint pictures. A goodly number of them merely loved to exude an air of elegance, but did not love art itself.

Naturally, they were even less interested in the artistic aspects of coins. If the ruling class had a concept of beauty, it was concentrated in other areas, such as their own depictions of reality, the porcelain utensils for their own daily use, the palaces they lived in during life, and the tombs they would occupy after death. They no longer understood how to make coins beautifully. Since they were accustomed to use gold and silver, they had no

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[37] *Emperor Shizong's Jiajing Veritable Record*, 192, jiajing 15, 9th month, jiazi, the Inspection of the Five Cities Censor, Yan Lin: "There are two types of coins used by the Dynasty. The first are the system coins . . . like the Hongwu, Yongle and Jiajing Circulating Treasures. The second comprises the old coins which had been minted down through the ages, like the Inaugural, Xiangfu, Taiping, and Chunhua coins. During the past 160 years, both types have been used together."

Lu Shen, *Yanjian Record*: "When I was young, I observed that all the coins in use among the people were Song coins, intermixed with Jin and Yuan coins. These were called good coins."

Five Mixed Tables: "In Shandong, both silver and coins were used together. The coins all had Song year-period names, and two of them were equal to one new coin, but the new coins were abolished and not used. The Song coins, however, were not being minted by anyone. Most had been dug out of the earth."

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He Qiaoyuan, *Famous Mountain Hoards*, "Record of Coin Systems": "Nowadays, everywhere within the Seas, Song coins are mostly used. Obviously Song coins are finely made and numerous, and can circulate for a long time."

Collectanea of Ancient and Modern Books and Illustrations, "Compendium on Economics: Food and Money Statutes," 358, "Coins and Certificates Section: Arts," 2.3, Jin Xueyan, "On Coins and Grain": "It is now not far from Song times. Hence most of the coins in use are Song items."

In addition, I assume that Inaugural coins were also not uncommon. Gu Yanwu, *Record of Daily Knowledge*: "When I was young, most of the coins I saw in the market had Southern Song year-period names. Later, when I went north, those I saw were mostly from when Song had its capital in Bian. . . . Among them were one or two Tang coins."

[38] *Economic Records of Famous Officials of the Imperial Court*, 24, "Copper and Mulberry Paper Money, 1," text of a memorial by Qiu Rui: "Those things which circulate and penetrate to all markets and shops are all illicitly minted counterfeits. Their inscriptions are old, but the things themselves are new. . . Next, order the Treasury to carefully select genuine Tang and Song coins like the Inaugural and the Taiping, and when a million have been obtained, have the Board of Revenue distribute them across the Empire, concentrated in all the markets. Strings should be used to tie together a hundred of the ancient coins, which should then be hung out so as to demonstrate their forms, and let the little people know that these are the forms of old coins. Those not of these types are all to be considered bad coins and the authorities informed so that they can collect them."

[39] Gu Yanwu, *Letters on the Profits and Ills of the Regions of the Empire*, 94, "Fujian, 4: Zhangpuxian": "Our Dynasty's coins are minted with new year-period inscriptions whenever the era name changes, but among the people the use of coins follows local customs. In Min, for example, Fuxing, Dingshao, and Funing do not use coins. They are used between Zhang and Quan and Yan and Jian, but those used in Zhang and Quan differ from those used in Yan and Jian, and those used in Quan differ from those used in Zhang. . . . Those used in the various districts also vary in their beauty. Those used in Shaoan are extremely fine. Those of Zhangpu are next. Though those used in Longji are extremely ugly, they are used anyway."

[40] *Ibid.*, 94.

need to use copper coins.

There are no detailed descriptions of the methods used for casting coins in ancient China. Based on the construction of coins and surviving coin molds, we can tell that casting from molds was employed straight through.

During Spring-Autumn and Warring States times, clay molds were employed. Each mold was destroyed in the course of making one casting, so that no two coins were completely identical, and no clay molds would have survived.

The Han went over to copper molds, and quite a few of these have survived. These were "mother" or master molds. The inscriptions on them are in relief. From these mother molds a number of clay molds were formed on which the inscriptions were formed in intaglio, so that the coins cast from them had
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inscriptions in relief.

From Wei, Jin and the Northern and Southern Dynasties times on, there was a return to the clay mold method, which was retained right on down to the end of Qing.

This second clay mold system differed, however, from the pre-Qin system. From medieval times on, the clay molds were formed from model coins or mother coins. During the Tang Dynasty, they first used wax to make a model coin. The Song sometimes made it of wood. For the Ming Dynasty there exist Wanli mother coins made of copper and Chongzhen mother coins made of tin. These were all made by carving, and are sometimes called carved mother coins. Afterward, clay molds were formed from such mother coins.

We know very little, however, about how the coins themselves were cast. There are no accounts of this process before Ming.

The Ming procedure was to first make a hollow wooden frame. The frame was filled with extremely fine clay and powdered charcoal. A little pine wood charcoal or willow wood charcoal was sprinkled on top of this. Afterward a hundred mother coins were arranged on the surface, and then the same type of frame was placed atop the first one. That way the lower frame was imprinted with one face of the coins, and the top frame received an impression from the other face. Then the two frames were turned upside down, and the frame which had just been on the bottom was set aside, and replaced by another frame. In this way a number of molds could be made in succession.

When the coins were being cast, cord was used to hold the two half frames together. There were holes and channels on the frames to permit entrance of the molten copper and lead it to the hundred coin impressions. By pouring the molten copper through these channels, a hundred copper coins could be formed simultaneously.

After the metal had cooled, the coins would be removed from the molds and broken apart. There was additional work after this:

First, the edges were filed. A bamboo stick was was threaded through their holes so that several hundred could be filed simultaneously. After the edges had been filed smooth, differences in the sizes of the coins were filed away.[41]

This was the Ming Dynasty method for casting coins, but it is also representative of the method used since Wei, Jin and Northern and Southern Dynasties times.

Of course there were some differences. For example, surviving Southern Liang clay molds are in the shape of small squares, with each square only holding four coin impressions. However, both sides were used. One side held the coins' obverses, and the other their reverses, with the channels for letting the molten metal in leading in from the center. When the coins were cast, a number of molds could be stacked atop each other, so that the molten copper could flow in through the central channel, and then out into the individual coin impressions. Of course there were yet other variations, but the basic principle remained the same.

The Ming Dynasty had a detailed division of labor for casting coins. There was a head artisan to manage the weight and purity of the coins. Below him were sand turning artisans, turning and filing artisans, grinding and washing artisans, brushing charcoal artisans, etc.[42]

Nevertheless, Ming coins were not as finely made and beautiful as those of former ages. In fact, they could not compare with the coins of Western Han and Northern Song, particularly not with the coins of Wang Mang or those of the reign of Emperor Huizong of Song.

The mold casting method was a very high cost one. We may take the Wanli lathed edge coins as an example: In wanli 5 (1577), 11th month, the Shanxi Inspector, Gao Wenjian, mentioned the expenses involved in casting coins in his memorial making ten recommendations on coins.

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[41] Song Yingxing, *Natural and Man-made Products*.

[42] Hou Xun, *Matters Concerning Minting*: "In chongzhen 1 . . . the minting regulations for a 1-cash coin were to use two brass files so that only 0.125 ounce remained. The officials supervising the casting are to select head artisans to be responsible for the coins' weight and finess, sand-watchers to be responsible for turning the sand, filing artisans who are to grind the edges, grinding and washing artisans to polish them, and charcoal brushing artisans for when the charcoal is not clean."

The price of 100 catties of copper was 7 ounces of silver. When the labor and miscellaneous expenses of 9.2 ounces were added, some 10,000 cash could be minted. He does not mention the cost of tin or meltage and wastage. Nor does he give the exact number of coins that could be minted. If

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we assume that the cost of tin was included in the miscellaneous expenses category, along with the meltage and wastage, then they would have been able to mint 12,300 cash, since a lathed edge coin weighed 0.13 ounce. The price of silver then was 1,000 cash per ounce. This allows us to derive some figures:

First, the cost of casting was 17.9 percent. Second, the seignorage was 33.7 percent. Third, the value of the material comprising a coin was only 57 percent of its face value.

This would seem to bestow on China's copper coins a distinctive character, one which differentiated them from a genuine standard money. They were not full-value money. They were not, one might argue, a suitable instrument to serve as a store of value.

It might be argued that one could not automatically regulate the quantity of money in circulation. When the quantity of money exceeded what was needed for circulation, no one would be willing to melt down copper coins for their copper content, since that would have imposed a loss of 43 percent. This meant that the price of copper coins was influenced by their quantity. In the present example, a coin's value could have fallen as much as 43 percent.

However, we must ask whether the price of copper could have been maintained at a level of 7 ounces of silver per 100 catties. If many people had melted down copper coins, the supply of copper would have exceeded the demand for it, the price of copper would have fallen, and the price of coins could in turn have fallen a step further. So a self-regulating process which would cause the price of coins to gradually converge with the price of copper would, after all, have been in operation.

Actually, under the assumption that coins will be manufactured under circumstances that will produce seignorage, the problem of private melting down of coins cannot appear in any case. Only private coining will occur. The consequence of private minting will be to cause the nominal value of copper coins to approach their intrinsic value.

As a consequence, the abovementioned seignorage is achieved through depreciation. It is a form of exploitation. Even with use of gold and silver coins, depreciation can be used to obtain this sort of seignorage, but it can never be maintained for long. It is precisely because of this self-regulation that even copper coins can develop the measure of value and a store of value functions.

Nor was the Ming Dynasty system of minting coins completely representative of the coin minting systems which had come down from earlier ages. Some dynasties had not sought to obtain seignorage. They emphasized the minting of coins, and did not begrudge the expense of doing so. For them, the only problem was the cost of producing coins. The cost of production also caused a discrepancy between the price of the material from which the coin was made and its face value.

This question of minting expense also arises for gold and silver coins, but the price of gold and silver is so high that the cost of producing coins is a small proportion of that, and most people can ignore it.

The productive power of the Ming coin casting furnaces seems to have risen substantially. During the Tang Dynasty, one furnace could only cast 3,300 strings of cash per year. There are no comparable statistics for Song. The sources only give the annual production figures for each inspectorate, and one inspectorate was not the same as one furnace.

During the hongwu era of Ming, a furnace's annual production was 7,832 strings.[43] This was better than double the figure for Tang. Such productivity was not necessarily entirely because of progress in tools. It could

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also have been because of larger scale furnaces, and might also have had something to do with the proportion of labor required.

There were a number of places which did not use copper coins during Ming. I have mentioned above that various places used commodity moneys. Notable among these was Yunan's use of *haiba* sea cowry,[44] which is in itself worthy of mention. Sea-cowry was what the Yuan Dynasty called *bazi*. It was reckoned by the string.

A number of the peoples of the southwest used cowry money then. India's Bengal[45] and Siam[46]

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[43]Cf. subection 7.2.2, note 14, below.

[44]*Emperor Xiaozong's Hongzhi Veritable Record*, 197, hongzhi 16, 3rd month, wuzi, the Works Left Reviewing Policy Adviser Zhang Wen's "Speaking on the Requisites for Minting Coins": "Yunnan solely uses *haiba* sea-cowry."

[45]Ma Huan, *Overall Survey of the Ocean Shores*, "The State of Banggela": "For change they use the *haiba*, which in their language is called the *kaoli* [i.e. cowry]. They exchange them individually and in numbers." Fei Xin, *Overall View of the Steelyard Marks*, "State of Banggela": "They circulate *haiba* along with coins." Huang Shengceng, *Tribute of the Courts of the*

were both cowry using regions. Some say that 80 cowry made up one string.[47] This type of *haiba* cowry probably came from the Indian Ocean. It is said that the people of the Maldives specialized in collecting and selling it to Bengal and Siam.[48] Possibly the *bazi* of Yunnan came from the same source.

At the beginning of Ming, 1 string was worth 0.01 ounce of silver.[49] Evidently the price of *haiba* had fallen considerably from the early Yuan level. At the beginning of Yuan a string of cowry was worth 0.12 ounce of silver. Over the course of a century it had fallen to one-twelfth of its former level. During the middle years of Ming, a string was only worth 0.006 ounce of silver.[50] By the end of Ming it had fallen to 0.0025.[51]

In zhengtong 1 [1436], in Yunnan 1 picul of rice was commuted into 70 strings of *haiba*. In zhengtong 10 this changed to 100 strings. In zhengtong 14, it fell back to 60 strings. At the end of chenghua 10 [1474], the Board of Revenue fixed the commutation into *haiba* schedule, with 30 percent to be paid in kind and 70 percent in *haiba*. One string of *haiba* was commuted to from 1 to 3 strings worth of certificates.[52]

The distinctive position in Chinese monetary history of Yunnan's coinage does not merely rest in its use of *haiba* sea-cowry, but also in the circumstances of cowry's abolition. This probably happened after Sun Kewang entered Yunnan. Actually, a mint had been opened in Yunnan as early as the hongzhi period [1488-1506]. In jiajing 34 [1554], Yunnan was ordered to mint 33,012 strings of cash per year, but coin production was only carried on for a decade. A mint was again opened in wanli 4 [1576].[53]

The coins which were produced were, however, probably concentrated at the center, and the people continued to employ *haiba*. After Sun Kewang arrived in Yunnan, he could have minted the Dashun Circulating Treasure, and later changed over to producing the Prosperous Dynasty Circulating Treasure. It is said that he prohibited use of the *bazi* cowry by the people.[54]

The Prince of Yongming probably also minted coins in Yunnan, and indeed minted coins bearing three year-period names --chongzhen, hongguang and longwu-- since coins with these three year-period names have been found in a Kunming tomb. These coins are exactly identical in construction, and all have a dot above the hole on the reverse. Evidently they had not been circulated, and must have been minted at the same time and in the same location.

Later, in yongli 14 (shunzhi 17 [1660]), Wu Sangui memorialized to request the minting of coins. Thereafter, *haiba* sea-cowry reverted to serving as an article of adornment for women.

The minting and circulation of copper coins led to the full development of Yunnan's copper mines. Later on, a large proportion of the Qing Dynasty's coin production came to depend on Yunnan's copper, and the quantity of coins produced by the Qing Dynasty was much greater than Ming's.

The Ming Dynasty's silver-copper exchange price involved an ever higher price for copper, but during Qing, changes in the silver-copper exchange price did not form so straight a line. Both highs
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and lows occurred.

Some peoples of the southwest had used cattle as money. This too is worth mentioning, because among the Indo-European peoples cattle had originally been the most widely used form of money.[55]

Western Seas Annotated Record, "State of Banggela": "Their trade employs silver coins called *shangjia*, and *haiba* sea-cowry which they call *kaoli*."

[46]*Overall Survey of the Ocean Shores*, "State of Xianluo": "Buying and selling are done with *haiba* in place of coins." *Overall View of the Steelyard Marks* records the same information.

[47]Zhu Guozhen, *Yongchuang Small Articles*, 30, "The Southwestern Barbarians": "The people of the south use cowries. One of them is called a *zhuang*. Four *zhuang* make a hand. Four hands make a *miao*. Five *miao* make a string. Cowries come in strings just as coins do."

[48]*Overall Survey of the Ocean Shores*, "State of Liushan."

[49]*Xinxingzhou Gazetteer*, quoting Ming Hongxue's memorial. Cf. Li Jiarui, "The Probable Circumstances of Ancient Yunnan's Use of Cowry Money," *Historical Studies*, 9 (1956).

[50]*Outline of Dian*. Cf. preceding note, article by Li Jiarui.

[51]*Xinxingzhou Gazetteer*.

[52]Cf. the the *Veritable Records* of the various reigns of the Ming period.

[53]*Ming History*, 81, "Treatise on Food and Money, 5," wanli 4: "The Inspector-Pacificator of Yunnan, Guo Tingwu, said . . . Dian [Yunnan] produces copper, but minting was not being carried on. Instead, *haiba* sea-cowry was purchased at high prices, which was not profitable. Subsequently an office for minting was opened."

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[54]Yan Zhongping, *Investigation of Qing Dynasty Yunnan's Copper Administration*, p. 14.

[55]In the epic poems of Homer, cattle are frequently employed to symbolize value. At the end of the seventh century B.C., the laws of Draco of Athens used cattle as their unit of calculation. India's classical literature also used cattle and sheep to

There are a number of words in the Latin language dealing with money which have evolved out of the word for cattle.[56]

In China, pre-Qin documents frequently contain references to hide money, and there is the sentence "if you inquire as to a commoner's wealth, he will reply with the number of his livestock."[57] Hence some people have supposed that China also used cattle as money in ancient times. This is incorrect.

I have already explained the meaning of Hide Money in chapter one, and using livestock to demonstrate one's wealth is not the same as saying that livestock were money. In China, only some of the peoples of the southwest actually used cattle as a medium of exchange,[58] and as a measure of value.[59]

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calculate value. In ancient Persia, payments were made in cattle and sheep. Before the middle of the fifth century A.D. in Italy, both legally and in the eyes of private individuals, there were rules concerning cattle as money.

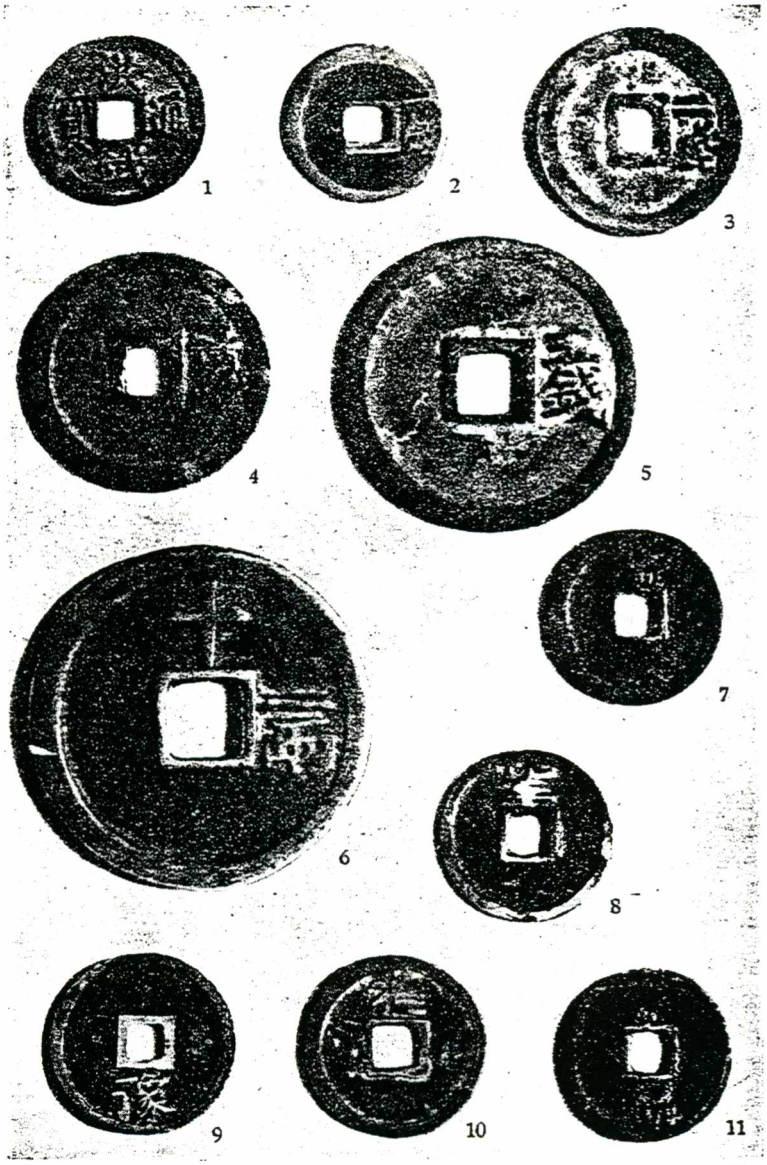
[56]The Latin word for coin, *pecunia*, is derived from the word for ox, *pecus*. From this are derived such English and French words as *peculation*. The English word for the cost of something, *fee*, comes from the ancient word for ox, *feoh*. The present word in German for ox is still *Vieh*. The Indian word *rupee* comes from the Sanskrit word for livestock, *rûpya*.

[57]*Record of Rituals*, "Lyric Rituals."

[58]*Yongchuang Small Articles*, 30, "Barbarians of the Southwest": "The barbarians of Guangnan use cattle as money for exchange."

[59]*Ming Record*, 39, Record of Emperor Shenzong," wanli 1, "Daban Mountain," article notes: "Drums which resound loudly are most favored. They can be exchanged for a thousand cattle. The next fetch 700 or 800. If one can obtain two or three drums, one may arrogate to one's self the title of king."

[a]戶 [b]工 [c]公 [d]正 [e]天 [f]河 [g]鶴 [h]京 [i]浙 [j]福 [k]云 [l]密 [m]鎮 [n]府 [o]院 [p]新 [q]一分 [r]宣府鎮 [s]密雲鎮 [t]印(篆) [u]兵 [v]工 [w]廣 [x]青 [y]貴 [z]嘉 [aa]加(嘉州) [ab]沪(瀘州) [ac]忠 [ad]應(應天府) [ae]榆(榆林衛) [af]重(重慶) [ag]奉制 [ah]奉旨 [ai]制 [aj]宮 [ak]局 [al]共 [am]刑 [an]季 [ao]部 [ap]行 [aq]道 [ar]寧 [as]監 [at]勅 [au]帥 [av]南 [aw]氣 [ax]留 [ay]御 [az]勅 [ba]督 [bb]部 [bc]粵 [bd]輔 [be]明 [bf]定 [bg]國 [bh]川



圖版七十二　明太祖朝的洪武錢

1.洪武通寶。 2.洪武通寶背一錢。 3.背二錢。 4.背三錢。 5.背五錢。
6.背一兩,當十錢。7—11.各省所鑄洪武通寶的背文:浙、北平、豫、桂、福。

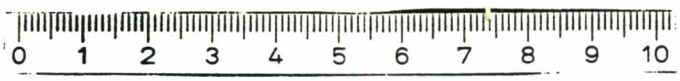
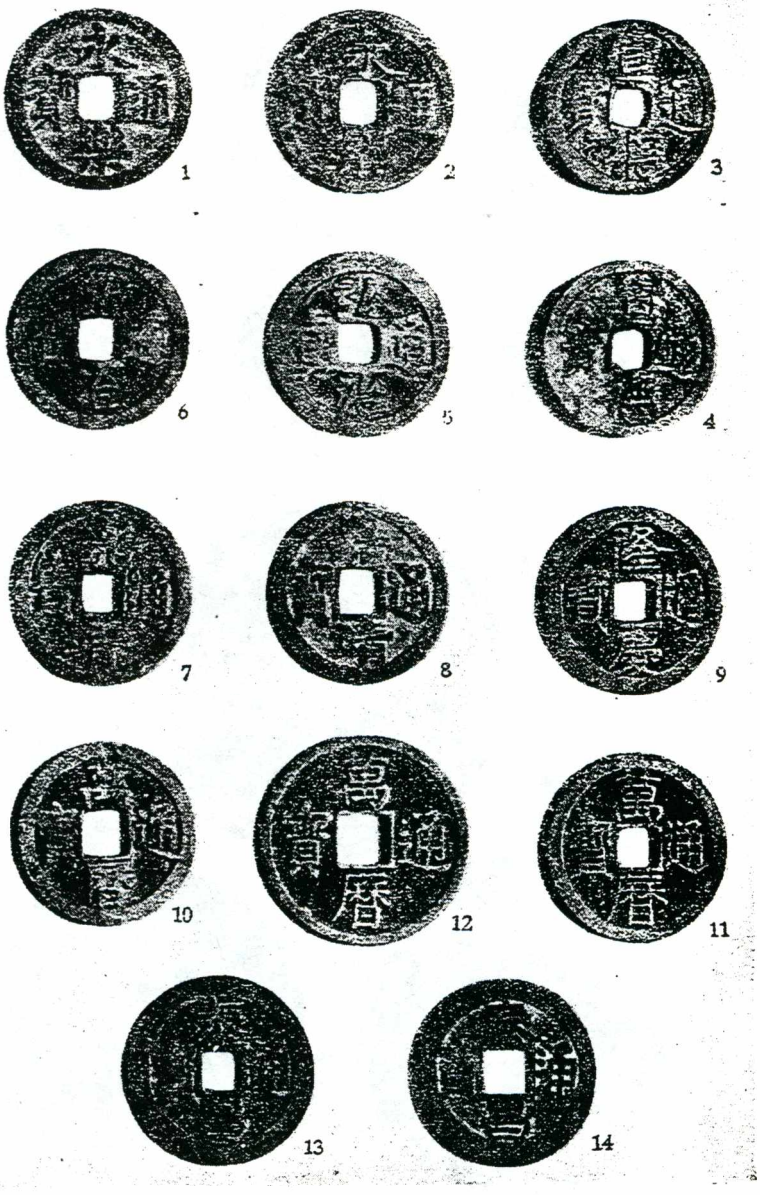


PLATE LXXII. HONGWU COINS OF MING TAIZU'S COURT

1. Hongwu Circulating Treasure. 2. Hongwu Circulating Treasure reverse 1-cash. 3. Reverse 2-cash. 4. Reverse 3-cash. 5. Reverse 5-cash. 6. Reverse 1-ounce, 10-cash coin. 7-11. Reverse inscriptions of Hongwu Circulating Treasure coins minted in various provinces: Zhe, Beiping, Yu, Gui, Fu.



圖版七十三　明代中葉的錢幣

1—2.成祖的永樂通寶。 3—4.宣宗的宣德通寶。 5—6.孝宗的弘治通寶。 7—8.世宗的嘉靖通寶。 9.穆宗的隆慶通寶。 10—11.神宗的萬曆通寶。 12.萬曆通寶折二錢。 13—14.光宗的泰昌通寶。

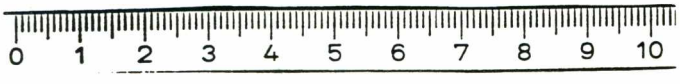
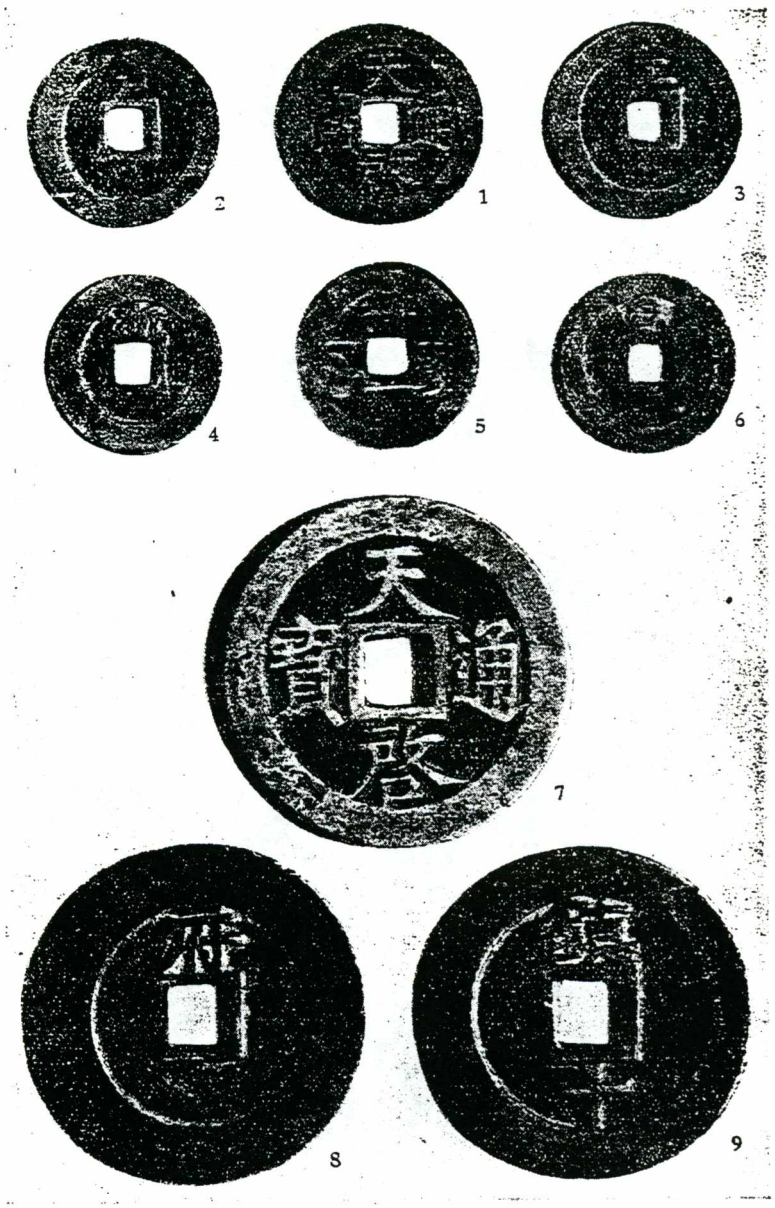


PLATE LXXIII. MID-MING COINS

1-2. Emperor Chengzu's Yongle Circulating Treasure. 3-4. Emperor Xuanzong's Xuande Circulating Treasure. 5-6. Emperor Xiaozong's Hongzhi Circulating Treasure. 7-8. Emperor Shizong's Jiajing Circulating Treasure. 9. Emperor Muzong's Longqing Circulating Treasure. 10-11. Emperor Shenzong's Wanli Circulating Treasure. 12. Wanli Circulating Treasure 2-cash coin. 13-14. Emperor Guangzong's Taichang Circulating Treasure.

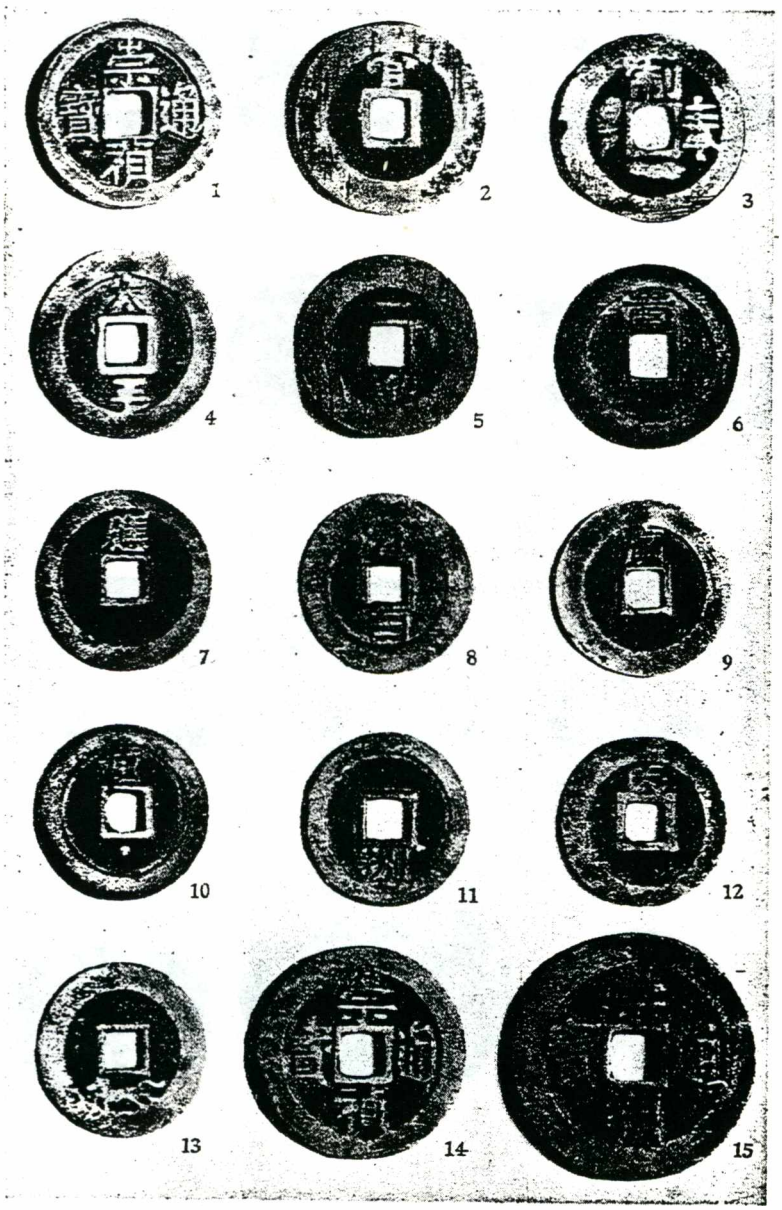


圖版七十四　熹宗朝的天啓錢

1.天啓通寶。 2—6.天啓通寶的背文:戶、工、浙、新一錢 一分、云。 7.天啓通寶當十大錢。 8.當十錢背府。 9.當十錢背鎮十。

PLATE LXXIV. THE TIANQI COINS OF EMPEROR XIZONG

1. Tianqi Circulating Treasure. 2-6. Tianqi Circulating Treasure reverse inscriptions: *hu*, *gong*, *Zhe*, *Xin* 1-qian 1-fen, *Yun*. 7. Tianqi Circulating Treasure 10-cash large coin. 8. Reverse *fu* of a 10-cash coin. 9. Reverse *Zhen* 10 on a 10-cash coin.



圖版七十五　思宗朝的崇禎通寶

1.崇禎通寶。 2—12.崇禎通寶的背文:官、奉制、太平、一分(錢)、貴、應、戶白、廣、重、習、丙。 13.跑馬崇禎之背。 14.崇禎通寶折二錢。 15.崇禎通寶折五錢。

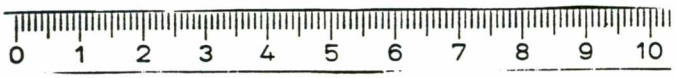
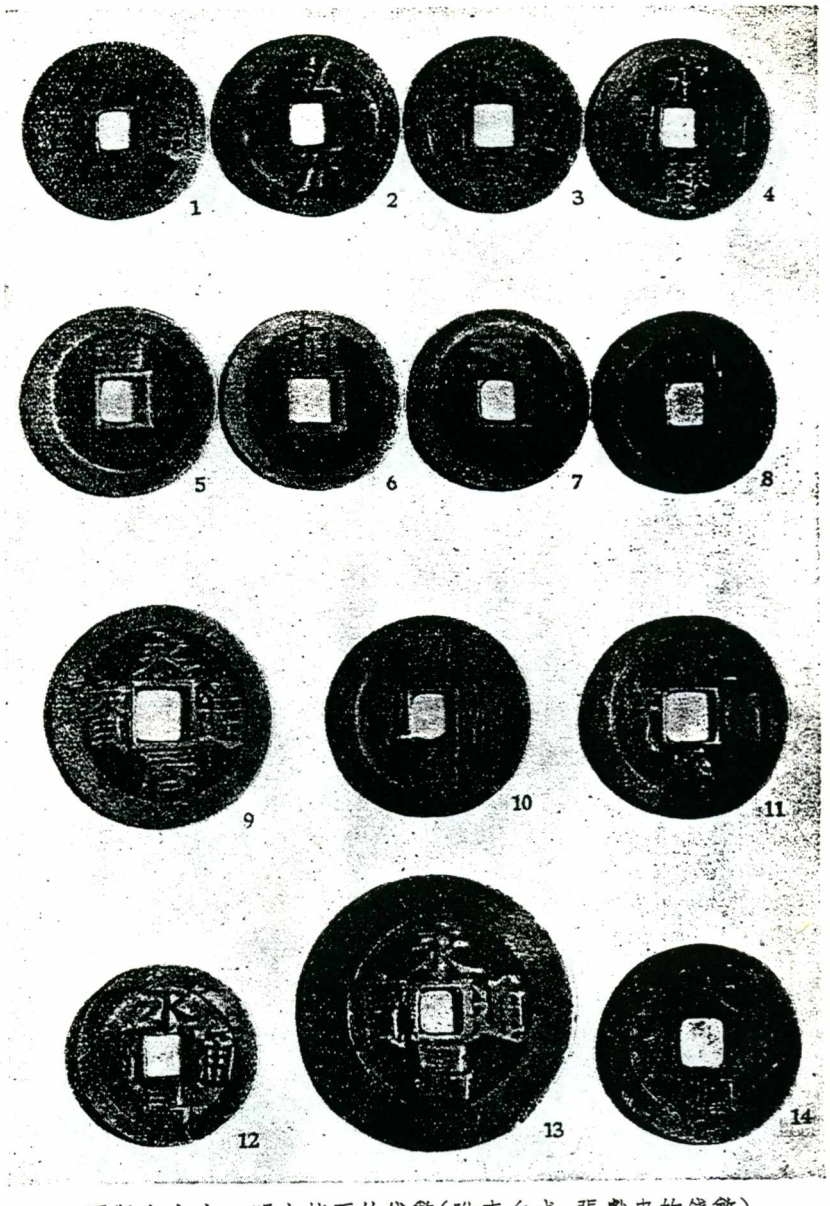


PLATE LXXV. THE CHONGZHEN CIRCULATING TREASURE OF EMPEROR SIZONG'S REIGN

1. Chongzhen Circulating Treasure. 2-12. Chongzhen Circulating Treasure reverse inscriptions: *guan*, *fengzhi*, *taiping*, 1- *qian*, *gui*, *ying*, *hujiu*, *guang*, *chong*, *ba* and *bing*. [Cf. pp. 643-644 for transcription of the characters.] 13. Running horse Chongzhen reverse. 14. Chongzhen Circulating Treasure 2-cash coin. 15. Chongzhen Circulating Treasure 5-cash coin.



圖版七十六　明末諸王的錢幣(附李自成、張獻忠的錢幣)

1.魯王的大明通寶。 2.福王的弘光通寶。 3.唐王的隆武通寶。 4.永明王的永曆通寶。 5—8.永曆通寶的背文:輔、明、定、國。 9.永曆通寶折二錢(?)。 10.篆書永曆通寶。 11.行書永曆通寶。 12.李自成的永昌通寶。 13.永昌通寶大錢。 14.張獻忠的大順通寶。

PLATE LXXVI. COINS OF THE LATE MING PRINCES
(AND THE COINS OF LI ZICHENG AND ZHANG XIANZHONG)

1. The Prince of Lu's Great Ming Circulating Treasure. 2. The Prince of Fu's Hongguang Circulating Treasure. 3. The Prince of Tang's Longwu Circulating Treasure. 4. The Prince of Yongming's Yongli Circulating Treasure. 5-8. Yongli Circulating Treasure reverse inscriptions: *fu*, *ming*, *ding*, *guo*. [Cf. p. 645 for transcription of these characters.] 9. Yongli Circulating Treasure 2-cash coin (?). 10. Seal script Yongli Circulating Treasure. 11. Cursive script Yongli Circulating Treasure. 12. Li Zicheng's Yongchang Circulating Treasure. 13. Yongchang Circulating Treasure large coin. 14. Zhang Xianzhong's Dashun Circulating Treasure.

3. Silver

The Ming Dynasty adopted a closed country policy. Emperor Taizu would not permit so much as an inch of timber to go to sea. Zheng He's several trips to the Western Ocean merely increased Chinese contacts with the nations of Southeast Asia. He did not make direct contact with Europe, and Southeast Asia was rather backward economically then.

As for money, the Ming wanted to restore a dual cash and paper money system, and so banned use of gold and silver. It even went so far as to prohibit the mining of silver.

Nevertheless, the advance of history could not be blocked. The silver ounce system inherited from Jin and Yuan could not be overturned. Both because of China's own needs, and also under the influence of Central Asian coinages, use of silver had been burgeoning during the centuries since the Five Dynasties period, and by Ming times had sent down deep and strong roots. At the beginning of the hongwu period [1368], Wang Yi recommended minting gold and silver coins to be circulated alongside copper cash.

Though the early Ming government did not want to use gold and silver, there were gold and silver exchange prices for Great Ming Treasure Certificates, and as the Treasure Certificates fell in price, resort to silver could not be avoided. After the prohibition of copper coins in hongwu 27 [1394], a number of places used nothing but silver for money.[1] In hongwu 30, 3rd month, the authorities issued a flat prohibition on use of gold and silver, but there is some question as to its efficacy.[2]

The prohibition against gold, silver and copper coins was to a degree relaxed in yongle 9 [1411].

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In hongxi 1 [1425] there was another prohibition against use of gold, silver and cloth as media of exchange, but it seems not to have had any effect, since in xuande 1 [1426], 7th month, the Board of Revenue said that the people were using only gold and silver. The government put up placards increasing the severity of the prohibition, but in xuande 3 [1428], 11th month, there were still officials in Jiangxi advocating the banning of silver,[3] so obviously the people were still using silver. Indeed, the commercial excise and the fish impost were formally levied in silver.[4]

In zhengtong 1 [1436], the Cloth Administration Offices in the southern provinces of Zhejiang, Jiangxi, Huguang, Guangdong and Guangxi were ordered to commute grain payments to silver from localities under their jurisdiction which could not be reached by boat. Simultaneously, the prohibition in use of silver among the people was relaxed, so that both public and private parties could use silver.[5] This caused silver to take over the functions of a measure of value, instrument for circulation and means of making payments.

In jingtai 3 [1452], 7th month, the salaries of capital officials were ordered commuted to silver. Because payments in paper money into the Treasury had been inadequate, in jingtai 7, 2nd month, the Board of Revenue paid in silver the annual salaries of the Beijing civil and military officials which had been calculated in paper money.[6] Though these were temporary measures, they pushed use of silver a step forward.

In chenghua 18 [1486], 7th month, a man in Taizhou, Zhili sent up a communication saying that he

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[1] *Ming Emperor Shizu's Hongwu Veritable Record*, 251, hongwu 30, 3rd month, jiazi: "The people were prohibited from using gold and silver for exchange. At this time the merchants of the Hangzhou region used gold and silver to set the prices for all goods, whether cheap or expensive. Because of this the paper money system was obstructed, and both public and private interests suffered thereby. Hence this order."

[2] *Emperor Chengzu's Yongle Veritable Record*, 27, yongle 2, 3rd month, gengwu: "The Secretary of the Board of Punishments, Zheng Ce, memorialized, 'When the people of Jiangxia-xian in Huguang have a father die, they use silver to handle the preparations for burial. By law, use of silver in exchange is to be punished by transportation to the frontiers.' The Ruler said . . . 'Now, when the people mourn a father, they are forced by the emergency to break the law in managing the burial. This must end in their merely playing with the law if they do not develop a heart which lusts for profit. The ancients grieved for those who were in mourning. They ought to be commiserated with.'"

[3] *Xuande Veritable Record*, 48, xuande 3, 11th month, yichou.

[4] *Xuande Veritable Record*, 80, xuande 6, 6th month, jiachen: "The prefect of Wenzhou in Zhejiang, He Wenyuan, said . . . recently, though there has been a prohibition on use of silver, the commercial excise and fish impost continue to be levied in silver."

[5] *Ming History*, "Treatise on Food and Money, 5": "When Emperor Yingzong ascended the throne, there was an order that taxes in grain be commuted to silver. Subsequently, the various payments in paper money were reduced, and grain, silver and coin were allowed to be used in place of paper money. The prohibition on use of silver was relaxed. Both at and outside of court all used silver as the measure. For small transactions, coins were used. Certificates were used only to commute official salaries, and were obstructed in their circulation."

[6] For the jingtai 3 matter, cf. *Investigation of Literary Remains Continued*. For the jingtai 7 reference, cf. *Zhengtong Veritable Record*, 263.

had met a stranger who had taught him a technique for alloying lead with mercury to smelt silver. Emperor Xianzong actually sent someone to help him make the experiment.[7] This shows the importance of silver then. The Europeans then were also becoming familiar with techniques for smelting gold.

Qiu Jun had advocated adoption of a silver standard, but with continued circulation of paper money and copper cash in the markets. Silver would be the upper level money, paper would be the middle level money, and cash coins the lower level money. Paper and coins would be permitted to circulate alongside silver. Ten cash coins would exchange for 0.01 ounce of silver, and a string's worth of Certificates would exchange for 1,000 cash. Only exchanges valued at 10 or more ounces would be permitted to be conducted in silver.[8]

From the zhengde period [1506-22] on, official salaries were paid 90 percent in silver and 10 percent in copper coins.

From the jiajing period [1522-67] on, silver was the main component in the Chinese monetary system. The various copper coins all developed links with silver which fixed their prices in silver. Large quantity transactions employed silver; small quantity ones used coin.[9] This would seem to have been a bimetallic silver and cash coin standard.

The "Single Whip" tax system was proposed in wanli 9. This commuted all taxes to payment in silver.

We can tell from all this that use of silver was already flourishing at the very least by the end of the hongwu period. Emperor Yingzong's relaxation of the ban on its use merely shows that the government lacked the power to enforce a prohibition. Later, even the government had no choice but to use silver for making payments.

Why then did silver enjoy so broad and deeply penetrating a circulation during the Ming Dynasty? Was it because

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an increase in production required more money? We cannot show that there was any quantum jump in production at the beginning of Ming.

Silver came into use simply because paper money depreciated and copper cash were decreasing in quantity. The depreciation of paper money led people to demand a stable money.

Under normal conditions, people would have been able to protect themselves by using copper coins, but very few coins were being minted at the beginning of Ming. Though minting took place during the hongwu, yongle and xuantong periods, it was not extensive, and the authorities hoarded these coins in the national treasury so as to promote the use of paper money. They either did not issue them, or only granted them to foreign emissaries.

During the half century after the xuande period [1426-1436], no coins at all were minted, and as a consequence there was a coin shortage among the people. Hence the circulation of silver was originally to make up for a shortage of money.

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[7] *Emperor Xianzong's Chenghua Veritable Record*, 229, chenghua 18, 7th month, jiashen: "A commoner of Taizhou, Zhili, named Li Wenchang said in a letter that he had met a stranger from whom he had received the technique for alloying lead with mercury to obtain silver. The Ruler ordered the intermediate officials to supervise a test of it. This all happened during the 5th intercalated month. In the end it did not succeed."

[8] *The Great Learning Expounded, Addendum*, "Copper and Mulberry Paper Money."

[9] *Journey to the West*, chapter 84: "Widow Zhao said, 'What I have here is of three sorts, upper, middle and lower. The upper sort is a feast with five fruits and five main dishes, with a lion immortal table of a *dou* of sugar. Two people to the table. You can ask a little missy to come accompany your leisure. Each place runs to 5 *qian* of silver, including the house's money.' The traveler laughed and said, 'Excellent! But how could I invite a little missy for 5 *qian*! . . . 'The middle kind combines plate and table, and is only fruit and warm stillbeer. You have to rely on your own devices. There's no little missy provided. Each place is only 2 *qian* of silver.' The traveller said, 'Fine, but what about the lower sort?' The woman said, 'I do not dare to talk about it in front of an honored guest.' The traveller said, 'Speak up. There's no obstacle. We're well-chosen fellows who can make a choice.' The woman said, 'The lower sort provides no one to serve. Whatever food happens to be in the pot, he serves himself. When he's eaten his fill, he takes up some straw to make a place, and sleeps wherever it is convenient. When dawn breaks, he gives a few cash for food money. There is simply no comparison.'"

The situation is a bit different in the *Water Margin Chronicle*. As far as the money being circulated goes, both silver and coins are used, but paper money is not mentioned. Coins are used for high priced purchases, as when a house is privately spoken for at 10,000 strings, and a reward of 3,000 strings is made. Everyday items are, however, reckoned in ounces of silver. Evidently when *Water Margin Chronicle* was rewritten, silver was already in general circulation, and cash strings were a practice of the past. It mentions silver shops (chapter 26) and exchange shops (chapter 29), but does not mention money shops. This cannot, however,

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prove that *Water Margin Chronicle* was a product of the Yuan Dynasty. It merely proves that it was not completed by the hand of a single person, and that it contains material from before the middle years of Ming.

Eventually, minting of coins was resumed, but because private coining was rampant, and because the coins came in different denominations, so that they were no longer suitable as a measure of value, use of silver was further encouraged.

The ingot was the main form taken by silver. The largest silver ingots ranged up to 500 ounces in weight.[10] Probably they were of the Zhen Treasury type of silver. Ordinary Great Yuan Treasure were 50 ounces per ingot, and below this were various sizes of small ingots.[11]

Most silver ingots bore inscriptions. A large ingot would carry the name of the place where it was cast, its weight and the full name of the silversmith, but small ingots sometimes did not even clearly bear an inscription giving their weights.[12] Sometimes the year-period name also appeared.

Therefore we can say that the silver ingot was China's version of a silver coin, since ingots met all of the standard requirements for a manufactured money.

Ming Dynasty silver ingots mainly adopted the shape of the Original Treasure. Not only were silver bars rare, so too were steelyard weight shaped silver ingots. The Original Treasure was a backward kind of shape. The course of evolution should have been for the complex to give way to the simple, and for the awkward to change into the convenient. The evolution of the shapes of coins had fit this rule, but the evolution of silver ingots violated it, and even defied it.

This is because although the Original Treasure shape existed prior to Ming, the silver cake and silver bar shapes also existed. Beginning with the Ming Dynasty, the Original Treasure became the main shape.

We can, however, ponder the convenience question from another angle, that of convenience of carriage. In the past, when the Chinese carried coins, they did not put them in pockets in their clothes, but rather wrapped them around their waists. The locution "a hundred thousand strings wrapped round his waist" goes back to antiquity.[13] The Original Treasure's shape is convenient for wearing at the waist, with one on the left and one on the right side of the waist.

There was also a change in the inscription on the silver ingots. Prior to Ming all inscriptions on silver ingots were incised, and most were cut into it after the ingot had been cast. This method was still being employed at the beginning of Ming, but later on raised inscriptions were also employed, and these gradually became the normal form. Most raised inscriptions were either stamped onto the ingots or cast integrally with them. None

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were cut into an ingot after the fact. This change did accord with the rules of evolution. Incised inscriptions normally wasted time and were troublesome, but before the middle years of Ming, silver ingots were still not circulated on a wide scale, or at least the government did not employ them as a general means of payment, and so the original marking method was still not felt to be inconvenient.

In fact, at that stage the number of characters on ingots was actually quite large. There are some Yuan Dynasty silver ingots bearing inscriptions of over fifty characters. There are also Ming Dynasty silver ingots with inscriptions of fifty or sixty characters.

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[10]Feng Menglong, *Annals of the Year Jiashen*: "At this time there was still a pile of gold in the Inner Treasury, and a certain amount of silver. The Original Treasure ranged up to 500 ounces in weight. They were engraved with the characters *yongle*. By now they have all come into the possession of the bandits." (Cf. *Mystical Observation Hall Collectanea*) When the Eight Nation Army entered Beijing in 1900, the Japanese Army looted two large silver ingots. On one was the inscription "300 ounce weight 2 ounces." The three characters "weight 2 ounces" are smaller than the others. The other ingot bore the inscription "wanli 45th year, 4th month, Auspicious Manufactured Zhen Treasury Treasure Silver Ingot Weight 500 Ounces." They are presently kept in the Mint of Japan. (Cf. Okudaira Masahiro *Record of East Asian Coins*, 12, pp. 45-47.)

[11]*Ming Collected Statutes*, 35, "Measures, 4": "Jiajing 14 . . . for every 20 ounces one ingot was cast." Also "Jiajing 41 . . . for every 50 ounces there was poured out an ingot which was sent out from the main granary to pay for such expenditures as commuting the salaries of civil and military officials." *The Artful Garden*, no. 3, "The Green Valley Daoist": "I inquired of the tavernkeeper. He replied, 'This Daoist most days comes with a small ingot of silver, only weighing 0.07 ounce, and buys still-beer, meat broth and cakes, the money being just enough for a day's necessities. The next day he does the same thing again."

[12]*Orchid Pavilion Memorials and Communications*, 1, "Communication on Investigation of Ma Congpin's Removal from Office": "The matter involved removal from office for exchanging an ingot of silver illicitly. . . . I again took the silver ingot, and examined the removal of the original maker's inscription. Every large ingot has cast on it the prefecture or district where it was made, the words exactly commuted to 50 ounces of silver, and the family and given name of the silversmith. Small ingots have only the place and silversmith's name, and do not have cast on them the exact quantity of silver involved."

[13]Cf. chapter 3.1.1, note 3, above. Qiao Ji, *Mountain Cliff Sheep*, "Residence on High": "The roc held 90,000. His waist girdled with 100,000, he is accustomed to come riding on the Yangzhou crane's back."

These inscriptions sometimes describe the reason for casting the ingot, as for example the quantity of silver into which an offender's fine in rice was commuted, or the quantity of silver into which a tax in kind was commuted. Almost all of them bear the family and given names of the silversmith.[14] This was to guarantee the fineness and weight of the silver comprising the ingot. The contents of all such inscriptions were, however, linked to the circumstances of the particular time and place, and of course could only have been carved at the time required, and a standard text could not have been stamped on the ingots. Such silver ingots have only historical value, and cannot be considered to have been a type of minted coin.

Sometimes such ingots were used to make ordinary payments, and so would not require so many characters on their inscriptions. They would merely need to clearly record the weight and the full name of the silversmith, and that would be sufficient. This would have led a number of silver ingots to employ the same sort of inscription, so there would be no need to carve them one character at a time, and the method of stamping them out could have been used. This would also have made possible the use of raised inscriptions.

After the middle years of the Ming Dynasty, silver gradually became the main instrument for making payments, and such a transformation in the inscriptions probably took place then. Some small silver ingots bear only a year-period.

Gold and silver were cast into various other shapes in addition to the Original Treasure. The Ming government set up a silver manufacturing office to cast gold and silver coins, beans and leaves for use as gifts.[15] This too is a function of money, that is to serve as an instrument for making payments.

A bean [Cf. Plate lxxvii,5 at end of this subsection] was a round pearl-shaped object which weighed 0.1, or 0.03 to 0.05 ounce. A leaf was a rectangular plate which could come in various weights. The bean and plate silver which was circulated in Japan during the Tokugawa Bakufu could have been influenced by China. These silver beans

[14]In the Spring of 1955, some 120 silver ingots were excavated from a Ming tomb in Hongyaxian, Sichuan. All had the Original Treasure shape. They ranged in weight from several market weight *qian* to 20 and more ounces. All bore inscriptions which were incised, ranging from a dozen to fifty or sixty characters in length. Most of them were cast during the zhengde period. A minority were cast at the beginning of jiajing.

The contents of the inscriptions may be divided into four categories. The first category contains statements like "The offender Zhou Mingqin's fine in rice of fifty piculs, people's paper one *fen* [.001 ounce], total silver 25.125 ounces Silversmith Chen Zhong." The second category contains statements like "The Longjixian transgressor, Jiang Chuyang, to make upright his original crime, in zhengde 8 distributes salt certificates and silver weighing 10.8 ounces exactly Silversmith Liu Chengyi." The third category consists of statements like "Changtaixian tax collection, zhengde 16, distributed for Ever-normal rice, price ten ounces exactly Announcing Official Wu Binggang The aforesaid Cui Tongji Silversmith Guo Ting." The fourth category consists of statements like "Tanzhoufu, Longjixian, originally compiled jiajing 2, Investigation Office Investigation Commissioner personnel awaiting one name successive intercalated months contributed silver thirteen ounces exactly The said clerk Chen Yu Silversmith Chen Zhong." (Liu Zhiyuan, "Inscriptions on Silver Ingots Excavated from a Ming Tomb in Hongyaxian, Sichuan," *Cultural Relics Reference Materials*, 5 (1956), 45.)

[15]Liu Ruoyu, *Record of Deliberations*, 16, "Inner Office Functions": "The Silver Manufacturing Office . . . is solely in charge of making gold and silver bells, needles, peach stalks, gold and silver coins, gold and silver beans and leaves. Beans were round pearls weighing 0.1 ounce or 0.03-0.05 ounce. Leaves were square plates whose weights were as irregular as the weights of beans. These were kept for use as gifts."

Lü Bi, *Small History of the Ming Court*, 8, "Record of Zhengtong: Silver Bean Satire": "Xin Po had a licentious reputation. He had strewn onto the ground things like silver beans and other objects made of gold and silver, and ordered the concubines and eunuchs to scamper about to pick them up as a kind of joke. The editor Yan Shouchen wrote a satire on silver beans to criticize this. Its text runs as follows: 'The secretaries accepted the edict to put out nine weights, to smelt silver into beans, and hurried the good workers. Sphere by sphere, all equally round, they usurp Heaven's ingenuity. The pearls are carried into the Penglai Palace. The Imperial Hand personally takes more than ten of them. The pearl-resembling stones mixed with gold pour under the steps at the foot of the throne. Ten-thousand irregular pearls run into jade pans. The whole sky rains hail tapping on the duck tiles. The middle officials kneel and enter, with much filling of their sleeves. Gold pots half sunk in gauze garments' wrinkled folds. Should they win a sky-colored one there is a laugh of joy. They bow and confer it, returning to sit in pure daylight. I have heard that yesterday in the Six Palaces, kingfisher feather beautiful red sleeves took the Spring wind. Competing to pick up beans made of yellow gold. Goat carts did not reach the melancholy smoke.'" (*Mystical Observation Hall Collectanea*) *August Ming Universal Record*: "Emperor Jing would scatter silver beans and gold coins on the ground, and order the concubines and eunuchs to fight to pick them up as sport." Song Yingxing, *Natural and Man-made Products*: "When the imperial family

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was flourishing, they smelted silver into beans, and when the various Earls were in decay, they would cast iron into coins."

and plates also varied in size and weight, and were used to bring an ingot of silver up to the prescribed weight.

The minting and use of gold and silver coins seem not to have been less than during previous eras.[16] Few gold coins have survived. The book *Common Language Finger Reckoning* repeatedly mentions gold coins, one of which was worth 1.15 ounces of silver.[17] Apparently during or before the wanli period, gold coins were being made, but perhaps Li Madou [Matteo Ricci] had brought some Italian *ducato* to serve as models for these.

As for silver coins [Plate lxxvii,1-4], those surviving include Yongle Circulating Treasure, Wanli Circulating Treasure and Tianqi Circulating Treasure. The construction of the Yongle silver coin is the same as that of the copper version, except that it is a bit smaller, weighing 0.1 treasury ounce. In addition, a Zhengde Circulating Treasure large gold coin has been unearthed in modern times, but on its reverse is a dragon and phoenix decorative pattern which is unlike anything on ordinary coins. The written sources also mention a Jiajing silver coin bearing the four character inscription "made jiajing period."

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What is most worthy of attention among the Ming Dynasty's silver coins are the wanli period mined silver coins. Silver mining increased considerably during the wanli period, and so more silver coins were minted then than gold and silver coins together were turned out during any other dynasty.

The mining of silver then may be said to have been an international phenomenon. During the sixteenth century, the whole world fell into a mania for silver mining. The abovementioned Japanese silver Yongle was also linked to the trend to mine more silver. During the same period, there were also regions within the German Empire where large-scale minting of mined silver was occurring.

There were two sorts of mined silver in China. The more commonly encountered sort is the Wanli Circulating Treasure [Plate lxxvii,3]. On its reverse above and below the hole are the two characters meaning mined silver. The ones I have seen are 0.03, 0.04 and 0.05 treasury ounce in weight. These weights are not absolutely exact, and there may be other denominations.

The characters of the inscriptions are in the so-called incised-raised script, and so they must all have been made at the same time and in the same place.

The other sort is large, and bears on its obverse the four characters meaning "Wanli Mined Silver." On its reverse are the two characters for "4 *qian*." Their inscriptions are very similar to those of the first sort. These were unearthed recently in Guangdong.

There are two other sorts of Wanli silver coins. Their obverses bear the four characters "Wanli Years Manufactured," and their obverses either "5 *qian*" or "2 *qian*" on the two sides of the hole. The inscriptions on these silver coins differ from those on the mined silver coins, so they must not have been minted at the same place.

There are also several types of Tianqi silver coins [Plate lxxvii,4]. Of these there is one which in construction resembles the so-called demon Tianqi copper coin. It weighs 4.75 grams. The label demon Tianqi is one created by Japanese numismatists. The coin is characterized by a small and thick body and an irregular inscription both for the silver and copper versions. The early Ming Dazhong and Hongwu coins both have narrow rims, but from jiajing times

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[16] *Ming History*, 163, "Biography of Li Shimien": "In xuande 5, the *Emperor Chengzu Veritable Record* was completed, and it was sent to await reading by the academicians. The Emperor visited the History Bureau, and scattered gold coins as gifts to the academicians. All stooped over to take them up. Mian alone stood upright. The Emperor then took out additional coins to give him."

Lü Bi, *Small History of the Ming Court*, 8, "Zhengtong Record: Gold Coin Beneficence Regulations": "At first the Emperor held feasts, and at the end of each speech would insist on ordering the middle officials to spread gold coins on the ground, and order the speaker to pick them up as a measure of benevolence."

Ming History, 182, "Biography of Ma Wensheng": "In hongzhi 1, the Ruler said that during Emperor Xianzong's reign in the temples protecting the mountain peaks, seas and rivers, there were magicians who said that stones were set up surrounded with tallies in seal script, within which the Daoist Classics written in gold ink were kept, along with gold and silver coins, precious stones and the five grains to be used as charms. All of this ought to be destroyed. This was done." Zhu Guozhen, *Yongchuang Small Articles*, 1, "Stone Receptacles in Temples," also records this matter. He speaks of "a number of gold and silver coins."

The tomb of Zhu Quan (1378-1448) in Xinjian, Jiangxi contained 13 gold coins which lacked inscriptions. Cf. "Excavation of the Ming Tomb of Zhu Quan in Xinjian, Jiangxi," *Archeology*, 4 (1962).

[17] *Common Language Finger Reckoning Complete Compilation* (Compendium of Collectanea edition), 1, p. 66: "The question is, that a gold coin is worth 1.15 ounces of silver. Now you have 1,000 ounces of silver. How many gold coins might that be?" Also, "The question is, there is a gold coin for which 1.15 ounces of silver might be obtained. Now you have 4,000 gold coins. How much silver might this equal?"

on, the coin rims gradually widened, and Tianqi coins generally all have wide rims. Only the demon Tianqi has a narrow rim. One can tell at a glance, however, that this is no privately minted coin, but rather was a product of the official furnaces. Quite a few of the copper demon Tianqi exist, and there are no small number of variant forms. Actually, they are not very similar to each other. This is also the case for the Wanli coins.

The demon Tianqi most easily remind one of the later Qing Dynasty qianlong period Red Cash minted in Xinjiang. This has led some to ask if these coins were minted some place near the Xinjiang region. The coins of the Xinjiang region include both copper and silver coins. They too are small and thick, which are precisely the characteristics of the demon Tianqi coins.

The only difference is that the copper coins of the western frontier were made out of red copper, while the demon Tianqi was made out of brass. However, if they were in fact made in the western frontier region or near there, they were also made by Chinese, and the copper alloy employed would naturally have been modeled on the standard Chinese copper alloy, just as in later ages the Red Coins minted in the interior for the peoples of Xinjiang were patterned on their own standard copper alloy.

In tianqi 1 [1621], the exchange price of Tianqi copper coins with silver was 600 to the ounce. In tianqi 3, it was 1,000 to the ounce in Sichuan, and it is quite possible that there were places where it was 800 to the ounce. Given this exchange price, one silver Tianqi

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would have been exactly equal to 100 copper cash.

There is another silver coin, a Tianqi Circulating Treasure, which is very small, weighing only a few hundredths of an ounce. Yet another type bears on its obverse the four characters Tianqi Years Manufactured, and on its reverse the two characters 1 *qian*.

The Ming Dynasty cast silver wafers of two sorts, 0.5 ounce and 1 ounce, which were used to make payments in the trade with places like Hami in the western frontier region.[18] This shows that there were commercial relations with the western frontier then.

Since there was no one standard shape for Ming Dynasty silver, it was still more difficult to determine the purity of the metal, which had to be weighed on each occasion when it was paid out.[19] Therefore, merchants in general had to carry steelyard scales with them, and they found this very inconvenient. Still worse, a steelyard scale could not determine the fineness of the metal. These difficulties set the stage for the circulation of European and American silver coins.

During the wanli period [1573-1620], the Fujian-Guangdong region no longer used copper coins, but instead relied entirely on silver,[20] and some of this silver is said to have come in from the southwest.[21] American silver was also already coming into China to a certain extent.

During the Middle Ages, European gold and silver coins were not uniform either. Although gold coins were minted, when in circulation they too had to be weighed before being accepted or given out. Moreover, because production and exchange were not well developed, and the supply of gold and silver was inadequate, gold and silver coins were invariably small.

During the latter half of the fifteenth century, however, Europe's production of silver greatly increased, and some people began to mint large silver coins weighing 1 Saxon ounce, or 31 grams, which was the same value as one of the Gu'erdeng gold coins of that time. The feudal lord of Bohemia minted this silver dollar beginning in 1518 in Joachimsthal.

Bohemia was under the sway of the Holy Roman Empire, and in 1519 the crown of the Holy Roman Empire came to rest on the head of the King of Spain, who adopted this large silver dollar. This was the famous doubloon, which was later produced on a

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[18] *Emperor Wuzong's Zhengde Veritable Record*, 116, zhengde 9, 9th month, xinyou: "The Board of Revenue repeatedly advised . . . that when the various barbarians of Hami in the Western Frontier transport tribute, they bring with them their locally produced goods to trade in hope of a profit. . . . The Board of War repeately advised accepting all that had been memorialized, except that for rewards outside the regulations, it feared each frontier region would make its own rules. The officials in charge were ordered to continue to make silver wafers weighing 5 *qian* or 1 ounce to give to them. Horses had already had prices issued for them and were not to be given."

[19] *Golden Lotus*, chapter 1: "Ximen Qing weighed out 4 ounces of lumps of silver, and had one of his servants buy a pig, a sheep, five or six jugs of gold-flower stillbeer, and incense sticks, chicken and ducks for a wine-feast." *Jade Delicate Pear* (or, *Unusual Connection of a Pair of Beauties*), chapter 7: "Zhang Guiru said, 'In planning a great matter, why begrudge a small expense?' He weighed out 2 ounces for him. . . . Zhang Guiru had no way out. He could only endure the discomfort, and weighed out 3 ounces of silver, which he sealed up in a tube."

[20] Xie Zhaozhi, *Five Mixed Tables*, 12.

[21] He Gaoyuan, *Famous Mountain Hoards*: "Between Min and Guang, silver comes from the southwestern barbarians."

large scale in Spain's Mexican colony, and which spread into Asia.

Euro-American silver and silver coins flowed into China along a number of channels.

The Portuguese were the first Europeans to arrive in China to carry on trade. At that time the Chinese called them the Folangji, or Franks. They arrived in Guangdong, Fujian and Zhejiang during the zhengde period [1506-22], and Chinese merchants, particularly the merchants of Tanzhou in Fujian, each year went to Manchijia to trade with them. Manchijia was under their occupation then. Hence it was possible in the sixteenth century for silver or silver coins to flow into China.

At the beginning of jiajing [1522], Guangdong banned Frankish ships, and so they carried on trade privately at Tanzhou. In jiajing 8, 10th month,
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the Guangdong-Guangxi Inspecting Capital Censor, Lin Fu, memorialized for permission to restore Guangdong's former regulations, and to drive the foreign ships out of Tanzhou.

During the jiajing '20s, the Franks reached Shuangyu in Zhejiang and Tanzhou in Fujian to carry on trade. Though it was not long before Zhu Wan drove them out, their center of operations gradually shifted to Amoy. In jiajing 44 [1565], Haidengxian was established in Fujian's Moon Harbor [Yuegang], and in longqing 1 [1567], the ban on maritime trade was lifted, and the merchants of the Eastern and Western Oceans were given permission to carry on trade.

Therefore, during the last century of Ming, the Portuguese must have carried a certain amount of silver to China, but from wanli 8 [1580] to chongzhen 13 [1640], a period of some sixty years, Portugal was a part of Spain, and so the silver coins they brought were probably Spanish silver dollars.

Spanish money took the *real* as its unit. The *real* weighed 3 grams, or 0.09 Chinese treasury ounces. The 8 *real* large silver coin was first minted at the beginning of the sixteenth century, and called the *peso*.[22] *Peso* meant eight *real* coins.

The design of the *peso* had on one side a crown, a royal lion and a city wall. On the other side were two sceptres. These were the pillars of the strong man Hercules in Occidental myth, and symbolized the cliffs on either side of the Straits of Gibraltar. It was said that Europe and Africa were originally joined at this point, but were pulled apart by Hercules. This is a little like the Chinese myth that the gorge at Longmen was cut open by Yu the Great.

This type of silver coin was manufactured and circulated only in America. The Europeans and Americans called it the doubloon, and the Chinese called it the "column-foreign" [*zhuyang*] or double candle, because the two pillars resembled a pair of candlesticks.

The main route of American silver dollars into China was by way of the overseas Chinese in the Philippines. The Spanish invaded the island of Luzon in 1570 (longqing 4), and they reached Manila the following year. By then there were already a number of overseas Chinese carrying on trade in the Philippines. Because they could not bear Spanish colonial oppression, they rose in rebellion on several occasions, and each time suffered inhumane slaughter.

Nevertheless, the Spanish colonialists could not sever their links with the Chinese, since their income then was almost entirely dependent on the China trade, and this trade was managed by the overseas Chinese. The overseas Chinese transported Chinese products to the Philippines, and these were then transported annually by the Spanish to Spain's American colonies for sale. These goods were sold for silver dollars, which then flowed into China by way of the overseas Chinese. This was probably occurring during the wanli era.[23]

In addition to the Spanish silver dollars, Holland's silver dollars could also have entered China during late Ming and early Qing. Holland was originally a Spanish dependency. During the sixteenth century, several of the Dutch provinces rose in rebellion against Spanish rule.
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[22]Zhang [?], *Eastern and Western Oceans Investigation*, 5, "Luzon: Products: Silver Coins": "The large ones are 0.75 ounces. The barbarians call them *huangbizhi*. Next comes a 0.36 ounce coin that the barbarians call a *tuceng*. Third is a 0.18 ounce coin called the *luoliaoli*. The smallest is 0.09 ounce, and is called the *huangliaoli*. All are brought by the Folangji." The transliteration *huangbizhi* here undoubtedly is for *un peso*, or one *peso*, but I suspect the weight given is an error for 0.72 ounce. *Huangliaoli* is a transliteration for *un real*.

[23]*Ibid.*, 7, "Investigation of Food Taxes": "As for the surcharge on the food tax, since Luzon in the Eastern Ocean had no other produce, the barbarians all used silver coins to exchange for goods. Therefore, the returning ships carried nothing except silver coins. Even if they had goods, these did not amount to much. Thus, when merchants returned to Ao [Amoy], in addition to levying the land and sea provision taxes, ships belonging to Luzon had exacted from them 150 ounces of silver. This was called the surcharge or surtax. Later on, the merchants were having a difficult time, and so in wanli 18 the amount was reduced to 120 ounces." Gu Yanwu, *Letters on the Profits and Ills of the Regions of the Empire*, 93, "Fujian, 3: Ocean Excises," discusses the use of silver coins in Tanzhou.

Later they too minted a large silver coin weighing more than 0.8 treasury ounces. It bore a man on a horse holding a sword, and so in China it was called the "horse coin" or "horse sword," but that happened during the yongli period after Ming proper had ended [cf. p. 645].

The Dutch invaded Taiwan, and in recent years Dutch coins have been unearthed on Taiwan.[24] Of course they could also have brought in other countries' silver coins, and it is possible that these were imported into China by way of Japan,[25] since the Dutch had especially close relations with Japan. A great deal of silver was imported from Japan during late Ming.[26]

Some 30 or 40 coarse silver strips were unearthed in Tainan city, Taiwan at the end of the Qing. They bore Spanish silver coin designs, and came in large and small sizes. The large ones weighed 0.7 ounce and the small ones 0.3 ounce. They also bore stamped Chinese characters like *yong* [eternal] 3, and *wang* [king]. Evidently they had circulated on Taiwan.[27] Such irregular silver strips were made from the sixteenth century on in Lima and Potosi in the New World. Their weights were the same as the official silver dollar and half-dollar.

Just how much silver was there in China by the end of the Ming? Jiang Chen seems to have calculated the total as 250 million ounces. I suspect this figure is too low, since when Liu Jin's household property was confiscated in zhengde 5 [1510], it included 12,057,800 ounces of gold and 259,583,800 ounces of silver.[28] The figure for silver could have been an indication of the price of the goods and not the actual amount of silver. A large percentage of the silver of the nation at that time must have been concentrated in Liu Jin's hands, but in any event, the total amount of silver in the country must have far exceeded the amount in his hands.

Moreover, after the zhengde period, foreign silver was also being imported. It may be, however, that only 100 to 200 million ounces was actually in circulation, the greater part of the total having been placed in hoards.

The flourishing state of the circulation of silver after the second quarter of the sixteenth century not only stimulated the economy of China, it also probably had the effect of giving impetus to Chinese culture. During the time when paper money was used, the life of the intelligentsia was firmly under the control of the feudal rulers, and they lived in what

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[24]On January 25, 1961, the Hong Kong newspaper, *Da Gong Bao*, said that four Dutch coins had been discovered in the neighborhood of Gaoxiong on Taiwan.

[25]Yao Shuxiang, *Jianzhi Compendium*: "The Dwarf [Wo] emissary Konishi Tobu came to discuss feudal matters. At this time, the Capital Garrison General Aide, Yang Guiyuan, was hall assistant. Konishi Tobu made a private gift to Yang of something resembling a sword scabbard, which was quite common. On it were merely a number of coins depicting a man and a horse. On its back there was also a strip of silver shaped like a leaf, 2 *fen* thick, 7 *cun* long, and with a ridge on its back and a groove on the opposite side. On either side were several hammer marks giving the whole thing the look of a leaf. It also bore a stamp mark 1 *cun* long, with three incised characters, reading *shizhouyin*, all being Chinese characters, except that the character *zhou* was slanted." (*Yan City Record Grove*, casing 50)

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This records an event of the wanli period. The silver strip on its back was a silver coin minted and circulated then in Japan.

[26]Kobata Jun, *History of the Circulation of Money in Japan* (revised and enlarged edition) collects material which shows that in late Ming Japanese silver flowed into China. I will append several additional instances from it. The Korean *Yi Dynasty Veritable Records* states under Zhongzong 37 (1542) that a Japanese emissary's credentials stated: "Our northern lands possess a mountain. Its name is Metal Mountain. In recent years it has produced genuine silver. For generations it will produce precious things. Therefore in recent years we have presented silver from it to Great Ming, and Great Ming has been much pleased. Now we make a present of it to your noble state." Under Mingzong 8, 7th month (1553), xinwei: "The Japanese state produces much silver. Hence the Superior State's men come to trade for it, and at times they may drift blown by the wind, and act as pirates along our country's sea coast." Zheng Ruoceng, *Compiled Illustrations for Sea Planning*, 12, recommendation by Zhang Shiche: "The Japanese barbarian merchants only use silver to exchange for commodities, unlike the western barbarians, who carry goods to exchange."

[27]*Kahei*, no. 97.

[28]Chen Hongmo, *Things Heard in Succeeding Generations* (*Compendium of Collectanea* edition), 3: "Confiscated from the malefactor Jin was property and wealth amounting to: gold, 240,000 ingots and 57,800 ounces; Original Treasures, 1 million ingots, silver 8 million and 1,583,600 ounces; precious stones, 2 *dou*; gold cups, 2,000; gold hooks, 3,000; jade belts, 4,162; lion barbarian belts, 2; gold and silver soup bowls, 500; embroidered robes, 407; ivory tablets, 2; pierced palace tablets, 500; gold tablets, 3; high officials' ceremonial dress, 4; eight-clawed gold dragon helmets and mail, 3,000; jade lute, 1; jade seal, 1. The above came to a total in gold of 12,057,800 ounces, and in silver of 259,583,800 ten-thousands." (This last character is, I suspect, an error for "ounces.") The figure for gold here corresponds to the sum of the first two items, and does not include the gold cups, hooks, etc. The figures for silver have not, however, been expressed clearly. If we use the gold-silver exchange price of that time of 1:7, then the grand total was equal to 344 million ounces of silver.

was virtually a barter economy, because official salaries were commuted to goods. Commodities were preferable to depreciated paper money, but this placed very large constraints on peoples' thoughts and actions.

After the 1520s, people threw off the shackles of paper money to use copper coins and silver. Silver was something the feudal rulers could not control.

The jiajing period novelist, Wu Cheng'en, too proud to abase himself, could go off with a flick of his sleeve. It was specifically the monetary economy which provided the freedom to put out that novel during the jiajing era. This novel was not aimed at a minority of aristocrats, but

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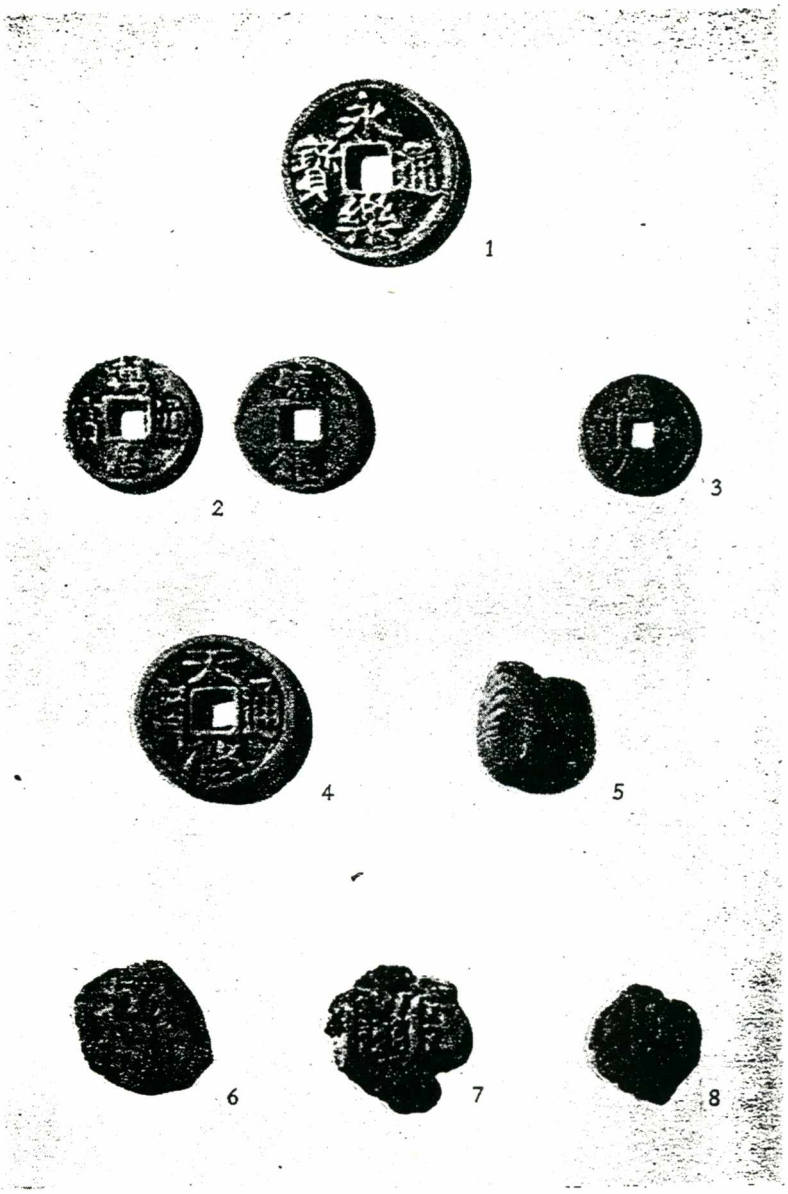
rather took as its audience the broad mass of townsmen. So imaginative and energetic a work as *Journey to the West* could not have been produced under the conditions of a natural economy. Rather it was the product of an urban monetary economy.

Before the sixteenth century, painters could only stick to the old rules. When they made a picture they had to pay attention to their reputations, and individual creativity could not be brought fully into play. After the beginning of the sixteenth century, academic painting weakened, but painters who did not enter the painting academy could still make a living. The circulation of silver stimulated the development of a commodity economy, and paintings gradually became commodities themselves. In addition, the development of woodblock illustrations was due to the same cause.



圖版七十七　明代的銀錢和銀豆

1.永樂通寶銀錢。 2.萬曆通寶礦銀。 3.小樣萬曆礦銀。 4.天啓通寶銀錢。 5.崇禎銀豆。 6—8.美洲的老雙柱小銀幣。這種小銀幣爲一利亞爾和半利亞爾。大概曾流到中國沿海地區來。

PLATE LXXVII. MING DYNASTY SILVER COINS AND BEANS

1. Yongle Circulating Treasure silver coin. 2. Wanli Circulating Treasure mined silver. 3. Small Wanli mined silver. 4. Tianqi Circulating Treasure silver coin. 5. Chongzhen silver bean. 6-8. American old doubloon small silver coin. This type of small silver coin comes in 1 *real* and half *real* sizes. It probably came into China by way of the coastal regions.

7.2 Money's Purchasing Power

1. The Great Ming Treasure Certificate Inflation

Overall, the Ming Dynasty's monetary economy suffered from a degree of constriction, much as had the Tang Dynasty's. It was not as expansionary as had been Song, Jin and Yuan. Though monetary depreciation occurred at its beginning and end, especially with the paper money inflation of the early years, which reached a high rate, most people used silver and coins, and prices calculated in silver and coins were very low.

In form, the Ming monetary system was a perfectly fine system, possessing a high degree of unity. Its denominations were convenient to use. For transactions from 100 cash up, paper money was used. For those below 100 cash they employed copper cash. Though the government

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saved a bit on labor with the large coins, it did not reduce the amount of metal in them, and this must have inhibited private coining.

This system was simpler than Wang Mang's, and more rational than those of the other dynasties. If it had not been for the excessive issue of paper currency, the people could surely have enjoyed relatively stable prices.

At the beginning of the hongwu period [1368-1399], the new dynasty pressed west to Dunhuang and attacked north to the Gobi Desert. Military requirements were heavy. There were then some 320 coin furnaces in the country, and their annual production was around 190 million coins, not a large amount. The population then was around 60 million, so this production figure was only around 3 cash per capita.

Naturally, this was insufficient to meet requirements, and so there was no choice but to issue paper money. The histories do not record the amount of paper money issued, but we can tell from the rise of the problem of redeeming certificates, that as early as hongwu 13, the phenomenon of currency inflation was already present. Since in hongwu 13 (1380), people frequently brought in "serviceable Certificates" to exchange for new ones, this shows that the number of notes was excessive, i.e. in excess of the quantity actually demanded. By that time there had also already appeared a difference between the purchasing power of the new and old notes.

Nevertheless, internal military activity had still not halted. In the north, the Mongols were thinking of making a comeback, and they remained in control of their territory in Yunnan. Xu Da and Fu Youde were attacking to the north and campaigning in the south over the course of several decades, and so it was not possible to reduce the size of the paper money issue.

Manufacture of counterfeit certificates became a major activity among the people.[1] It was perhaps for just this reason that the reward for informers was increased to 250 ounces of silver. In addition, there were also large scale abuses among officials and clerks.[2] Unavoidably, this caused the actual quantity of notes in circulation to increase, and their purchasing power to fall.

By hongwu 23 [1390], 1 string of Treasure Certificates was only worth 250 cash in Liangzhe.[3] For this reason an order was issued changing the mone-

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[1] *Essay on Prince Zhaodai* (*Mystical Observation Hall Collectanea*, with a preface dated hongwu 18, 10th month), "Counterfeit Certificates," Number 48: "Treasure Certificates circulated throughout the Empire, and made exchange convenient for the people. In Liangzhe, Jiangdong and Jiangxi, counterfeiters were terribly numerous among the people. Yang Mantou of Jurongxian rose in rebellion, and quite a few people from the district joined in his plot. . . . He was captured and taken to the officials. The road runs 90 *li* from the capital to Jurong, and the decapitated bodies were laid out all along the way, so extreme were the punishments. His Majesty thought there could not possibly be any further offenses, but in less than a year, the people of this district's villages were counterfeiting Treasure Certificates. Even when those in neighboring hamlets knew that their neighbors were engaged in this practice, it continued to go on, even after these deaths."

[2] *Imperial System Large Bestowal Continued Compilation* (*Mystical Observation Hall Collectanea*), "Certificate Treasury Abuses," Number 32: "The twenty Treasure Certificate Intendant's Office officials, inlcuding Feng Lang and Sun An, the officials communicating with the Board of Revenue, Li Shu and Guo Heng, the Revenue Measures Reviewing Policy Adviser Qu Shen and 580 certificate artisans have been taking certificates in the office. The daily wage of a certificate artisan can reach 0.1 ounce. An ordinary artisan only makes 0.07 ounce. Your Majesty understands that they have some energy remaining which enables them to obtain the 0.03 ounce difference without exhausting their ambitions. Later, the three offices formed a cabal, and the artisans exhausted their efforts on its behalf. Manufacture of Certificates began in hongwu 18, 2nd month, 25th day, and halted when the weather grew cold during the 12th month. By exhausting their energies, they had made 6,946,599 ingots worth of Certificates. They had hidden 1,437,540 ingots worth of Certificates in the Broad Origins Treasury next to the officially authorized quantity of Certificates. There were piles of Certificates in various places which had been paid in as commercial taxes. There had been officially authorized some 5,590,059 ingots worth of Certificates, and these had been mixed in with the piles of notes paid in as commercial taxes, to substitute for the commercial tax levies which had come in from the outside."

[3] *Ming Veritable Records*, 205.

tary system. In hongwu 24 (1391), the purchasing power of the old Certificates had fallen to half that of the new ones.[4]

People then were blaming the merchants for making excessive use of the procedures for exchanging old certificates, and there may have been some justification for such reproaches. Zhu Yuanzhang said that since all notes were 1-string, why should anyone distinguish between new and old ones? What he said was true enough, but the real problem was that too many had been issued. If new and old Certificates had not been treated differently, then the only alternative would have been for the whole stock of notes to have fallen in value. When we add in the abuses by officials, then no wonder people "crumpled and damaged them so as to exchange them for new ones."

One may say that there was no year up through hongwu 31 [1398] when soldiers were not being employed. The currency inflation was manifested not only through the difference in value between new and old Certificates, but still more clearly in the price of the notes in terms of copper cash.

In hongwu 27 [1394], in the Liangzhe, Jiangxi, Min and Guang region, a 1-string Treasure Certificate was only worth 160 copper cash.[5] That is to say, if we assume no changes in the purchasing power of copper cash, then prices calculated in Treasure Certificates had increased more than sixfold. If the copper cash here were ones dating to after the reduction in weight of the coinage, then the degree of the price increase was even more than this. This is why they were constrained

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to prohibit the use of coins.[6]

The people then turned to gold and silver, and so in hongwu 30, 3rd month, gold and silver were prohibited as well.[7]

Actually, these measures were like the policy of an ostrich. They were not of the least help in raising or stablizing the value of the Certificates, since the problem was the fall in value of the Certificates, and not a rise in price of copper cash, gold and silver. Even with the ban on use of copper cash, gold, and silver, prices still rose.

In hongwu 9 [1376], a 1-string Certificate or an ounce of silver were the equivalent of 1 picul of rice.[8] By hongwu 30 [1397], an ounce of silver could be commuted into 4 piculs of rice when paying the grain tax, but if notes were used, then 2 strings and 500 cash worth were required to commute 1 picul of rice.[9] This represented a ten-fold rise in the value of silver in terms of notes.

Of course there were some people then who understood the true cause for the rise in prices. For example, in yongle 2 (1404), the Capital Censor, Chen Ying, said that it was because "the court has issued too many Certificates, and has no method for withdrawing them that goods are heavily demanded and Certificates are lightly demanded."[10] He also proposed a Capitation Edible Salt Rule to call in and reduce the size of the currency supply.

This was to be a kind of salt exise levied on every adult in the country, each of whom would be obliged to consume 1 catty of salt per month and pay in a 1-string Certificate for that purpose. Minors would pay half that amount. That way 200-300 million strings of Treasure Certificates could be redeemed. This was a rather large figure, and the burden would have been distributed unequally among the people, but if enough certificates could be redeemed and no more issued, then the purchasing

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[4] *Investigation of Literary Remains Continued*, "Investigation of Coins," hongwu 24: "8th month. The Board of Revenue was charged with publicizing Certificate regulations. At this time there were worn notes among the people. When merchants used them in trade, they mostly raised prices so as to discount them. Twice the number of old ones than new Certificates were needed." *Ming Veritable Records*, 211.

[5] *Ming Veritable Record*, 234, hongwu 27, 8th month, bingwu: "There was an edict prohibiting use of copper cash. At this time, the people of Liangzhe were demanding coins heavily, but Certificates lightly, mostly circulating the latter at a discount which fell to as little as 160 cash to discount a 1-string Certificate. The same rate held in Fujian, Liangguang and Jiangxi. This caused prices to jump, the Certificates to become still worse, and not circulate."

[6] *Book of Ming*, 3, "Annals of Taizu Emperor Gao, 3," hongwu 27, 8th month: "The Certificates were obstructed and spoiled. Use of coins was prohibited."

[7] *Ming Veritable Records*, 251, hongwu "30, 3rd month, jiazi. The people were prohibited from using gold and silver in exchange. At this time in the commanderies of the Hangzhou region, merchants set all prices, whether of expensive or cheap goods, in gold and silver. Because of this the Certificates were obstructed, and public and private interests were hurt. Hence this order was issued."

[8] *Ming Veritable Records*, 105, hongwu 9, 3rd month, jichou: "The people were ordered to use silver, Certificates, coins and heavy silk to pay this year's taxes. The Board of Revenue memorialized that 1 ounce of silver, 1,000 cash, a 1-string Certificate would be discounted for 1 picul of rice. Wheat was worth 20 percent less. A bolt of cotton, ramie or linen was commuted to 6 *dou* of rice or 7 *dou* of wheat. A bolt of hemp was commuted to 4 *dou* of rice or 5 *dou* of wheat."

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[9] *Ming Veritable Records*, 225.

[10] *Ming History*, 81, "Treatise on Food and Money, 5."

power of the paper money could have been raised.

The reign of the Yongle Emperor [1403-25] was, however, the most inflationary of the Ming Dynasty. There was inflation in culture, as well as in military affairs, and in construction. For example, the building of Beijing required the moving of 10,000 households from Shanxi, and mobilizing a million laborers. Attacks against the Tatar Khan required 500,000 soldiers. In addition to this, Zheng He paid a number of visits to the South Seas.

These were all expensive undertakings. As a consequence, the Capitation Edible Salt Rule merely became a kind of fiscal measure, and we cannot say it was a monetary policy. The quantity of money continued to increase without interruption, and its value continued to fall.

Ming Dynasty official salaries were calculated in terms of rice and paid in Treasure Certificates. During the hongwu period, 1 string was discounted to 1 picul. By yongle 1 [1403], this ratio had changed to 10 strings per picul. By hongxi 1 (1425), this had increased to 25 strings per picul.[11]

Hence with the hectic military activity of the yongle period, the cost of rice had increased to 25 times what it had been at the beginning of hongwu. In other words, over the course of fifty years, the cost of rice had increased 25-fold.

This was just the overly high price the government calculated for paper money when distributing Treasure Certificates. When it redeemed Treasure Certificates, it set their price even lower.

For example, in commuting various taxes in kind, a 1-string Certificate still commuted 1 picul of rice during hongwu 9, but by yongle 5, this had increased to 30 strings per picul, a thirty-fold increase in the price of rice over the course of 32 years.

This increase was probably closer to the market price. By yongle 5 [1407], various items of daily use which could be used in substitution for payment of taxes had also had their rate of commutation increased, wheat and beans by thirty-fold,

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large ramie cloth and small cotton cloth by forty-fold.[12]

In hongxi 1 (1425), Emperor Renzong himself said that "I have observed that prices of various goods among the people have increased several dozen fold over their levels during the hongwu period."[13] At that time the official purchase price for a bolt of plain cloth was 50 strings in coin, and 6 strings for a catty of cotton bolls.[14] The market price may have been still higher.

Peng Zhu was already advocating reform of the monetary system, saying that the Certificates were disturbing the market, and were of no help in meeting the state's requirements.[15]

During Emperor Xuanzong's reign [1426-36], the policy was to increase taxes. The number and variety of excise taxes were increased so as to draw in and thereby constrict the size of the money supply, as well as to increase demand for Treasure Certificates among the people.

In xuande 1 (1426), locally imposed fines were to be commuted to Treasure Certificates at a rate five times the market price.[16] In xuande 3, they also

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[11] *Ming History*, 82, "Treatise on Food and Money, 6."

[12] According to *Ming Collected Statutes* and *Investigation of Literary Remains Continued*, in yongle 5 the commutation price of various goods was as follows: gold, 400 strings per ounce; silver, 80 strings per ounce; rice, 30 strings per picul; wheat and beans, 25 strings per picul; barley, 15 strings per picul; green grains, buckwheat, 10 strings per picul; salt, 100 strings per large voucher; silk floss, 40 strings per catty; cotton, 25 strings per catty; large heavy silk, 50 strings per bolt; small heavy silk, 30 strings per bolt; small ramie, 20 strings per bolt; large ramie, 25 strings per bolt; large cotton cloth, 30 strings per bolt; small cotton cloth, 25 strings per bolt. (Cf. also chapter 6.2.4, note 22, above, "Calculation of Value of Stolen Goods During the Hongwu Period.")

[13] *Hongxi Veritable Record*, 9, latter part.

[14] *Xuande Veritable Record*, 2.

[15] *Ming History*, 161, "Biography of Peng Zhu."

[16] *Xuande Veritable Record*, 22, xuande 1, 10th month, yihai: "The Board of Revenue said: Recently, the Certificates have been obstructed, and the court has frequently issued severe prohibitions. Up to the present, they have not been seen to be in circulation. This is because many have been issued, and few taken in. We request that henceforth all officials, soldiers and civilians pay in Certificates for remission of capital offenses and theft of horses and mules at the following rates: Horses, 3,000 strings per head; mules, 8,000 strings; donkeys, 2,000 strings; cattle, 1,000 strings; . . . a goose, 80 strings; 30 strings per chicken or duck. The pardon extends to the end of hongxi 1 for fish and fish bladders, at 25 strings; fish oil at 10 strings; tea, 5 strings; 10 strings per 100 feathers; 300 strings per ox hide; 150 strings per sheep or lesser animal's hide; 25 strings per bundle of firewood. For stealing various objects of gold and silver: 8,000 strings per ounce of gold; 2,000 strings per ounce of silver; 200 strings per catty of copper or tin; 50 strings for iron; 100 strings for lead; 2,500 strings per bolt of ramie, silk floss or gauze; 2,000 strings for damask; 1,000 strings for thin silk; 500 strings for official heavy silk; 250 strings for small heavy silk; 200 strings for official cotton cloth; 150 strings for small cotton cloth; 100 strings for small ramie cloth; 200 strings for Fujian plain cloth or washed white Summer plain cloth; 1,000 strings for Korean plain cloth. For articles not specified, each is to be discounted into certificates at a rate five times its current price.

halted manufacture of new Certificates, and decreed that damaged and worn ones were to be destroyed by burning. In xuande 4, even vegetable gardens, fruit orchards, house rentals, shops for mounting paintings, cart hall shops, oil shops, millers, timber merchants, brick and tile works, ox carts and small carts all had to pay their taxes in Certificates.

This policy simultaneously aimed at stabilizing the value of money and serving as a source of revenue, since military campaigns continued during the reign of Emperor Xuanzong.

Prices, however, continued to rise. In xuande 4, a picul of rice, a bolt of cotton cloth or a catty of silk each cost 50 strings worth of Certificates.[17] This was a fifty-fold rise from the hongwu 9 base. In xuande 7, a 1-string Treasure Certificate was probably only worth 5 actual cash.[18] In xuande 8 [1433], a bolt of heavy silk was commuted to 400 strings worth of Certificates, and plain cloth to 200 strings.[19] This was an increase of more than 330 fold over the hongwu 9 [1376] level.[20] In this case, however, the aim was to sop up Certificates, and does not necessarily reflect an actual price.

The people were no longer using certificates, only gold and silver. An ounce of silver was then worth 100 strings in Certificates.[21] This was a hundred times more than in the hongwu 9 base period.

After Emperor Yingzong ascended the throne (1436), rice and wheat were ordered commuted to silver in collecting the land tax, and the ban on use of silver was rescinded. Now that silver had been legalized, the number of places using it increased. The government still recognized the Treasure Certificates' power to circulate, but their purchasing power declined step by step.

There were internal and external wars during the zhengtong period [1436-50], and in zhengtong 9 a picul of rice was commuted to 100 strings worth of Certificates.[22] This was double the xuande 4 price, and a hundred times the early hongwu level. In zhengtong 13, the price of Treasure Certificates in copper cash, for both new and old certificates, ranged from 1 or 2 to 10 cash per string of Certificates.[23]

In the 7th month of Emperor Jing's jingtai 3 (1452), salaries of capital officials were ordered paid in silver in accord with contemporary prices, and 500 strings of Certificates yielded 1 ounce of silver.[24] This was merely public acknowledgement that the silver price of Treasure Certificates had fallen to one-five-hundredth of its former level.

Thereafter, the price of Certificates plunged straight down. In Emperor Xianzong's chenghua 1 (1465) a 1-string Treasure Certificate was commuted to 4 cash in coin, and in chenghua 6 to 2 cash.

In chenghua 23, Qiu Jun proposed his reform of the monetary system.[25] A distinction was to be

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Inner and outer commercial excise tax stations' rates are all to remain at their prior levels."

[17] *Xuande Veritable Record*, 58, xuande 4, 9th month, renzi: "The Board of Revenue advised in a memorial that a bolt of heavy silk was equal to 1 picul 2 *dou* of food; that a bolt of cotton cloth was equal to 1 picul; a bolt of ramie cloth to 7 *dou*; a catty of silk to 1 picul; 50 strings worth of notes to 1 picul; 1 catty of cotton bolls wool to 2 *dou*; 5 strings of Certificates to a bundle of hay. This was accepted." (These prices held for Yingtian, Suzhou and Songzhou prefectures in Zhejiang.)

[18] Kobata Jun, *Studies in the History of Medieval Sino-Japanese Trade*, p. 402, quoting *Jingjue yaochao*.

[19] *Xuande Veritable Record*, 100, xuande 8, 3rd month, gengchen, the Acting Secretrary of the Board of Revenue and Board of Rites of the Travelling Court, Hu Yong, memorialized: "Payments in Certificates grow ever more numerous, and the Certificates are ever more obstructed. I request that the 7th year division of salary grain be reduced to the old quantity and be commuted to 15 strings of Certificates per picul. Of the total, 70 percent should be commuted to official heavy silk, with each bolt equal to 400 strings of Certificates, and 30 percent should be commuted to official cotton cloth, with each bolt commuted to 200 strings of Certificates. Salary rice of civil and military officials should be commuted to Certificates at 25 strings worth per picul. Banner Army monthly provisions should be discounted to 10 strings or 5 strings. I request that henceforth capital officials be reduced to 15 strings per picul. . . . This was accepted."

[20] During the hongwu period, a bolt of heavy silk was commuted to 1 picul 2 *dou* of rice. (Cf. *Ming Collected Statutes*, 29, "Tax Collections," hongwu 18 section.) Therefore, I extrapolate that at the beginning of the period, the price of heavy silk must have been 1 string 200 cash per bolt.

[21] *Ming Collected Statutes* says that this was in xuande 4. *Investigation of Literary Remains Continued* says it was in xuande 7.

[22] *Ming Collected Statutes*, 29, "Tax Collections." At that time commutation of official salaries was still only between 15 and 25 strings per picul. (Cf. *Ming History*,

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82, "Treatise on Food and Money, 6.") That, however, was really a reduction in official salaries, and cannot be used to represent the price of rice."

[23] *Investigation of Literary Remains Continued*, zhengtong 13, 5th month: "At this time, the Certificates had long since stopped circulating. One string of new Certificates was then calculated at only 10 cash, and old Certificates at only 1 or 2 cash. Even if piled up in the market stalls, passersby would pay no attention to them. If 10 strings of Certificates were commuted from 1 picul of salary rice, then a *dou* of rice was 1 cash."

[24] *Investigation of Literary Remains Continued*.

[25] *The Academy Expounded, Addendum*, "Copper and Mul-

drawn between the face values of new and old Treasure Certificates. A new Certificate was to be worth 10 cash per string. An old Certificate with the four corners intact and with no rips in its
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middle, was to have a face value of 5 cash per string. A torn note would be worth 3 cash. A worn note having the 1-string denomination label still readable would be worth 1 cash. Their market price then was less than 1 cash per string.

Seven hundred strings of official salary Certificates were commuted into 1 ounce of silver in Emperor Xiaozong's hongzhi 1 (1488). Seven copper coins were then worth 0.01 ounce of silver.[26] Therefore a 1-string Certificate was equal to 1 copper cash. During hongxi and xuande [1425-36], there were still small 100-cash Certificates in circulation, but by chenghua and hongzhi times [11465-1506], only large 1-string notes remained.[27]

By Emperor Shizong's jiajing 14 (1535), 1,000 strings in Treasure Certificates were only worth 0.4 ounces of silver. Silver had risen 2,500 fold against Treasure Certificates. A thousand copper cash were then equal to 1.43 ounces of silver, and so 1,000 strings in notes were only worth around 280 copper cash. Copper cash had risen 3,570 fold against paper notes.[28] In jiajing 45 [1566], 5,000 strings were only worth 1 ounce of silver.[29]

In wanli 46 (1618), military provisions were still being paid for in Treasure Certificates, with each officer being given several hundred strings in Certificates, worth only several dozen cash. Probably 10 strings were only equal to 1 cash. The soldiers would immediately bring their Treasure Certificates in to redeem them for ready cash, and so they would flow back into the government's coffers.[30]

The price of Certificates varied to some extent according to location, and the government's own buying and selling prices for them also differed. In fact, after the hongzhi period [1488-1506], Treasure Certificates no longer had any significance in the monetary economy, and people made everyday purchases with silver and copper cash. Paper notes had long since gone out of use.[31]

Some suppose that the failure of the early Ming monetary system occured because it ought not to have used both coins and Certificates. By this they mean to say that if Treasure Certificates alone had

berry Paper Money."

[26] *Ming Collected Statutes*, 35, "Tax Rates, 4." *Book of Ming*, 83, "Treatise on Food and Money": "At the beginning of chenghua, 2 strings of Certificates were commuted into 4 cash, and in chenghua 6 the rate fell to 2 cash."

[27] Lu Rong, *Pulse Garden Miscellaneous Record*.

[28] *Ming Collected Statutes*, "Tax Rates, 4." *Book of Ming*, 81, "Treatise on Food and Money": "During jiajing, the Censor Wei Youben sent up a message. . . . Each Certificate is 1 string; a thousand of them are 1 piece. The current price for 1 piece is 0.8 ounce of silver. The official price per piece is 3 ounces of silver. . . . The official price of 0.1 ounce of silver is 70 good coins. The current price of 0.1 ounce of silver is only 30 good coins."

[29] *Investigation of Literary Remains Continued*, longqing 1, 8th month: "It was ordered that the Nanjing impost in Certificates be commuted into silver at different rates for new and old Certificates. Tax offices under Yingtianfu were ordered to discount impost certificates dated prior to jiajing 45 into 2 *hao* of silver per string before accepting them in payment of taxes. For those dated after longqing 1, each string was to be commuted to 6 *hao* of silver."

[30] In the Summer of wanli 46, the Board of Revenue Secretary, Li Ruhua offered a "Petition on Temporary Changes in Relief Measures": "Each army officer is given several hundred strings of Certificates, which are only worth several dozen cash, and which they carry off to exchange. Nine firms of coin and certificate houses take them in by the month. They both take them in and exchange them. As the circulation and redemption of certificates in particular places has long been a vexatious business, there is nothing which can be done about this." (Cheng Kaiyu (ed.), *Chou liao shou hua*, Wanli year gengshen, Tiandu edition, 8.)

[31] The figures for silver and coins in the following table which are in parentheses are all extrapolations. For example, under hongwu 19, according to *Investigation of Literary Remains Continued*, "the annual delivery of tax in coins and Certificates is difficult because of dangers of the road. Those who bring taxes may exchange them for gold and silver . . . 1 ounce of silver for 1 ingot's worth of Certificates." At that time the price of silver was around 1,000 cash per ounce. Hence I have added a figure of 200 cash per string to the "Official Price --Coin" column, but in parentheses.

Also, for example, under hongwu 28, the histories record no Certificate prices, but the *Ming History Draft*, "Treatise on Food and Money," gives a national schedule for land tax payment commutation of plain cloth, heavy silk, cotton bolls and gold and silver. One ingot in Certificates commuted 1 picul of rice; 1 ounce of silver commuted 2 piculs of rice. From this we can calculate that 1 string of Certificates was worth 0.1 ounce of silver, and can then convert this into a figure for copper coins.

Also in the table, under chenghua 1 and 23, the market price of 0.9 cash means that a 1-string Certificate was not even worth 1 cash. The chenghua 13 silver market price of 0.00045 means that 1,000 strings in Certificates was only worth 45 cash.

The silver price of cash assumed is the official price. Prior to chenghua, I use a price of 1,000 cash per ounce of silver in my calculations. Beginning with chenghua 1, I use a price of 80 cash per ounce. Beginning with hongzhi 1, I use a price of 70 cash per ounce.

been used, the system could not have failed. This very much requires discussion.

GREAT MING TREASURE CERTIFICATE PRICE TABLE

Year	Official Price (per string in)		Market Price (per string in)		Source
	Coin (cash)	Silver (oz)	Coin (cash)	Silver (oz)	
hongwu 9					
(1376)	1,000	1.0	1,000	1.0	Ming His.
19 (1386)	(200)	0.20			InvLitRemCont
24 (1391)		0.20			MingVerRec
25 (1392)			160		Ming His
27 (1394)			160		InvLitRemCont
28 (1395)	(100)	(0.10)			MingHisDraft
30 (1397)	(71)	0.07153			MingCollStat
yongle					
5 (1407)	(12)	0.0125			InLitRemCont
11 (1413)	(47)	0.0476			MingCollStat
during				0.012	Book of Ming
xuande 1					
(1426)		0.0025			MingVer Rec
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xuande 4					
(1429)	(10)	0.01			MingCollStat
7 (1432)	(10)	0.01			MingCollStat; MingVerRec
zhengtong					
1 (1436)				0.0009	InvLitRemCon; MingVerRec
13 (1448)			1-10		InvLitRemCon
jingtai					
3 (1452)	(2)	0.002			InvLitRemCon
7 (1456)		0.00142			InvLitRemCon
chenghua					
1 (1465)	4	(0.005)	0.9		MingCollStat
3 (1467)	4	(0.005)			MingCollStat
6 (1470)	2	(0.0025)			MingCollStat
7 (1471)			2-3		MingHis
13 (1477)	(4)	0.005		0.00045	InvLitRemCon
16 (1480)	(4)	0.005			InvLitRemCon
23 (1487)	(20)	0.025	0.9		InvLitRemCon
hongzhi					
1 (1488)	1-2	0.001428-0.003			MingCollStat; InvLitRemCon
6 (1493)	(2.1)	0.003			MingCollStat
during				0.001333	BookofMing
14 (1501)	0.3-0.4375	0.000444-0.000625			MingHis, "Punishments"
zhengde					
2 (1507)	0.301				MingHis
6 (1511)		0.00143			MingHis
jiajing					
4 (1525)	(2.1)	0.003			MingHis
6 (1527)		0.001143			InvLitRemCon
7 (1528)	1.57	0.009			JiajingVerRec
8 (1529)	(2.1)	0.003	(0.24)	0.0008	InvLitRemCon
19 (1540)		0.00032		0.0001	Petition by Liang Cai
45 (1566)		0.0002			InvLitRemCon
longqing		-			
1 (1567)		0.0006			InvLitRemCon
wanli					
46 (1618)			0.1	(0.00018)	Petition by Li Ruhua

The instability in the value of early Ming money was entirely due to the paper

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money being issued excessively. Even if they had not used copper coins, the price of the Certificates could still have fallen.

As for the system itself, simultaneous use of coins and Certificates is like having two weights on a scale. Only if the two are kept in balance, is there a stable equilibrium. If a discrepancy between their prices appears, then you know that either too many of one of them have been issued, or too few of the other.

From the point of view of the best interests of the people, when using copper cash, one cannot tell how much inconvenience or harm comes from a reduction in their quantity. With a continuous fall in the value of paper money, however, people can only enjoy relatively stable prices by using copper cash.

At such a time a partial return to a natural economy is easy to explain. This point may be elucidated from the forms of payment of official salaries. The proportion of Ming official salaries paid in money was not large. According to the hongwu 13 regulations, only between a little over 20 percent and something over 40 percent was to be paid in money. The major portion was in salary rice, and the portion paid in money was not in copper cash, since few coins were being minted during early Ming, but in Treasure Certificates. These were called salary Certificates.

Because a portion of early Ming salaries were commuted to Treasure Certificates, the real incomes of officials fell in parallel with the fall in the purchasing power of Treasure Certificates.

At the beginning of hongwu [1368], a regular first rank official got 120 hectoliters of rice per month. At that point, the entire amount was paid in rice. In xuande 8 [1434], a portion was drawn in Treasure Certificates, and as a consequence such a

salary was only equal to 46 hectoliters of rice. During the zhengtong period [1436-50], the proportion in Treasure Certificates increased, and a regular first rank official's monthly income was only equal to 34 or 35 hectoliters of rice. By chenghua 7 [1471], it had been reduced to less than 20 hectoliters, equal to that of a seventh rank official of Tang's kaiyuan period. Moreover, a Ming regular first rank official often got less, and so the most he obtained was only a bit over 10.

As for lower ranking officials, though they got a smaller proportion of their incomes in Treasure Certificates, their real incomes also gradually diminished in the same way. For example, a following ninth rank official got 8 hectoliters of rice per month at the beginning of hongwu. During zhengtong, this fell to 2.5 hectoliters, and by chenghua times to 1.7 hectoliters.

MING DYNASTY OFFICIALS' MONTHLY SALARIES
(in hectoliters rice)[32]

Rank	hngwu 13	hngwu 20	xunde 8	zhngtng 9	chnghu 7
1	116.32	93.41	45.94	34.80	21.02
2	98.42	65.50	32.21	24.40	14.73
3	80.53	37.58	21.76	14.00	8.35
4	62.63	25.77	14.86	9.60	5.80
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5	33.10	17.18	12.70	6.40	3.86
6	18.79	10.74	8.01	4.75	3.46
7	14.32	8.05	6.69	3.56	2.59
8	10.74	6.98	5.79	3.08	2.23
9	8.50	5.91	5.90[33]	2.61	1.90
Following 9	8.05	5.37	5.37	2.54	1.73

[32]The official salary figures are derived from *Ming History*, 82, "Treatise on Food and Money." The hongwu 13 rice price was 1 string per Ming picul. For the hongwu 29 system, I calculate on the basis of the entire amount being given in rice. In xuande 8, I calculate on the basis of equating 1 bolt of heavy silk with 1 picul 2 *dou* (using the Ming picul) of rice, and a price of 50 strings per picul. Under the zhengtong schedule, a picul was commuted to 25 strings of certificates, but the actual price was 100 strings. Under the chenghua schedule, the entire amount was commuted into plain cloth for conversion into Certificates. One bolt of plain cloth had a face value of 250 cash, a picul of rice was worth 0.476 ounce of silver, and an ounce of silver was equated with 800 copper cash. The Ming picul was equal to 1.0737 hectoliters.

[33]The figure for xuande 8 is based on the hongwu 25 schedule. High ranking officials were issued 40 to 50 percent of their salaries in rice, and lower ranking ones were issued 70 to 80 percent of their salaries in rice. The remainder was issued in Certificates. Only those of ninth rank and below were paid entirely in rice. That is why a ninth rank official's income turns out to have been higher than that of an eighth rank official. There must have been some procedure then for correcting this anomaly.

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2. *Purchasing Power of Pre-Wanli Copper Coins*

In the course of the Ming Dynasty's paper money inflation, the economic life of the people came to depend upon the protection of silver and coins, just as a traveller would take shelter under a roadside pavilion during a heavy storm. Though some rain might still be blown in, it was much more secure than standing outside.

From beginning to end, the purchasing power of copper coins remained very high. Rice, for example, at the beginning of hongwu ranged from 500 to 1,000 cash per picul. In chenghua 18 [1482], natural disasters on both sides of the Yangtze drove the cost of a *dou* of rice to 70-80 cash, and it was said "the people looked as though they were starving, and the countryside was littered with the corpses of starving people."[1] Evidently the price of rice in terms of copper cash had not risen or fallen by much. Various unofficial histories and novels also allow us to see that the purchasing power of copper cash remained high during the whole course of the Ming period.[2]

[1]*Ming Officials' Memorials of Advice*, 2, Wang Shu, "Petition Requesting the Taking Back of the Middle Official Wang Jing."

[2]*Unusual Things Seen in Ancient and Modern Times*, 9, "Running into a Dongting Red While In Transit Along the Han": "It is said that during the chenghua period of this dynasty, outside the gates of Suzhou there was a man with the family name of Wen, and the given name of Ruoxiu. . . who met a blind gentleman. He put his hand into his purse to take out a coin. He grasped it firmly

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and asked its value."

Journey to the West, chapter 59: "Outside the gate he saw only a young man, pushing a red cart, standing beside the gate, and calling out that he was selling steamed dumplings. Great Sage plucked out a fine hair, and turned it into a copper coin, with which he asked the fellow if he could buy some dumplings. That fellow took the coin, not checking if it was good or bad, and opened up the cover on the cart, letting the steam puff out,

Actually, copper cash had a tendency to rise in terms of silver. At the beginning of hongwu [1368], an ounce of silver was equal to 1,000 copper cash.[3] During the chenghua period [1465-88], the amount fell to 800 cash.[4] At the beginning of hongzhi [1488], it was further reduced to 700 cash.[5] During the zhengde period [1506-22] it was the same.[6] The official price was not moved further during the jiajing period.[7] The market price of 1 ounce was only, however, 300 good coins.[8]

By the beginning of longqing [1567], silver was in greater circulation, and the price of coins had fallen, with 1 ounce commuted to 800 gold-reverse coins, and 1,000 fire-lacquer and lathed-edge coins.[9] The same was the case in wanli 4 [1576]. Later, the gold-reverse rose in price, and 5 were equal to 0.01 ounce of silver, but Jiajing gold-reverse were only priced at 4 to the 0.01 ounce.[10]

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took out a dumpling, and handed it to the travellers."

The *Partition Curtain Flower Shadow* (written during the jiajing period), chapter 18: "Fine-pearl said, 'There are few good people these days. A butcher, Two Pebble Mouth, has received our family's beneficence day after day, but when we hit a bad patch, he is unwilling to lend us a single coin to buy a steamed dumpling for brother Hui to eat."

The Artful Garden (written during the wanli period), 4, "Jade Dragon Mountain Umbrella Play": "Jin laughed and said, 'Stupid child! What can I say to you! I give you several tens of coins, and tell you to go to the village shop for a bit of stillbeer to drink so as to pass a peaceful night, but you've given them to a man, and gotten thoroughly drunk. . ."

[3]*Ming Collected Statutes*, 179, "Calculating the Value of Stolen Goods," equates 1,000 copper cash with 1 ounce of silver. Cf. chapter 6.2.4, note 22, above. *Ming History*, 81, "Treatise on Food and Money, 5": "[In hongwu 8], each 1-string Certificate was equal to 1,000 cash or 1 ounce of silver. Four strings were equal to an ounce of gold."

[4]*Emperor Xianzong's Chenghua Veritable Record*, 33, chenghua 2, 8th month, xinchou: "The Reviewing Policy Adviser Qiu Hong spoke on eleven matters. . . . Item: The Coinage System. Recently, coins have not been circulating in the capital, and trade has been inconvenienced. An order ought to be issued that the salary Certificates of the civil and military officials in the two capitals, and the salary silver of the military men should be paid half in coin, with 1 string of Certificates being converted to 4 cash, and 0.1 ounce of silver being converted to 80 cash. . . . The Ruler assented to this." *Ibid.*, 210, chenghua 16, 12th month, jiazi: "The Board of Revenue said that the soldiers and civilians of the capital were saying that prior to this the silver price of coins in the capital was only 0.1 ounce of silver for 80 cash. . ." *Ibid.*, 212, chenghua 17, 2nd month, wuwu: "The Ruler said that henceforth it would only be permitted to employ coins from earlier dynasties, along with Hongwu, Yongle and Xuande coins, with 80 cash commuting 0.1 ounce of silver."

[5]*Emperor Xiaozong's Hongzhi Veritable Record*, 11, hongzhi 1, 2nd month, xinchou: "The Board of Revenue requested . . . that 7 coins be taken in commutation of 0.01 ounce of silver. . . . Accepted." *Ibid.*, 74, hongzhi 6, 2nd month, gengxu: "An edict was received to gather the court officials to advise the Ruler on three matters. . . . Henceforth each 1-string Certificate is to be commuted in collecting taxes to 0.003 ounce of silver, and 7 coins to 0.01 ounce of silver."

[6]*Emperor Wuzong's Zhengde Veritable Record*, 9, zhengde 1, 1st month, xinhai: "The Board of Revenue said that 700 cash would commute 1 ounce of silver." *Ming History*, "Treatise on Food and Money, 5": "Zhengde 3 . . . the words of the Taijian, Zhang Yong, were followed, and Tiancai Treasury and Board of Revenue Cloth Administration Office Treasury cash were issued, and for collection of taxes, 70 cash was commuted to 0.1 ounce of silver."

[7]*Ming Collected Statutes*, jiajing 3: "Henceforth, only good coins are to be used, with 0.1 ounce of silver for 70 cash, and for lower coins 140 cash per 0.1 ounce of silver." *Ming History*, "Treatise on Food and Money, 5": "In jiajing 4, the branch tax offices were ordered when collecting taxes to commute a 1-string Certificate into 0.003 ounce of silver, and 7 cash into 0.01 ounce of silver." The same regulation was repeated in jiajing 33.

[8]*Investigation of Literary Remains Continued*, 11, "Investigation of Coins, 5," jiajing 8, 9th month. The Zhili Inspector, Wei Youben, memorialized: "If we speak in terms of coins, in all places, low quality coins circulate in abundance, and good coins are hard to obtain. The official price is 0.1 ounce of silver for 70 good coins. The present price for 0.1 ounce of silver is only 30 cash in good coins."

[9]*Ming History*, "Treatise on Food and Money, 5." *Investigation of Literary Remains Continued*, 11, "Investigation of Coins, 5," says that in longqing 4, 8 gold-reverse coins commuted to 0.01 ounce of silver, and 10 fire-lacquer or lathed-edge coins were commuted to 0.01 ounce of silver.

[10]*Investigation of Literary Remains Continued*, 11, "Investigation of Coins, 5" says that in wanli 4, all Jiajing, Longqing and Wanli gold-reverse coins exchanged with silver at the rate of 8 for each 0.01 ounce, and fire-lacquer and lathed-edge coins exchanged at the rate of 10 per 0.01 ounce, while old coins traded at 12 per 0.01 ounce. *Emperor Shenzong's Wanli Veritable Record*, 49, wanli 4, 4th month, renshen, also states: "The provinces are only permitted to mint coins with lathed edges. Ten of these may exchange for 0.01 ounce of silver." However, *Ibid.*, 187, wanli 15, 6th month, xinwei, states: "Hence 5 Jiajing gold-reverse coins were equated with 0.01 ounce of silver and 8 Wanli gold-reverse coins with 0.01 ounce of silver,

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and that this had been so for more than a day. In the course of two months, all of the Jiajing gold-reverses had gone out of use, and only Wanli gold-reverses were being used."

The two books do not give the same price for the Jiajing gold-reverse. However, the *Ming History*, "Treatise on Food and

On the basis of the Board of Revenue's recommendation, in wanli 13 [1585] the Wanli gold-reverse was changed to 8 coins per 0.01 ounce of silver. In wanli 15, the Board of Revenue stated that 5 Jiajing gold-reverses would commute 0.01 ounce of silver, as would 8 Wanli gold-reverses, and that this had been the case for some time. Evidently by wanli 13 the Jiajing gold-reverse was already being commuted at 5 to the 0.01 ounce. In wanli 17, Wanli gold-reverses seem also to have been running at 5 to the 0.01 ounce, and by wanli 39 the market price was 66 to 0.1 ounce of silver.[11]

Therefore a string of standard coins could exchange for ever larger amounts of silver.

MING DYNASTY STANDARD COIN EXCHANGE PRICES

Period	Number of Ounces per String
hongwu 1 (1368)	1.00
chenghua 2 (1466)	1.25
hongzhi 1 (1488)	1.42857
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jiajing 8 (1529)	
official price	1.42857
market price	3.33
longqing 4 (1570)	1.25
wanli 4 (1576)	1.25
13	1.25-2.00
17	2.00
39	1.515

The reasons for the rise in the price of coins were first, that the price of copper had risen, that is, that the silver-copper exchange price had changed. Based on the hongwu 1 [1368] list of stolen goods values, 100 catties of copper were then worth 5 ounces of silver. In jingtai 4 [1453], 100 catties of red copper were worth 6 ounces. In wanli 5 [1577], according to a memorial by the Shanxi Inspector, Gao Wenjian, 100 catties fetched 7 ounces. After wanli 25 [1597], the price per 100 catties was 10.5 ounces.[12] So by the wanli period, the silver price of copper was double the level at the beginning of Ming.

The second reason was that the weight of the standard coin had been increased on several occasions. The Hongwu coin weighed 0.1 ounce. The Hongzhi coin weighed 0.12 ounce. The Jiajing coin weighed 0.13 ounce. This increased the intrinsic value of the standard coin.

The third reason was connected with the promotion of Treasure Certificates by the authorities. Not many coins were minted. The Dazhong Circulating Treasure was minted on two occasions, but the total produced was only 42,220 strings, some of which were large coins later reminted into small Hongwu coins. As for the quantity of Hongwu coins minted, the histories only record the hongwu 1 figure of some 89,000 strings, and the hongwu 8 figure of 199,849 strings and 832 cash.[13]

According to the regulations of hongwu 26 [1393], in addition to Nanjing, there were 326.5 furnaces in the entire country, and these were capable of annual production of 190,414 strings and 800 cash.[14] In fact, however, this was not the year

Money, 5" states: "When first minted, 10 gold-reverses were equal to 0.01 ounce of silver. Now it takes 5 of the Wanli gold-reverses, and 4 of the Jiajing gold-reverses to get 0.01 ounce of silver. The same price holds for fire-lacquer and lathed-edge coins. Within a decade, not only had demand halved the number provided, but the weight of the coins and their price had both jumped up."

[11]The above exchange prices are all based on *Investigation of Literary Remains Continued*, 11, "Investigation of Coins, 5."

[12]Xiang Mengyuan, *Winter Official's Record of Affairs*. This price also held for wanli 44. The wanli 25 price refers to twice-fired brass. The wanli 44 price was for four-times fired brass.

[13]*Emperor Taizu's Hongwu Veritable Record*.

[14]The production for hongwu 26 is recorded differently in various sources. *Ming Collected Statutes*, 194, "Minting of Coins," gives the following breakdown:

Location	No. Furnaces	Annual Quantity Minted
Beiping	21	12,830,400 cash
Guangxi	15.5	9,039,600
Shaanxi	39.5	23,036,400
Guangdong	19.5	11,372,400
Sichuan	10	5,832,000
Shandong	22.5	12,122,000
Shanxi	40	23,328,000
Henan	22.5	13,122,000
Zhejiang	21	11,664,000
Jiangxi	115	67,068,000
TOTAL	326.5	189,414,800 cash

However, Fu Weilin, *Book of Ming*, 81, "Treatise on Food and Money," says that during the hongwu period there were 325 minting furnaces in the country, and Tan Rumu's *Date Grove*

by year production, since minting was periodically halted.[15]

Even during years when coins were being minted, the set amount might not necessarily have been turned out. The number of Yongle coins minted was even smaller, since they only began to be minted in the capital region six years into the reign, and only after nine years were Zhejiang, Jiangxi, Guangdong and Fujian told to start producing them.

Minting of Xuande coins only began in xuande 8, and even then only the Board of Works in the capital and four local mints turned them out. The histories say that only 100,000 strings were minted.[16] Even if they had continued to turn out this quantity for several years, it would not have amounted to much.

After xuan-

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de [1436] there was probably no minting for six or seven decades. It was not until hongzhi 16 [1503] that Hongzhi coins began to be minted. The number of furnaces turning out Hongzhi coins seems to have been increased, because in addition to restoring the furnaces originally used during hongwu times, they added furnaces in Huguang, Fujian, Yunnan, and Guizhou. The quantity minted in Nanjing also increased. Annual production could have amounted to 250,000 strings.[17] This, however, was merely the schedule fixed by the authorities. There was no way to consistently maintain this rate.[18]

The annual production of Jiajing Circulating Treasure was probably only around 100,000 strings.[19] In jiajing 23 [1544], the large coins

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Miscellaneous Table, "Coin Furnaces," section's figures do not match these either. It says that Beiping, Shandong and Yunnan each had 22 furnaces; Shanxi had 40; Zhejiang had 20; Jiangxi had 115; Guangxi and Sichuan each had 10; Shaanxi had 39; and Guangdong had 19.

If we examine the details, we can discover that each of these sources contains errors. The production figure for each furnace then seems to have been fixed. Each was to turn out 7,832 strings per annum. If we apply this standard to the material in the *Ming Collected Statutes*, then we can see that Beiping had 22 rather than 21 furnaces. On this point *Date Grove Miscellaneous Table* is correct. Zhejiang had 20 rather than 21 furnaces, and *Date Grove*'s figures here are also correct. *Auspicious Sheep* (*Mystical Observation Hall Collectanea*) records 20 furnaces. Of the remainder, only for Shandong do the number of furnaces and quantity of coins not correspond, but if we change the figure for quantity of coins from over 12 million to over 13 million, then that pair of figures also agree with each other. I am almost entirely certain that this figure ought to be changed, and that therefore the number of minting furnaces in hongwu 26 must have been 326.5, and the annual production of coins was 190,414,800 cash.

None of the sources records the number of furnaces or coins minted in Fujian and Huguang, but a large number of Hongwu coins bear the character *fu* on their reverses.

[15]Cf. section 7.1, above, "Monetary Systems."

[16]*Emperor Xuanzong's Xuande Veritable Record*, 106, xuande 8, 9th month, yihai.

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[17]The figures for furnaces minting Hongzhi Circulating Treasure are calculated as follows: That for Beijing is based on the old figure for Beiping in the early years, and Nanjing's figure is double that for Beijing. Shandong, Shanxi, Henan, Zhejiang, Jiangxi, Guangdong, Guangxi and Sichuan are calculated at the old rate, but the production of the four additional provinces is added: Huguang at the same rate as Zhejiang, Fujian at the Guangdong figure, Yunnan and Guizhou at the Sichuan figure. That would make the total number of furnaces 429, and annual production capacity 250,776 strings.

[18]*Emperor Xiaozong's Hongzhi Veritable Record*, 213, hongzhi 17, 6th month, gengchen: "The Board of Works again memorialized. In Nanjing . . . Yang Shouzhi discussed the matter of reductions in minting. He said that the Nanjing Treasure Origins Office was to mint 25,660,000 copper Hongzhi Circulating Treasure coins. The expense was not small. At present many places have suffered harm from natural disasters. Damage has been especially severe in Nanjing, and a temporary halt in minting is requested. After a year, and an abundant harvest, it can be discussed again. An order to reduce the original figure to a third was issued."

Ibid., 224, hongzhi 18, 5th month, jichou: "Prior to this, the Taichang Temple memorialized that because Hongwu coins were not circulating in the market, shopkeepers found it inconvenient to set prices. The Ruler ordered the Board of Revenue to investigate the reasons for this. The Board of Revenue said that our dynasty originally minted coins like the Hongwu Circulating Treasure, but they have long since gone out of use among the people. Terribly many of them have been hoarded in the official treasuries. . . . The Hongzhi Circulating Treasure being minted at various locations are now only being turned out at 10 or 20 percent of capacity."

[19]*Ming Collected Statutes* says that in jiajing 6 the Beijing Treasure Origins Office minted 18,830,400 cash, and the Nanjing Treasure Origins Office minted 22,660,800 cash. The Board of Works was also ordered to send officials to Zhili, Henan, Min and Guang to mint coins according to the rules of the yongle and xuande periods. The figures for the Treasure Origins Offices could be in error, because they differ only by one digit from those for former periods. If the methods for turning out Hongzhi Circulating Treasures were used, then the Beijing Treasure Origins Office must have made 12,830,400 cash, and the Nanjing Treasure Origins Office twice that amount, or 25,660,800 cash. In any event, however, since it is said that the yongle and xuande precedents were to be followed, the quantity of coins minted was probably only around 100,000 strings.

minted were still smaller in number, because only the Beijing Board of Works was minting them. Only an extremely small number have survived. As for the so-called supplementary minting of the coins of nine year-periods, this was probably simply never carried out. The Longqing Circulating Treasure was minted for more than a year, and the Board of Revenue only put out 2 million of them.

The number of coins minted remained small right down to the beginning of the wanli period, with annual production of only 20,000 ingots worth. This was increased to 150,000 ingots in wanli 13 [1585], and to 90,000 ingots in wanli 20.[20] Only after wanli 27 [1599] did the number of furnaces increase.

Therefore, during the more than two centuries down to the end of the sixteenth century, the Ming Dynasty did not mint many coins. I suspect the total was only some 10 million strings, and a large proportion of these remained in the official treasury,[21] and did not participate in circulation. Old coins from former dynasties and privately coined cash constituted the bulk of the coins in actual circulation. The Ming court often limited tax payment to standard coins of the current dynasty, or accepted old coins at a discount of two as the equivalent of one standard coin.[22]

Standard coins were the coins minted by the official furnaces of the current dynasty. This term was used to contrast these with old coins of former dynasties and private coins of the current dynasty. The term standard coin [*zhi qian*] was first used during the Ming Dynasty. Under such circumstances, the exchange price of standard coins was, of course, raised.

Not only were few coins made during Ming, but a portion of them flowed abroad. During the yongle period, eunuchs were sent annually to foreign countries, and to the northwest to buy horses and other commodities, bringing with them on each occasion several tens of millions of copper coins.[23]

At that time, Java and Sanfoqi (or Bolin) in the South Seas employed Chinese coins, and Ceylon also used them.[24] The copper coins in such places were probably mainly of Song date, but Japan imported quite a few Ming coins. Most of these were Hongwu and Yongle coins, with Xuande coins coming next in frequency.

Japan's Kamakura Bakufu had long since fallen, and the Ashikaga clan had risen to replace it. This period of 180 years (1392-1573) is called the Muromachi period. The Japanese did not mint coins themselves, but because of the development of commerce, its demand for currency was very great, and the local feudal leaders (called daimyo) relied en-

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[20] *Ming Collected Statutes*, 194, "Minting of Coins."

[21] *Emperor Xiaozong's Hongzhi Veritable Record*, 29, hongzhi 2, 8th month, jiayin: "Based on the memorial of the Prefect of Chongqing, Sichuan, Mao Tai, the Board of Revenue requested the minting of coins. He had said that the state's Hongwu, Yongle and Xuande coins were all being hoarded and not used, and they ought to be circulated." *Emperor Wuzong's Zhengde Veritable Record*, 29, zhengde 2, 8th month, renshen: ". . . Though many Hungwu and Yongle coins have been hoarded in the Treasury, few have been given as gifts." In wanli 4, 12th month, the Reviewing Policy Adviser, Si Shun, said: "The Silver Treasuries have amassed coins in the tens of millions, and they have piled up in such profusion that official salaries ought to be ordered paid 40 percent in silver and 60 percent in coin."

[22] *Investigation of Literary Remains Continued*, quoting *Remaining Dreams of Spring Brightness*: "During the hungzhi period . . . they minted Hongzhi Circulating Treasure coins. When officials were paid their salaries, they were given Circulating Treasure coins. When taxes were paid in to local offices, half was in standard coins of the hongwu, yongle and xuande periods. Those without such standard coins could, as a favor, pay 2 old coins to commute 1 such standard coin." *Five Mixed Tables*: "In Shandong, silver and coins were used intermixed. The coins used all had Song year-period names. Two of these were equal to one of the new coins."

[23] *Investigation of Literary Remains Continued*, 11, "Investigation of Coins, 5," yongle 19, 4th month: "The Expectant Discusser, Zou Ji, said the court annually orders the Empire's offices to mint copper coins. It sends eunuchs to bestow them on foreign countries, and to the northwest to buy horses and receive goods. What is expended is often several tens of millions, and what is taken in does not come up to 10 or 20 percent of this."

[24] According to Huang Shengceng, *Tribute of the Courts of the Western Seas Annotated Record*, trade in these two countries was carried on entirely with Chinese coins of former dynasties. This was the situation at the time of Zheng He's expeditions. *Investigation of Literary Remains Continued*, 11, quoting Ma Huan's *Overall Survey of the Ocean Shores*: "The state of Java uses Chinese copper coins of former dynasties. The state of Jiugang also uses Chinese copper coins. Ceylon especially likes Chinese copper coins, and will exchange a pearl for one of them." When sixteenth-century Dutchmen first reached that region, they too said that copper coins with holes were in use there. For example, Lindchoten, in his *Itinerarie Voyage* wrote: "In sunda there is also no other kind of money than certain copper

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mynt called 'caixa', of the bigness of a Hollãdes doite, but not half so thicke, in the middle where of is a hole to hang it on a string, for that commonlie they put two hundred or a thousand upon one string." (Quoted by R. Charlmer, *History of Currency in British Colonies*, p. 372.)

tirely on merchants who carried on overseas trade to serve as their economic supports, in exchange for which they provided the merchants with political protection.

A number of merchants had been dispatched abroad by them, and a goodly amount of the trade was controlled by the Bakufu. On the pretext of promoting local goods, they came to exchange these goods for Chinese copper coins. China treated this as "bringing tribute,"

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for which they gave coins in exchange according to a schedule which set prices at very high levels.

For example, in yongle 2 [1404], the ambassador from Japan was given 50 ingots worth of Certificates and 1,500 strings in cash.[25] Such practices became common thereafter.[26] At times they even gave rise to quarrels.[27]

Prior to the xuande period [1426], the Ming court was promoting Treasure Certificates, and copper cash were not in wide circulation. At times their circulation was even prohibited, and large quantities of standard coins accumulated in the official treasuries, and so were often used to make payments to foreigners.

In xuande 10 [1435], 12th month, the Prefect of Wuzhou, Li Ben, memorialized for permission to circulate coins alongside Certificates. Thereafter, the Ming court was no longer very willing to make gifts of copper coins. As a consequence, a number of private Japanese merchants decided to carry away copper coins in the course of conducting ordinary trade.

The Ming court had, however, a closed door foreign trade policy. Ever since the time of the founding Emperor, Taizu, not so much as an inch of timber was permitted to go to sea, and export of copper cash was still more strictly banned. There were even regulations for foreigners engaging in trade.

For example, after jiajing 6 [1527], the Japanese were only permitted to come once per decade, bringing a hundred emissaries on three ships. No one in excess of this limit would be received. However, the copper coins carried off by the Japanese were not necessarily standard coins. I suspect that the majority of them were old coins and private coins.

At that time in China 1 ounce of silver could exchange for 700 to 800 copper cash, whereas in Japan 1 ounce of silver could only exchange for 250 copper cash.[28] Therefore copper cash spontaneously flowed toward Japan.

When Japanese merchant vessels came to China then, they moored at Fujian's Yuegang and Zhejiang's Shuangyu. In the course of trade, copper

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[25] *Emperor Taizong's Yongle Veritable Record*, 39, yongle 3, 11th month, xinchou.

[26] According to *Emperor Taizong's Yongle Veritable Record*, the Ming court sent an embassy to Japan in yongle 5, 5th month, carrying as gifts 1,000 ounces of silver and 15,000 strings of copper cash. In yongle 6, 5th month, the emissary from Japan was given 100 ingots worth of Certificates and 100,000 cash. In yongle 9, the middle official Wang Jin was sent to Japan with a gift of 50 strings of cash. *Emperor Yingzong's Zhengtong Veritable Record*, 236, jingtai 4, 12th month, jiashen: "The Board of Rites memorialized, 'The King of Japan has brought additional tribute. . . . It is several tens of times more than of old. Because of old the Japanese have left with a profit, they have now come with many times more goods. If they are requited according to the former rate, in addition to the commutation into heavy silk and plain cloth, the copper coins will total 217,732 strings and 100 cash.'"

[27] In chenghua 5, the Japanese Bakufu leader, Ashikaga Yoshimasa, sent three ships to China. According to *Good Neighbor States Treasure Record*, the Japanese credential read: "'The register of copper coins is presented to the Superior State. We have long come. Now we seek two things, and bow down, hoping that our memorial will reach its goal so as to satisfy our desires.' The list was seen on the left side. During the yongle period, many copper coins were given. Recently, this had not been proposed. Now the Treasury is constricted. How will this profit the people? A decision is anxiously awaited."

Ming Veritable Records also mentions this matter. *Emperor Xianzong Veritable Record*, 62, chenghua 5, 1st month, bingzi, Board of Rites memorial: "The tribute of the state of Japan falls into the category of knives and swords. The precedent is to requite it with coin and heavy silk. Hitherto, this has all been done on a scheduled basis, but the increase has harmed the quantity involved. Moreover, recently the values of coins and Certificates have diverged widely . . . and the emissary Kiyokei has been disputing the rules to be followed." *Ibid.*, 2nd month, bingxu, first day of moon: "The Japanese emissary Kiyokei, with three ships . . . The local official Xuan Shu memorialized on these three vessels, saying that because they had encountered winds at sea, there had been loss of life and goods, and requested that a like amount of goods be given as rewards for their return to their nation. The Prince of Shu saw no fault in this. The matter was sent to the Board of Rites, which said . . . it would be difficult to give an equal amount. The Ruler said . . . but there is a king who is able and obedient, and we may make a special gift to this king of 100 bolts of heavy silk, and 10 of patterned damask. Then Xuan Shu memorialized to request a gift of 5,000 strings of copper cash. . . . The Ruler said, Xuan Shu might be given another 500 strings of copper cash to hurry them off."

[28] *Compiled Illustrations for Sea Planning*, "Ancient Cash Coins," note: "The Wa do not themselves mint coins, but merely use ancient Chinese coins. For 1,000 cash the price is 4 ounces of silver. If new coins are made privately in Fujian, 1,000 have a price of 1.2 ounces of silver. Only the Yongle and Inaugural coins are not used."

coins flowed out through these two places. Private coining was also most prevalent in Fujian and Zhejiang, and it is probable that most coin exports to Japan were private coins. These private coins were worth 1.2 ounces of silver per thousand, and 3 of them were equal to 1 standard coin.

Nevertheless, on the whole the quantity of copper coins flowing into Japan from xuande times on must not have been large, because Japanese merchants had begun to import Chinese commodities, and these commodities could be sold for very high prices in Japan.

For example, the price of silk during xuande and zhengtong [1426-50] was 250 cash per catty in China, and 5 strings per catty in Japan.[29] The profit from this was far greater than from importing copper coins, and so as to gain profit from importing such commodities, Japanese merchants sometimes even exported copper coins to China.[30]

For all of the above reasons the purchasing power of standard coins was very high. During the hongwu period [1368-99], the price of rice was around 500 cash per picul. During zhengtong [1436-50], it was only around 300-400 cash.[31] A price of 300 cash per picul is recorded for both chenghua 5 [1469] and 8.[32] In chenghua 11, the commutation price was only 160 cash.[33]

Since, however, most Ming rice prices were calculated in silver, these few figures cannot be taken as representative of the trends in standard coins' purchasing power in rice.

If we convert the average price in silver of rice to standard coins, then during the hongwu period a hectoliter of rice was worth 460 cash, 285 cash during the yongle period, 290 cash during the xuande period, a little over 250 cash during the zhengtong period, 400 cash during jingtai times, 250-260 cash during tianshun,

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some 350 cash during chenghua, over 360 cash during hongzhi, some 330 cash during zhengde, from 170 or 180 to 400 cash during jiajing, over 470 cash during longqing, and falling from 600 to something over 300 cash during wanli.

The significance of such commutation calculations is not, however, great, since by no means were all the coins in people's hands standard coins. Frequently they were old or privately made coins.

Actually, because Treasure Certificates were being promoted prior to xuande, circulation of copper cash was often prohibited, and such bans were not removed until xuande 10 [1435].

Most of the coins on the market were, however, old and private coins. Standard Hongwu and Yongle coins were kept in the treasury and not issued. That is to say, although the purchasing power of standard coins was high, prices in coin were not altogether stable. The situation was very complex. Only the official coins were relatively stable, and even appreciating in value against silver. Old and privately made coins were, on the contrary, unstable, and in unpredictable ways.

By old coins I mean pre-Ming coins. Prior to the wanli period, many more of them were in circulation than were Ming coins. Most old coins weighed around 0.1 ounce, and were generally well made and uniform, except that having been in use for a long time they were inevitably somewhat worn.

The Ming Dynasty generally treated old coins that were intact just as though they were Ming coins.[34] It was only during hongzhi [1488-1506] be-

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[29]Kobata Jun, *History of the Circulation of Money in Japan* (revised and expanded edition), p. 594, quoting the words of Kusuba Nyudo (who accompanied xuande and zhengtong period Japanese voyages to China).

[30]In zhengde 6, when a Japanese ship arrived at Ningbo, the broker Sun Zan brought copper coins to sell to the ship master, but could not trade them. After xuande times, no more copper coins flowed to Japan. Recently, a hoard of ancient coins was unearthed in Miyasaki Prefecture, Kyushogun. Of the total of 7,719 coins, there were 9 Xuande Circulating Treasure and 2 Hongzhi Circulating Treasure. Compared with the number of Hongwu and Yongle coins, these are hardly worth mentioning. There were 1,273 Hongwu Circulating Treasure, and another 123 Japanese imitations. There were 200 Yongle Circulating Treasure, 2,590 Japanese imitations, and 3 Vietnamese imitations.

[31]*Emperor Yingzong's Zhengtong Veritable Record*, 68, zhengtong 5, 6th month, wuyin: "Now [the Guangxi] Intendant-Inspector's Office has memorialized 'The Aid-the-State General and Assistants in Restoring Obedience, Tu Sheng and Lei Geng are collecting salary rice in Xing'anxian, with each picul compelled to be commuted to 700 cash, or even to 1,500 cash, which is three or four times the price recently. How can the people bear this?'"

[32]*Emperor Xianzong's Chenghua Veritable Record*, 71, chenghua 5, 9th month, renchen: "[In Shandong] each picul of rice is discounted into 0.25 ounce of silver, or one large cotton cloth bolt, or 300 cash." *Ibid.*, 111, chenghua 8, 12th month, gengwu: "[In Shandong] each

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picul of provisions was bought officially for 300 copper cash or 0.35 ounce of silver."

[33]*Ibid.*, 145, chenghua 11, 11th month, xinwei.

[34]*Ming Collected Statutes*, 194, "Minting of Coins": "In tianshun 4 it was ordered that except for counterfeits and tin coins, all coins in circulation among the people from previous dynasties, and Hongwu, Yongle and Xuande coins, as well as 2-

cause the authorities were promoting Hongwu and later standard coins, that the regulations prescribed using two old coins in place of one standard coin when paying taxes.[35]

It was, however, also possible for commutation to occur among the public.[36] During the jiajing period, old coins were again distinguished by denomination, and old 2-cash coins of the middle sort were equated with 1 good coin.[37]

Oscillations in the prices of Ming Dynasty coins were manifested mainly among private coins. The problem of private coins arose right from the beginning of the hongwu period.

Because private coins were interfering with the smooth circulation of standard coins, in hongwu 6 the authorities began to buy them up for reminting at a set price. They offered 190 official coins for each catty of private coins.[38]

During the early period, when the authorities were promoting Treasure Certificates, copper coins may well have been kept in hoards, and not even private minting would have been profitable. Later, however, when Treasure Certificates had fallen in value relative to copper coins, and few of the Ming Dynasty's standard coins were being minted, the purchasing power of copper coins rose to a very high level, and private minting flourished.

Private minting of copper coins was always prohibited by every dynasty. In hongwu 1, the Ming Dynasty proclaimed a severe prohibition on private minting. Over the course of Chinese history, however, private minting was only rarely halted by legal measures. On the contrary, the proliferation of prohibition orders reflected the ubiquity of private minting. Actually, the Ming Dynasty merely banned private coining. It did not ban the circulation of private coins.

Due to the proliferation everywhere of private coining, in jingtai 7 [1456], another ban was announced. Private coining then mainly centered in the south, in Suzhou and Songjiang. The coins were then transported to Beijing for distribution. All private coins were adulterated with iron and tin, and their purity of metal was very low. Some of the army artisans in Beijing also made a living from private coining.[39]

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In chenghua 13 [1477], people in Suzhou, Songzhou, Changzhou, Zhenzhou, Hangzhou and Linqing were still earning a living by private coining, and the merchants in these places were seeking profit by buying their output. As a consequence, the government issued yet another prohibition.[40]

In chenghua 16, 12th month, however, the Board of Revenue said that counterfeiting was flourishing, 0.1 ounce of silver was worth 130 cash, that coins were cheap and rice expensive. Moreover, sorting of coins was too troublesome, and so it requested an additional prohibition.[41]

In chenghua 17, 2nd month, it once more reported that private coins were circulating everywhere inside and outside of the capital, the circulation of old coins was being obstructed, coins were lightly demanded and goods expensive. And yet another prohibition order was handed down.[42]

Obviously, such laws had no great efficacy.

From the hongzhi period [1488-1506] on, the private coining problem only increased and never diminished, the names by which they were known proliferated, there were new coins, as well as lead

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cash and 3-cash coins, could be used according to their face values, with no discrimination among them permitted." *Emperor Xianzong's Chenghua Veritable Record*, 210, chenghua 16, 12th month, jiazi: "Aside from counterfeits, damaged and tin coins, which are not to be used, no discrimination will be made among the others, whether their year-periods are remote or recent."

[35]Cf. note 22.

[36]*Emperor Wuzong's Zhengde Veritable Record*, 83, zhengde 7, 1st month, gengwu: "At first, the Office of Ceremonial Overseership Chief Inspector, Zhang Yong, memorialized that Hongwu, Xuande and Hongzhi coins are circulating along with old coins from earlier dynasties. However, within, they are not being issued by the officials; outside, they are not being collected in taxes. Above and below, they are avoiding the junctions, and so we should order the people to commute two for one." *Investigation of Literary Remains Continued*, 11, zhengde 7: "The Board of Revenue again assented to publication of a placard saying that for both soldiers and civilians, both near and far, whether coins are large or small, but if they are roughly whole copper coins, 7 of them will be worth 0.01 ounce of silver, and it is not permitted for two to be commuted for one."

[37]*Ming Collected Statutes*, jiajing 6: "It was again ordered that it be proclaimed inside and outside the capital walls by travelling Board of Revenue personnel that henceforth, aside from privately minted new coins, broken coins, lead or iron coins, which officials will buy but no longer use, roughly whole old coins of the middling sort may be equated with silver at the rate of 140 coins per 0.1 ounce of silver, and are to freely circulate alongside Hongwu and Yongle type coins."

[38]*Emperor Taizu's Hongwu Veritable Record*, 86, hongwu 6, 11th month, bingwu.

[39]*Investigation of Literary Remains Continued.*

[40]*Investigation of Literary Remains Continued*, 11, "Investigation of Coins, 5."

[41]*Emperor Xianzong's Chenghua Veritable Record*, 210, chenghua 16, 12th month, jiazi.

and tin ones, thin and small ones, low quality coins, and better ones, and ones called leather sticks.[43]

In hongzhi 16 [1503], when the Hongzhi Circulating Treasure was first minted, the Reviewing Policy Adviser, Zhang Wenchen, discussed the expenses of minting. It cost 10 ounces of silver to mint 10,000 cash, and so he opposed minting coins. He also pointed out the court's wasteful practices,[44] and connected them with the problem of private coining. So long as private coining flourished, official minting could not hope to be profitable.

It is probable that very few Hongwu type standard coins circulated during the chenghua and hongzhi periods [1465-1506].[45] In hongzhi 2, in Sichuan, the Prefect of Chongqingfu requested the minting of coins. The Board of Revenue said that the Hongwu, Yongle and Xuande coins of the dynasty had been hoarded away and kept from use. The Board of Works also said that no one was using Hongwu-type coins.[46] Both ministries opposed minting. By the end of the hongzhi period, the capital districts relied almost solely on private coins, two of which were equivalent to one good coin. This was called exchange for good.[47]

There was another ban on private minting during zhengde. In zhengde 6 [1511], someone asked for a ban on use of low quality coins, and urged that only standard coins of the current dynasty and large old coins be used. The following year, permission was granted to use all coins, except for damaged, iron and tin coins, with 70 equated with 0.1 ounce of silver. The practice of equating two with one good coin was banned.

Nevertheless, private coining became still worse. The exchange of two bad for one good coin became an exchange of three and then four for one good coin. The authorities acknowledged that the bad practice of private coining had gone on for years and was hard to eradicate. Some were too poorly made to be serviceable, and the so-called four-exchange circulated in abundance.[48] It was even possible for 8 coins to be equated with one good one.

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[43] *Famous Mountain Hoards*, "Record of Coins."

[44] *Emperor Xiaozong's Hongzhi Veritable Record*, 197, hongzhi 16, 3rd month, wuzi: "The Board of Works Left Reviewing Policy Adviser, Zhang Wenchen, discussed the requirements for minting. He said, 'The expense for minting coins is 10 ounces of silver for 10,000 coins per year. . . . At other times official minting and illicit minting were carried on together, and I fear that there will again be suffering from an excess of coins. In recent years, only old coins have been used, and the people are still privately coining. If we now mint and circulate official coins abundantly, this will provide opportunities to engage in counterfeiting. . . . If Your Majesty is sincerely able to practice frugality personally so as to set an example for the Empire, there will not be three extra costs, there will be nine years' accumulation, and thus, even though coins are not minted, there will spontaneously be enough to meet requirements."

When Gu Yanwu discusses the Damingfu land tax in *Letters on the Profits and Ills of the Regions of the Empire*, "Northern Zhi," he too acknowledges that from hongzhi on, the state's strength had gradually declined, the burdens on the people had grown heavier, and the population had diminished by the day.

[45] Lu Rong, *Pulse Garden Miscellaneous Record*, 10: "The Hongwu coins did not circulate at all among the people. When I was young, I had seen them. Now, there was not even one to be seen. They had been melted down to make other things."

[46] *Emperor Xiaozong's Hongzhi Veritable Record*, 29, hongzhi 2, 8th month, jiayin.

[47] Dong Gu, *Green Jade Village Miscellaneous Holdings*: "In my township, from the beginning of the state down to the hongzhi period, we had always circulated good coins. Each 0.01 ounce of silver was equal to 7 coins. No odd ones were used. But sorting them out was too troublesome. The green ones were taken as of the highest fineness. In zhengde year dingchou, I first travelled to the capital. When I first got there and observed traders all calling coins 'boards,' I wondered and inquired about this. I found that the coins in use were all low and bad ones, two of which were commuted for one good one. But if they were taken in quantity, and one did not see if they were good or not, people all found it convenient to suppose they were good.

"Since I moved south, my township has come to circulate nothing but boards. Good coins were all put aside and not circulated. I do not know how it could have been so miraculously rapid as this. Within a few years, the boards again had undergone winnowing, their origins at twice the quantity were forgotten, and they were still reckoned by number. This caused silver to become expensive and coins cheap. This expedient began in the capital districts."

Lu Shen, *Yanjian Record*: "When I was young, I observed that only Song coins were in use among the people, intermixed with Jin and Yuan coins. These were called good coins. Among the Tang coins there were

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Kaitong Original Treasures [i.e. Inaugural Circulating Treasure. EHK]. If these were come upon, they were not used. Newly minted ones [meaning private coins] were called low coins. Two of them were equated with one good coin, and people also used them in pairs. By the end of the hongzhi period, good coins no longer circulated in the capital districts, and only new coins were circulated. This was called exchange for good [*dao hao*]. During the zhengde period, there was exchange for three and exchange for four, and illicit coiners multiplied in number."

[48] *Emperor Wuzong's Zhengde Veritable Record*, 83, zhengde 7, 1st month, gengwu: "At this time, the bad practice of private minting had gone on for years, and was hard to change. It had reached the point where four coins were being commuted for one, and there were bad, damaged and inadequate ones

During the jiajing period [1522-67], the problem of private coins became still worse. In some remote localities, particularly ones near the sea, privately minted coins could be sold to foreign countries. Places like Fujian's Longji[49] and Guangdong's Xinning[50] were both in such a position.

In jiajing 3 [1524], the government published placards informing merchants inside and outside the capital that 70 good coins were equal to 0.1 ounce of silver, and that 140 low coins were required to exchange for the same amount of silver.[51] During jiajing 6, however, all the coins on the capital market were privately minted. No standard coins or old coins from previous dynasties were able to circulate, probably because they had been driven out of circulation. Emperor Shizong said that it was not a matter of the officials ordering a ban, but of their being unable to enforce it.[52] Later, the price in silver of private coins fell from 3-4,000 coins per ounce to 6-7,000.[53] In jiajing 12, private coins in Zhili had names like exchange-3, exchange-4,

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commute-6, and commute-7.[54] There was even an exchange-9 and an exchange-10.[55]

Such private coins were light, broken, thin and small, and could be crushed in the hand. Although they bore inscriptions, their strokes might be indistinquishable. They might not even be made of copper, but rather of lead and iron. They might not be cast, but rather cut out.[56]

In jiajing 33 [1554], the silver price of Jiajing coins and Hongwu-type standard coins, as well as intact coins from earlier dynasties was set at 7 coins per 0.01 ounce. Other coins were classified into three grades depending on the level of their quality. These exchanged at 10, or 14, or 21 coins to 0.01 ounce of silver. The flood of coins unsuitable for use were banned. In issuing salaries to civil and military officials, however, the government did not distinguish between new and old coins. All were used as though they were coins of the highest category, exchanging at 7 coins to the 0.01 ounce, and the officials in turn went to the market to force the merchants to to accept them, much to the sorrow of the people.

As a consequence of permitting small coins to circulate, 6,000 coins were equated with an ounce of silver. The exchange rate of Jiajing coins was then fixed at 700, coins of the Hongwu type at 1,000, and 3,000 coins from earlier dynasties were pegged at 1 ounce of silver.

Thereupon manufacture of Jiajing coins got underway among the populace. Finally, the authorities had no choice but to abolish the price fixing rules, and to allow the various kinds of coins to find their own levels. Taxes and official salaries were all paid in silver.[57]

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which returned for exchange at that rate and which circulated abundantly at that exchange rate."

[49]*Japan One Mint*, "Copper Cash," article, note: "*Song History*, copper cash inscription Qianwen Large Treasure. *Yuan History*, merchants were sent carrying gold to exchange for copper coins, pictures and books. Private minting offices had long since halted coining. Only ancient Chinese coins were used. Each 1-cash coin had a price of 0.004 ounce of silver. Up until then, Fujian's Longji had privately coined and marketed them. They were heavier than Chinese coins, and not reckoned as Longji's counterfeits."

[50]The Ming jiajing period woodblock edition *Xinning District Gazetteer*, "Food and Money: Coins": "At the beginning of the dynasty, when Hongwu Circulating Treasure were first circulated, a coin minting factory was set up in the commandery city. Most of the Xinhui people were smelter workers, and so stole the molding methods. As a consequence, the district swarmed with the people of Cao Gang, all minting counterfeit coins which were mixed in with genuine ones in circulation. A thousand of them exchanged for 300 good coins. Those in office piled up prohibitions, but were unable to halt it. Now the custom still exists, and they are sometimes in contact with the people of Xinhui. They carry them to Jiaozhi and Guangxi, or go down to the sea to sell them. Recently, city-controlled coins have become prevalent. Those used are mostly old coins. For each ounce of silver, 1,000 coins can be exchanged. They are fairly similar to those of Xinhui, and there are few differences with those of Guang city. Nevertheless, intermixed with them are Haoyong counterfeits. People can, however, usually distinguish these, and so the coins' towns of origin rarely encounter those of other places."

[51]*Ming Collected Statutes* (events of jiajing 3).

[52]*Emperor Shizong's Jiajing Veritable Record*, 83, jiajing 6, 12th month, jiachen.

[53]*Ming History*, "Treatise on Food and Money, 5": "[During jiajing] Prior to this there was a flood of bad coins circulating among the people at a rate of 30-40 coins per 0.01 ounce of silver. Later, they were increasingly adulterated with lead and tin, made thin and narrow, and without regular shape, and so reached 60 or 70 coins per 0.01 ounce of silver."

[54]*Emperor Shizong's Jiajing Veritable Record*, 149, jiajing 12, 4th month, bingzi: "Sun Jin, "Enumeration of Things to Aid the Imperial Domains," . . . item: fixing the coinage. In Zhili, evil people scheme over thin, small, leaden and worn coins, and set up names like exchange-3, exchange-4, commute-5, commute-6, and commute-7, so that a point is reached where regular coins do not circulate."

[55]*Yanjian Record*: "Since jiajing times, there have been [exchange]-5, 6, and even 9 and 10."

[56]*Book of Ming*, 81, "Treatise on Food and Money," jiajing 23, the words of the Censor Yan Lin.

At the beginning of longqing, a number of people proposed ways of adjusting the monetary system.

The first was the Board of War Expectant Executive Tan Lun. He said that to enrich the people it was necessary to emphasize cloth and food, and to make silver cheap. To do that, it was necessary to use coins. He advocated restoration of copper coins' power as legal tender. Tax payments of less than 3 ounces should be collected in coin. For trade among the people, transactions of 0.1 ounce or less should be permitted to employ coins.[58]

The second was Jin Xueyan. He too opposed the use of silver and the abolition of coins, and advocated ordering the people to pay fines in copper and charcoal, which the government would use to mint coins. Silver and coins would both be used for all government expenditures.[59]

The third was the Zhili Inspector, Yang Jiaxiang, who advocated minting Great Ming Circulating Treasure.[60] Probably because of the very great confusion attending the circulation of year-period coins, he did not wish to employ a year-period coin so as to symbolize the reform.

The fourth was Gao Gong. He advocated adoption of a *laissez faire* policy, which would not suddenly change court policy, thereby damaging the faith of the people.[61] Emperor Muzong approved of Gao Gong's proposal, but also minted Longqing Circulating Treasure. It is said that from then on the coins circulated to some extent. The exchange rate then was 8 coins per 0.01 ounce of silver.

The private coining problem was not, however, removed. That some Jiajing and Wanli coins had labels like gold-reverse, fire-lacquer and lathed-edge, simply meant that by such means it was hoped to hinder private coining, and this alone is sufficient to indicate the continued virulence of that practice.

[57] *Ming History*, "Treatise on Food and Money, 5."

[58] *Ming History*, "Treatise on Food and Money, 5."

[59] *Ming History*, 214, "Biography of Jin Xueyan": "At the beginning of longqing . . . he responded to an edict with a discussion of the principles of finance which ran to more than ten-thousand words. He said that selecting soldiers, minting coins, and amassing grain were the most important things. To outline his words . . . 'I have observed the Empire's people confusedly worrying because of their lacks. If it is not that cloth or the five grains are insufficient, then there is not enough silver. . . . How can we use silver and abolish coins! The more we abolish coins, the more we circulate silver alone. If we circulate it alone, then hoards will be increasingly deep, silver increasingly expensive, goods increasingly cheap, and making distinctions in assessing purity of metal ever more difficult. The rich will take advantage of a good's cheapness to engross it, and when it becomes expensive they will sell it off. When silver accumulates among the rich ever more abundantly, there will be ever less of it to circulate within the Empire. . .

"'Those who calculate such things say there are two difficulties with the coinage: That profit does not attend the basic cost, and that the people are unwilling to circulate them. These are both mistaken. . . .

"'If we sincerely order the people to use copper and charcoal to pay fines, and artisan labor service men take it in the garrisons, this one rule will spread coins throughout the Empire. Only evil rich men are unwilling to circulate coins. I request that henceforth such expenditures as payment of fines, taxes, official gifts, salaries and army provisions all be paid out jointly in silver and coins. If above this is how things are collected, and below this is how they are paid, how could we suffer from their not circulating!'"

[60] *Ming History*, "Treatise on Food and Money."

[61] *Ming History*, "Treatise on Food and Money."

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3. The Late Ming Copper Cash Depreciation

Cracks were opening in the economic foundations of the Ming Dynasty's political authority after the hongzhi and zhengde periods [1522], and by the end of the wanli years [1620] these foundations began to be shaken.

For the period prior to wanli [1573], the question of the price of coins requires discussion of private coining. The standard coins from the government mints merely evoked complaints about their scarcity, or were squeezed out by private coins, since their circulation was neither easy nor profitable. Their purchasing power was very high. At the beginning of wanli, the supply of standard coins was still small, and so their exchange price was very high. It was not until after foreign war broke out that the coinage genuinely became worse.

Foreign war struck a heavy blow to the fiscal base of the Ming political authority.[1] Hao Jing ad-

[1] *Ming History*, 322, "Chronicle of Japan": "The invasion of the Eastern State by the *Kambaku* lasted seven years from beginning to end. Several hundred thousand soldiers were killed, and several million expended on provisions." There are even some who believe that this was the beginning of the end for the Ming Dynasty. *Xingcun Compendium* quotes Xia Yunyi as saying: "From what did the difficulties caused by the bandits arise? The Empire was crying out with hunger because of the com-

vised minting large coins in 10-cash, 30-cash and 50-cash denominations. These would have been the largest face value coins in the history of the Ming Dynasty. Though this recommendation was not put into effect, the very fact that it was put forward at all is a reflection of the straitened circumstances of the times.

Prior to wanli 20 [1592], there were still only sixty furnaces for casting coins. The expenses of the foreign war caused the number of mints to increase continuously. To begin with, an additional forty were set up, and then fifty. In wanli 29 [1601], 100 more were established. In wanli 30, the Board of Revenue's prefectural army granaries added mints, incresing the number by 250. Yingtianfu set up another 100.[2] I suspect that no one can any longer be clear as to the total number of furnaces.

The minting of coins and the issue of paper money was originally undertaken at the beginning of hongwu by the Secretariat. The Secretariat was abolished in hongwu 13 [1380], issue of Treasure Certificates was undertaken by the Board of Revenue, and minting of standard coins by the Board of Works. A Treasure Origins Office was set up in the capital.

Now, not only did the Board of Revenue want to mint coins, but so too did the managing bureaus. Eventually, even the Ever-normal Granaries also minted coins. The various characters on the coins' reverses were undoubtedly all appellations of the coin minting units. At that time these coins only circulated in Beijing. As a consequence, their purchasing power fell. None of the army labor service artisans wanted to be given their wages 30 percent in copper coins.

At the same time, because of the fall in the price of coins, the prices of other goods shot up, and copper merchants raised the price of copper, forcing some coin furnaces to halt operations and dismiss their workers. This in turn evoked a flareup in private coining. This was because artisans previously formed a trade with few skilled members, but after the increase in minting a number of people had mastered its techniques, and after they had been dismissed and left with no other way to make a living, a number of them turned to private coining.

To make matters worse, the coins they turned out were almost identical to official coins. The costs of private coining were low, and so they could sell their output at a low price, allowing private coins to flood the market.[3] Before the war, it only took 40-50 gold-reverse coins

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to commute 0.1 ounce of silver. Though the official price did not change after the war, the market price could have become 60 cash per 0.1 ounce.[4]

If this was the case in Beijing, things could not have been any different in Nanjing. Most Ming coins were minted in Nanjing, which by the hongzhi period was already producing twice the quantity of Beijing. During late Ming, the shares of other provinces could also have been taken over by Nanjing. Hence the prices of coins in the two capitals diverged. In wanli 46 [1618], it took 10 cash to get 0.01 ounce of silver in Nanjing, whereas in Beijing it took 6 cash.[5] During the taichang period [1620-21], 63 standard cash made 0.1 ounce of silver in Beijing, while in Nanjing it took 100 cash.[6] This was because the coins minted in Nanjing were thinner and smaller than Beijing's.

From wanli 46 [1618] on, after the Manchus moved onto the attack, the situation became more serious. When Nuerhaci (Emperor Taizu of Qing) made plans to attack Fushun, advisers at court requested issuing a million for army supplies, but Emperor Shenzong only issued 100,000. Citing the precedent of the counterattack against the Japanese

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pounding of taxes. But from what year did this compounding of taxes begin? It all arose from the Eastern Barbarians causing trouble."

[2]Petition by Wang Wanzuo. Cf. Hu Wokun, *Circulation of Coins*, 2.

[3]Gu Qiyuan, *Repetitive Words from the Guest's Seat*, "Minting of Coins" (written during the wanli period).

[4]*Emperor Shenzong's Wanli Veritable Record*, 488, wanli 39, 10th month, wuzi: "The merchant Liu Shenzhi made an accusation. In previous years the merchants had not dealt in coins. In wanli 17, the Board of Revenue had advised equating 50 cash with 0.1 ounce of silver, and agreed to take one-third of tax payments in coin, so that for every 10,000 ounces there would be 3,000 ounces extra to help the state. . . . Now the market price per 0.1 ounce of silver is 60 cash. The officials continue to honor the previous rule and give 50 cash to the merchants so that for every 10,000 ounces dealt in coin, the merchants commute 3,000 ounces of silver inside and outside the capital. The merchants are simply annually done out of several tens of thousands of ounces."

[5]*Emperor Shenzong's Wanli Veritable Record*, 570, wanli 46, 5th month, bingchen, the statement of the Revenue officer, Ying Zhen.

[6]*Emperor Shenzong's Wanli Veritable Record*, 575, taichang 1, 12th month, wushen, text of a petition from the Manager of the Board of Works to restore the Nanjing Inspectorate of Minting Manager's punishment: "It is only that expenses differ in north and south. Hence in the south, the south's advice should be followed, and 100 cash be made equal to 0.1 ounce; in the north the north's advice should be followed, and 63 cash equated with 0.1 ounce. . . . The Ruler agreed with this."

invasion, the Board of War dispatched 100,000 soldiers, requiring 3 million in supplies, but the state treasury did not issue that amount.

Obviously the treasury was empty. The only alternative was to increase taxes. The result of the government's calculations was that Liaodong would annually require more than 8 million in supplies, and the field acreage tax was twice increased to 0.007 ounce per *mu*, but this only yielded 4 million, and the peasants were already fleeing because they could not endure the burden. As for commercial taxes, to have increased these could only have led to the disappearance of the merchants. Though prices were still very low in the rich and populous towns and villages of the south,[7] in regions where business was constricted by military activity, prices shot up several fold.[8]

Because of the increase in the quantity of coins, and the presence of 2-cash coins, the exchange rate of copper coins with silver fell. In tianqi 1 [1621], the enormous cost of supplying the armies induced Wang Xianqian to request establishment of coin minting offices in the two capitals and thirteen provinces at a set rate of 600 cash per ounce.[9] In tianqi 3, the Sichuan Travelling Censor, Wen Gaomo, also requested minting coins at 1,000 cash to the ounce of silver.[10]

If we only looked at the silver price of coins, we might not realize how serious the situation was, for we must understand that the purchasing power of silver had greatly fallen by then, and so the fall in the purchasing power of copper cash was greater than the fall in its exchange price in silver.

It was only then (in tianqi 1) that Wang Xiangqian made his proposal to simultaneously mint 10-cash, 100-cash and 1,000-cash large coins. The 10-cash's weight was to have been twice that of the 1-cash; the 100-cash was to be five times that weight, and the 1,000-cash ten times the 1-cash coin's weight.

When payments were made, there was to be a fixed ratio between them. The 100-cash was to be used in place of four 10-cash, and the 1,000-cash for four 100-cash coins. A payment of 10,000 cash was to be made with four 1,000-cash coins.[11]

If a 1-cash coin weighed 0.1 ounce, and the purity of metal of all the denominations was the same, then a payment of 10,000 cash, which had to be made with four 1,000-cash coins, 24 100-cash coins, 144 10-cash coins or 2,160 1-cash coins, would only have weighed 260.8 ounces, rather than the original nominal weight of 1,000 ounces. That is to say, the promotion of these three denominations of large coins would have meant a weight reduction to

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26 percent of the original level. All other things remaining equal, prices would have risen by at least 3.8 fold.

The three large coins may not all have been minted, or if minted may not have been issued before they were recalled for reminting, but a 10-cash large coin was minted, and in large quantity, both officially and privately.

In tianqi 2 [1622], the Board of Revenue formally established a Treasure Spring Office to mint coins under the supervision of a Right Expectant Executive. It was called a Coinage Hall. The amount it minted far exceeded that turned out by the Board of Works' Treasure Origins Office.[12] Places outside of the capital also minted large coins, including such places as Xuanfuzhen and Miyunzhen.

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[7] *Wuchuan District Gazetteer*, Chen Shunxi, "Record of Things Seen and Heard Escaping from Disorder": "I was born in wanli 46, year wuwu. At that time . . . my home was in a rich township, where a *dou* of rice was less than 20 cash, and a fish was 1 or 2 cash. Ten betel nuts cost 2 cash. Firewood brought 10 cash. A joint of muscle meat or a duck was 6 or 7 cash, and a *dou* of salt was 300 cash."

[8] *Three Reigns' Veritable Record of Events in Liao*, 5, tianqi 1, 8th month, Wang Zaijin's theme: "Since all of the metal coins have been used up in payments outside the Wall, and the Ruler has announced their dispersal among the guilds, it has been exactly like the blockage of a spring. It went like the flowing of water until the hoard was empty. Since the land and excise taxes have been increased in rate so as to increase revenues, events continued to unfold on the Han and Liao. . . . The roads are narrowed by crowds of people. Merchants are scarce and goods few. Rice is like pearls, and firewood like cassia. Goods are unstable. The price of a bundle of hay has increased several fold. A *dou* of rice is more expensive than several tenths of an ounce of silver. A month's food money can not be carried on the person. You cannot get enough food to make a living. From this one can understand the difficulty a soldier has in getting by."

[9] *Emperor Xizong's Tianqi Veritable Record*, 8, tianqi 1, 8th month, wuxu.

[10] *Ibid.*, 25, tianqi 3, 1st month, bingwu.

[11] *Investigation of Literary Remains Continued*, 11, "Investigation of Coins, 5," tianqi 1, 8th month.

[12] *Ibid.*, 11, "Investigation of Coins, 5," quoting *Remaining Dreams of Spring Brightness*: "At the beginning of Ming, minting of coins was solely under the Treasure Origins Office of the Board of Works. An Expectant Executive of the Contingency Office supervised its work. In tianqi 2, they began to add Board of Revenue Treasure Spring Offices, with Right Expectant Executives in charge of them. They were called Coinage Halls. The increased number of furnaces to mint coins were to aid in raising armies. Their administration was under the Board of Revenue. The quantity minted by the Board of Works was minuscule."

Although a large coin could be as thick and heavy as 0.9 ounce, there were light and small ones of less than 0.5 ounce, and because there were so many of them, purchasers of goods costing 3 to 5 cash would pay with a large coin, obliging the seller to try to compensate for the lower value of the large coin, and tripping off numerous disputes.

As a consequence, some recommended that for goods worth 10 or 20 cash the entire price be paid in large coins, but that odd amounts continue to be paid for with 1-cash coins. The results of such procedures were probably not very good, and so in the 5th month, 10th day, the two capitals halted minting of large coins, though they continued to be circulated as before.

It was not until tianqi 6 [1626] that an order was sent down withdrawing large coins, but the more of them that were withdrawn, the more of them there were, and so it was determined that all excise taxes be paid in large coins, which the government would then use to mint 1-cash coins. When large coins were cashed in, they were not fully redeemed for 1-cash coins. Instead, good ones were traded for 8 cash, and low quality ones for 6 cash. Even these book prices were, however, frequently discounted, and 7 cash were paid instead of 8.[13]

The Tianqi 1-cash coins underwent depreciation themselves. When first minted they weighed 0.13 ounce, and 55 of them commuted 0.1 ounce of silver. In the Autumn of tianqi 2, their weight was reduced to 0.07 ounce.[14] This was a severe reduction in weight.

When coins were minted previously, they had sought energetically after fineness and regularity, not sparing copper or grudging labor, seeking only to ward off private coining. Among Tianqi coins are the so-called White Sand coins, which were relatively well-made,[15] but before long this changed. The histories say that then "offices were opened all over the Empire, making the seignorage from coins substantial."[16]

And indeed the seignorage from minting coins was very large. In wanli 5 [1577], it was 33.7 percent, and around wanli 25, it was 20.3 percent, but in tianqi 2 or 3 [1622-3], Nanjing used a capital sum of 209,054 ounces, and obtained a return of 128,606.8 ounces, for a seignorage of 61.5 percent. In tianqi 4, a capital sum of 143,441 ounces yielded a return of 128,932 ounces, for a seignorage of 89.9 percent.

The copper coins of this period actually amounted to a secondary money. The minting office personnel were corrupt, and turned out especially light and small coins to meet their quotas, or they lowered the purity of the copper, which was was supposed to comprise 70 percent, with lead as the remaining 30 percent. In tianqi 3, devaluation reached a point where coins were 50 percent copper and 50 percent lead.

The standard coins of some localities had only 20 or 30 percent copper, the remainder being composed of lead and slag. If thrown on the ground, they might break, and a hundred of them would not make a stack an inch high.[17] It is said that people from places like Suzhou agreed among themselves to boycott use of Tianqi coins for as long as ten months.[18]

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[13] *Emperor Xizong's Tianqi Veritable Record*, 66, tianqi 6, 5th month, jiyou, jiazi, and wuchen sections, and *Investigation of Literary Remains Continued*, 11, "Investigation of Coins, 5."

[14] *Jinling Trifling Matters*: "The coins first minted weighed 8 catties 8 ounces per thousand. Later, they were gradually lightened. By the Autumn of tianqi 2, they had become so small and thin, that if thrown on the ground they would break, and a thousand were only 4 catties 8 ounces, 4 catties less than when first minted. Did this profit of 4 catties come back to the court? To the officials? To the workmen?"

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[15] *Ibid.*: "When coins were minted at the beginning of the tianqi period, the Treasury had Japanese lead and Japanese tin which were alloyed with copper to mint coins having a pure white color. Their inscriptions and rims stood out clearly, and people called them White Sand coins. Coppersmiths would equate 2 White Sand coins with a small tea spoon, which could be sold for 10 cash. Hence White Sand coins were most scarce, and private coiners could not mint them."

[16] *Ming History*, "Treatise on Food and Money, 5."

[17] *Investigation of Literary Remains Continued*, 11, "Investigation of Coins, 5," tianqi 3, statement by the Censor, Zhao Hongfan: "When I was ordered to Chu, I witnessed the promulgation of the new Tianqi coins. Their copper cointent was only 20 or 30 percent, and their lead and slag content 70 or 80 percent. They were so brittle and thin, that if thrown on the ground they could break. They were so light and small that a hundred stacked would not be an inch high. If this was the way things were in one place, one can imagine what conditions were like elsewhere. The abuses occurred at the time of minting. The officials were not strict enough. They left things to the furnace foremen, who threw off all restraints on their cupidity, and on their own initiative admixed lead and slag into the alloy, so that half the value of the copper entered private purses."

[18] Wu Chenyan, *Neglected Garden Miscellaneous Record*: "During the tianqi period, Suzhou caught Zhou Zhongjie and Gong Shunchang. The people rebelled and beat to death the school head. Later, the people of Suzhou came to an agreement to provide no outlet for the use of Tianqi coins. Various prefectures and districts agreed with and adopted this course of action, and Tianqi coins accumulated in numbers past reckoning. Event-

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The reduction in weight and lowering of the purity of the metal content of the copper coins could also have been linked to the continuous rise in the price of copper. I have already mentioned that during the wanli years the price of copper rose from its early Ming price of 5 ounces of silver per 100 catties to 10.5 ounces, but during the tianqi years, brass rose to 12 ounces and red copper to 14.3 ounces.[19]

Given the simultaneous rise in the price of copper and the levying of a very large seignorage, one can imagine how reckless was the worsening of the quality of the coinage.

Owing to the authorities' cruel exactions, the wealth embodied in coins flowed into the coffers of a minority composed of men like Yan Song and his son and Wei Zhongxian.[20]

The people had no heart to carry on agriculture. Many fled to other places. There were floods and droughts which caused starvation, and "bandits and thieves" arose on all sides. By the end of tianqi, there was a severe famine in the Yan'an area of Shaanxi. All the grass was pulled up, and people resorted to swallowing white pebbles to assuage their hunger. If children and isolated individuals ventured out of doors, they were killed and eaten. Men like Gao Yingxiang, Li Zicheng and Zhang Xianzhong came out of the ranks of these starving people. Zhang Xianzhong was from Yan'an.

It was just after the Manchu soldiery had laid siege to Jinzhou, and the peasants of Shaanxi had arisen to sweep through Yan'an, that the Ming court engaged in large scale minting of Chongzhen coins.[21] At first, each coin weighed 0.12 or 0.13 ounce,[22] and 65 of them commuted 0.1 ounce of silver. In chongzhen 1, the seignorage in Nanjing was around 50 percent, or over 39,000 ounces of silver. Seignorage in Beijing was 20.4 percent, yielding a profit of over 26,000 ounces in eight and a half months.[23]

Later, probably because private coins were light and small, the government furnaces could no longer compete, and some of them closed down. Except for those in the two capitals, only those in Huguang, Shaanxi, Sichuan, Yunnan and Xuanfuzhen and Mizhen remained in operation. Nor did all the seignorage revert to the court.

Some recommended sending officials to the provinces to obtain copper for minting coins, and this gave a great stimulus to opening local mints. The manager Zhu Dashou said that in Jingzhou alone minting could be carried out four times a year, and that the return from four mintings was twice that obtained in Nanjing and three times that in Beijing. The court put him in sole charge of minting.

He changed the form of the coins so that one coin weighed 0.1 ounce, and a thousand commuted 1 ounce of silver, but those minted in Nanjing might be as light as 0.04 ounce, and so their weight was fixed at 0.08 ounce.[24] They also took over for reminting old coins and old copper objects.[25]

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ually word of this reached the capital, and each province issued exhortations until the coins were restored to circulation. This private ban lasted in all ten months."

[19]Hou Xun, *Matters Concerning Minting*.

[20]*Book of Ming*, 149, "Biography of Yan Shifan," in describing the confiscation of the family property of Yan Song, gives the following: "Confiscated was 13,071.6 ounces of gold; pure gold inlaid jewelry, jars, cups and plates to a total of some 3,800 objects, weighing some 13,200 ounces; pure gold inlaid pearls, jade, cat's eye jewels, some 6,550 pieces of jewelry, and some 2,027,000 of white metal; silver screens of a total weight of some 13,600 ounces; a water ring marked the first year of the establishment of the state of Wang Ruhan; a treasure cup from the Jin Yonghe Palace, and jade human figurines, jade horses, jade donkeys, jade dippers, jade vases coming to 857 items; also white jade, green jade, black jade, inlaid gold, plated gold, decorated and plain jade belts amounting to 202 objects; gold foil, decorated and plain rhioceros horn and incense belts, 124 items; gold plaited silk, pure gold decorated and plain gold foil, pearl and jade belts and diadems, 33 items; gold foil vases, jade longevity deer, rhinoceros and elephant, crystal, blue and white plates for a total of 2,680 objects; . . . mansions, houses, fields, hill ponds and various manor houses, oxen and horses worth a total of around 295,860 ounces. This was in their original place of registration in Jiangxi.

"Their mansions, manor fields and wealth in the capital and in Yangzhou came to no less than several hundred thousand more, and was all officially confiscated. . . ."

For Yan Song and his son's hoards of silver and associated objects, please consult subsection 7.4.2, notes 17 and 18 below. *Unofficial Record of Emperor Wuzong of Ming*, "Record of Tianshui and Bingshan," contains additional material on this.

[21]*Ming History*, "Treatise on Food and Money, 5." *Investigation of Literary Remains Continued* states that from chongzhen 1 [1628], 1st month to 9th month, 15th day, the Board of Revenue minted a total of 129,489,984 cash.

[22]*Investigation of Literary Remains Continued*, "Investigation of Coins," tianqi 7, 12th month.

[23]Hou Xun, *Matters Concerning Minting*.

[24]*Ming History*, "Treatise on Food and Money, 5."

[25]Chen Lin, *Ming History Collected Aura*: "In chongzhen 11, wuyin, the Ruler had all the bronze utensils from past reigns which were in the Inner Treasury issued to the Treasure Origins Office for minting into coins. Included were items from three dynasties and the xuande years. Their designs were fine and artful, and this was a violation of principle. The merchants could

The historians state that all the ancient coins were melted down, but this may not be so, because after the issue of the Tianqi and Chongzhen small coins, thick and heavy ancient coins had all gone into hiding, and the efficiency of the officials carrying on public business was very low.[26] They would not have been able to carry to completion the task of buying up all the old coins. The fact that after the fall of Ming there were still a number of ancient coins in circulation attests to this.

In the outer provinces, the price of coins was lower than in Beijing. For example, during chongzhen 11 [1638], an ounce of silver was still 800 cash in Beijing, but in Henan and Shandong there were places where it reached 1,500 to 1,600 cash, probably including some private coins.[27]

There are an enormous number of names for private coins dating to the end of Ming. During the tianqi period there were the Broad-edged, Large-board and Gold-lamp. At the beginning of chongzhen

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there were the Fat-head, Wry-neck and Pointed-foot.[28]

Eventually, 100 capital cash were worth 0.05 ounce of silver, and in the outer provinces 100 cash were worth 0.04 ounce of silver.[29] In chongzhen 13 [1640], 1,000 uncirculated Suzhou coins were worth over 0.5 ounce of silver. A thousand circulated coins were only worth 0.45 or 0.46 ounce.[30]

There were also the so-called Tightener, the Big-eyed Bandit and Short-mandate Official. One ounce of silver could exchange for 5-6,000 of such cash.[31]

By shunzhi 4 or 5 [1647-8] of the Qing Dynasty, 100 Chongzhen coins were only worth 0.01 ounce of silver, and a catty's weight of copper cash was worth 0.025 ounce of silver.[32]

Late Ming prices were very chaotic. Naturally, in besieged cities it can be imagined that rice was like pearls and firewood like cassia.[33] The situation

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not endure the destruction of these antiquities, and for every 1,000 catties of them they offered to pay in 2,000 catties of copper. Those in charge would not agree to this. They said,

"'Though it is a pity to destroy ancient objects, how dare we take supply and demand into account?' The merchants said they lightly treasured copper, and would send it down to the furnaces, feeling obliged to preserve its substance. As for the things from the three dynasties, it was extremely clear that their substance is lightly demanded. What was being sent down to the furnaces were only rusted fragments. Who then would take responsibility for this calamity? Those in charge replied, 'The Ruler alone can fathom such matters terribly deeply. . . . The blame is not on us.' Thereupon the antiques were virtually all destroyed."

[26]Details of the corruption of the late Ming government may be seen from the memorial which Zhang Wenheng addressed to the Qing Emperor Taizong. In tianzong 9 (chong-

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zhen 8 [1635]), he stated: " . . . I do not know if the Central Realm may be taken only now. Their civil and military major and minor officials have all been bought with coin. The civil officials are without plans. The military ones are without bravery. Those in charge of the armies' horses control the armies' cash. Those who manufacture implements and weapons reduce the weight of official coins. . . . Above and below, in the capital and outside of it, they all tell lies. Every one of their enterprises has gone bad." (*Ming and Qing Historical Materials*, C, 1)

[27]*Investigation of Literary Remains Continued*, 11, "Investigation of Coins, 5."

[28]*Investigation of Literary Remains Continued*, 11, "Investigation of Coins, 5."

[29]Wang Bu, *Worm Hut Trifling Talk*: "There was a difference between the capital and the provinces among Ming Dynasty standard coins. The capital coins were called yellow coins. Each weighed 0.16 ounce, and 70 were worth 0.1 ounce of silver. The outer province coins were called hide coins. Each weighed 0.1 ounce, and 100 of them were worth 0.1 ounce of silver. After chongzhen 6 or 7, they gradually became cheaper, until at the time of the dynasty's fall 100 capital coins were worth 0.05 ounce of silver, and 100 hide coins were worth 0.04 ounce of silver. Even the Chongzhen Circulating Treasure did not circulate at all among the people." *Investigation of Literary Remains Continued*, 11 "Investigation of Coins, 5," quoting an undated discussion of the old days: "By chongzhen 16, year guiwei, they were finally selling for 2,000, and between Summer and Autumn for 2,000 plus several hundred."

[30]Xu Kang, *Reflection of a Dream of the Past*. Cf. Ye Dehui, *Pure Words from the Book Grove* (Zhonghua shuju edition) pp. 166-167.

[31]*Book of Ming*, 81, "Treatise on Food and Money": "During chongzhen, the Inner Treasury was much blocked, and the towns with soldiers and horses were all ordered to open furnaces for minting to provide the wherewithal for army supplies. These coins were not uniform, and illicit minting proliferated. By the end of the year, an ounce of silver exchanged for 5-6,000 cash. These coins had such names as the Tightener, Big-eyed Bandit and Short-mandate Official because they were portents of the Li Zicheng disorder."

[32]*Investigation of Literary Remains Continued*, 11, "Investigation of Coins, 5."

[33]*Record of the Siege of Bian* in recording the situation at the time of the chongzhen 15 siege of the city states: "Among the people, one seed was like a pearl. The official soldiers still had some provisions remaining. All, including the great families and rural gentry sought to buy it, but to obtain grain, the price was incalculable. A *sheng* of grain sold for up to 10,000 cash." Xu Shichuan, *Record of Changes on the River*, 3, reports the circumstances surrounding the rise in price of rice as follows: "Inside the city, a *dou* of rice rose toward 1 of metal/gold." "Inside

was not identical everywhere. During chongzhen 11 [1638], some said that the price of rice was 1,000 cash per picul, but as the *dou* then was small, only a fourth the size of the original *dou*, a nominal price of 1,000 cash per picul would actually have been 4,000 cash.[34] However, others said that during chongzhen 17 a picul of rice was still only 700-800 cash.[35]

In any event, there may well have been places where old coins were in circulation, and it is possible that the purchasing power of good and bad coins was not the same. There may even have been places which did not use bad coins. Under such circumstances, prices would have been relatively low, and everyone would have treated copper cash as an item in heavy demand.[36]

I have previously discussed the earnings of Ming officials. Prior to chenghua, these were paid in Treasure Certificates, and so fell in parallel with the fall in price of Treasure Certificates. Later, a portion was paid in silver, and finally they were entirely paid in silver. As a result official pay improved.

The earnings of laborers, however, remained at a very low level. Workers on annual salaries sometimes had them calculated in rice or silver. All short-term work wages were expressed in copper cash.

At the beginning of the zhengtong period [1436-1450] it probably took 5 or 6 ounces of silver per year in Changshu district to pay for substitute labor service for one year.[37] Converted into metric terms, this is equal to 1.7 hectoliters of rice per month.

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the city, a *dou* of rice reached 6 of metal/gold." "Inside the city, a *sheng* of rice was 2 of metal/gold." "Inside the city, rice reached 600 metal/gold per picul."

[34] *Investigation of Literary Remains Continued*, 11, "Investigation of Coins, 5," quoting from a petition by Shen Yan.

[35] *Ming and Qing Historical Materials*, Compilation B, volume 6, chongzhen 17, 2nd month, 16th Board of War issue: "Draft of memorial by Imperial Capital Garrison Governor General Li Guozhen. . . . To feed only one soldier, 1 picul of rice per month is required. In recent years, at times when grain was expensive, handling of it has been particularly liberal compared to the present. People still hankered after these *sheng* and *dou*. Now a picul of rice is only worth 700-800 cash. It it is intermixed with seed rice, rotten and red grain, and it is as cheap as dirt."

[36] Kang Fansheng, *Model Compass Record*, shaowu 1, 10th month, 8th day: "Since I had made the figures to send to the people of the household, I was sent to Yongxin to accompany the first degree graduate Hu. Mr. Hu, whose alternate name was Yi, and the Anfu youth Zhu Kuibao were both in the high ministry, and liked and respected me very much. I presented several coins as presents to each, and I made no distinction between them." The purchasing power of money at the end of Ming may be discerned from the prices contained in the book *Rousing the Age Marriage Affinity*. I have selected from it the more important prices to copy out here, and have divided them into prices calculated in silver and prices calculated in coin:

1. Those calculated in ounces of silver:
cotton bolls, per catty, 0.16 moist blue cloth, per item, 0.32 flat loom white plain cloth, per bolt, 0.48
child's tuition (middle grades), per month, 0.05
meat, per catty, 0.15
riding donkey, per head, 15
land, per *mu*, 2
blue plain cloth lined shirt, each, 0.45
yuan shuttle plain cloth, per bolt, 0.45
child's tuition (official family), per month, 0.1
spiked millet, per picul, 0.5 or 0.6
good horse, per head, 83.333 middle-grade house, per month, 3
large pine beam, each, 5-6

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decorated red fringed paper, per knife, 6
food, per picul, 0.5 to 1.3-1.4
family of three, monthly living expenses, 1
to teach only 1 student, per year, 4
Buddha hand, each, 0.4
dried mushrooms, per plate, 0.8
white wheat, per picul, 0.9
interest (compounded), per month, 0.02 per ounce
olives, per catty, 0.12
grain, per picul, 0.5 to 0.8
teaching at a private school (several pupils), per month, 1
fine color paddy rice, per picul, 2
house, 1 main beam, 45
rental of a three-room small house, furnished, per month, 1
straw donkey, per head, 1.2
heavy silk, gauze, per sheet, 0.05
pine wood for coffin, per set, 3.2
2. Those calculated in cash:
Ointment, per capsule, 1 cat, each, 30-40
silver, per ounce, 1,000
basket of water-chestnuts, each, 120
gauze bedding, each, 25
[],[a] each, 80
plate scales, per set, 36
tuition (ordinary family), per month, 30
silver, per ounce, 1 string
rental for a two-room house, per month, 200
winnows, each, 35
donkey sets, each, 18
iron hooked carrying pole, each, 40
charcoal, per catty, 2.5

[37] *Emperor Yingzong's Zhengtong Veritable Record*, 154, zhengtong 12, 5th month, guichou: "Guo Nan, the person who had arrived to serve as magistrate of Changshu district . . . came

During the wanli period [1573-1620], a dike-building laborer's wage was 1.5 ounces per month.[38] This could buy more than 2 hectoliters of rice. A hired laborer could earn 30 cash per day.[39] This was equal to 2 hectoliters of rice per month. Sometimes, however, he was only able to earn 24 or 25 cash.[40] This was only 1.14 hectoliters per month. By the chongzhen period [1628-1644], a worker could earn 60 cash per day, but by then the purchasing power of coins had declined, and so real income was less than 2 hectoliters of rice.[41]

During chongzhen 16 [1643], Zhang Xianzhong's army was rolling through Hubei and Hunan as though crashing through bamboo. Li Zicheng had taken Tongguan and Xi'an, and was advancing steadily toward the capital. The authorities wanted to issue paper money, but could no longer

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follow their own desires, and so there was no alternative to minting large coins.[42] Before long the Ming Dynasty fell.

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to an agreement with them [the people of the town] which said: 'If you put forward 4 piculs of rice, this will equal labor service for one year. Do you wish this?' All replied, 'Recently, a year's labor service required 5 or 6 ounces of silver. If things are now done as you propose, it will only be equal to 1 ounce of silver, and there will be no one who does not desire it.'" We cannot tell from this if the zhengtong 12 wage level was more than 3 *dou* of rice per month, since examination of the implications of what was said suggests that this figure was lower than the wage of that time.

[38] *Letters on the Profits and Ills of the Regions of the Empire*, 4, Northern Zhi, 3."

[39] *Investigation of Literary Remains Continued*, 11, "Investigation of Coins, 5," chongzhen 11, 9th month, section quotes Shen Yan's petition: "Thirty years ago [which must have been around wanli 36] . . . a hired laborer daily earned around 30 cash, and from this could feed a wife and child. Now twice this would not enable him to do so."

[40] *Chou Liao shouhua*, 29, wanli 47. The Junior Prefectural Overseer and Henan Circuit Censor, Xu Guangqi mentioned: "When poor people in the capital hire out their labor, they get 24 or 25 cash per day, which is only sufficient to provide them food. For the three months of Winter, their clothing does not suffice to cover their bodies." The cost of rice here is calculated at the average price between wanli 46 and tianqi 7 of 1.1 ounces of silver per picul of rice. Taking 1 ounce of silver at 630 cash, and a daily wage of 24.5 cash, this would be just enough to earn 1 picul of rice per month, which would be equal to 1.14 hectoliters.

[41] Cf. note 39.

[42] The Chongzhen 5-cash coin seems not to have been put into circulation. There are even fewer 10-cash coins. Gu Jingxing, *White Couch Grass Hall Collection*, "Li Sunqing Yanjing

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Drunken Stillbeer Pavilion Snow Song Rhyme" (written in shunzhi 2/longwu 2 [1645]) contains: "The Treasure Origins new coin one-equals-ten, At sunset I raise the coin to the stillbeer pavilion." He could have been referring to a Shunzhi coin of which one was equal to ten small Chongzhen coins. *Rousing the Age Marriage Affinity*, chapter 50 uses more than a thousand characters to write of the 10-cash coin's commutation into secondary coins or commutation into coins. What it probably referred to was the Tianqi 10-cash.

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4. Silver's Purchasing Power

Though use of silver in China has had a very long history, during and before Western Han it served only for making works of art and handicraft. The White Metal money of the time of Emperor Wu of Western Han may have contained more tin than silver, and in any event was abolished after just a little over a year. After Eastern Han, silver sometimes served as an instrument for making payments. Beginning with the Five Dynasties period, its uses gradually became more numerous. The Jin minted the Cheng'an Treasure Money. Nevertheless, right down to the end of Yuan, silver could still not be reckoned a full-fledged money.

Therefore, studies of silver's purchasing power up until then have no very great significance. By the reign of Emperor Yingzong of Ming [1457-1465], when the ban on silver was relaxed, a number of goods prices were being expressed in terms of silver. Only then did China genuinely become a silver-using nation, and only then did silver become genuinely monetized.

The question of whether silver was minted into the form of coins is not important for the study of its purchasing power. Even though in ancient times foreign countries had minted gold and silver into coins, they still often used their weights as the basis for circulating them.

The Chinese practice of circulating pieces of silver actually provides a number of elements of convenience for the study of prices. This is because if silver is minted into coins, and prices are calculated in terms of the number of silver coins, reduction in the coins' weight or other forms of depreciation would make it impossible to compare price figures.

In Europe, because of the circulation of gold and

silver coins whose size and purity varied by time and place, the study of the history of prices has run into a number of troublesome dead ends. There are a number of prices and expressions of prices for which there is no significance because there is no way to determine the nature of the coins in which they are expressed.

For example, within the boundaries of the German Empire during the fourteenth and fifteenth centuries, the silver pfennig and *hejin'er* [Chinese version of German] coins ranged in fineness from 90 percent and up down to 20 or 30 percent in different localities. If the documents state that the price of wheat or wages in a given year was a certain number of pfennig or *hejin'er*, it is very difficult to figure out exactly how much silver this corresponded to, and so it is difficult to make comparisons with past prices or prices in other regions.

Although Chinese silver ingots were also not uniform in their purity, variations were relatively minor, and when used to represent prices, they were commuted into silver of the finest standard [*wenyin*]. Prices calculated in silver all employed this fine silver as their standard, and not some unknown lesser degree of fineness. This is highly convenient for the study of prices.

Price records before Ming are too scarce to be able to serve as the basis for systematic investigation. Even where there are records, they employ copper cash or paper money as their units of measurement. The weights and fineness of copper coins varied by dynasty, and strictly speaking

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they cannot be compared. Paper money was expanded in quantity still more frequently. At most, one can only study the vicissitudes in purchasing power of a certain type of paper money, but we cannot make long-term comparisons.

After the relaxation of the ban on silver during early Ming, most prices during the next five centuries were expressed in terms of silver, and price records become more numerous, so that not only may chronological comparisons but even comparisons with foreign countries may be made.

Among Chinese prices, the most detailed records are for rice, just as was the case for European wheat prices. Some Europeans believed that over the long term wheat prices were the best surrogate for the trend of prices in general.[1] The same is true of Chinese rice prices. Therefore, in ancient times, for which there are no other price index numbers, use of the price of rice as their surrogate is fairly reliable.

Sometimes, when we study the price of an important article of consumption, it is more concrete than studying price index numbers, especially when making comparative studies of foreign countries. This is because different countries use different methods for constructing price indexes. The types of goods selected and their quantities differ, and so comparisons are sometimes unsatisfactory. If, however, the comparison rests on the prices of a particular commodity, the situations in the two countries may be discerned.

For example, we have no way to compare prices in China and England prior to the Ming Dynasty, but once China had formally adopted silver, such comparisons become possible.

The price of wheat in China during the latter half of the fourteenth century[2] was 13 or 14 grams of silver per hectoliter.[3] The price of wheat during the same period in England was 34 grams of silver per hectoliter.[4] We can draw one conclusion from this: That during the latter half of the fourteenth century the purchasing power of silver in China was more than twice what it was in England. In both England and China wheat was an important necessity for everyday life, and both countries produced it on a large scale.

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[1]England's John Locke believed that wheat prices over the long term were the best surrogate for prices in general. Adam Smith also believed that the price of wheat was superior to any other price for showing true value, or the relationship of prices in general to true value. In America, during the century or so from 1798 to 1932, changes in the price of wheat almost exactly correspond to changes in the general price level. (Cf. G. F. Warren and F. A. Pearson, *Gold and Prices*, p. 28, Figure 12.)

[2]Only the hongwu 1 list of the values of stolen property mentions the price of wheat during the latter half of the fourteenth century, and gives it as 0.25 ounce per picul (*Ming Collected Statutes*), or 80 percent of the price of rice. In hongwu 9, 1 ounce of silver was to commute 1 picul of rice for tax payments, and wheat was 20 percent less (*Ming History*, "Treatise on Food and Money"). This was also 80 percent of the price of rice. The price of wheat is here calculated by taking 80 percent of the price of rice. Because wheat price records are too few, we can use the rice prices of hongwu 1 from the list of values of stolen property of 0.32 ounce per picul, the hongwu 9 price of 1 ounce per picul, the hongwu 18 price of 0.5 ounce per picul (*Ming Collected Statutes*, 29), and hongwu 30 of 0.25 and 0.5 ounce per picul (*Ming History*, "Treatise on Food and Money") to strike an average price of 0.375 ounce per picul. For the latter half of the fourteenth century, the average is 0.538 ounce per picul. This would make the price of wheat 0.43 ounce per picul.

[3]During the Ming Dynasty, a picul was 1.0737 hectoliters. An ounce was 37.3 grams (Wu Chengluo, *History of Chinese Weight Measures*).

[4]The English wheat price is derived from the figures given in James E. Thorold Rogers, *A History of Agriculture and Prices*

If we draw a comparison of rice prices, the conclusion we reach would not be very accurate. During the last half of the fourteenth century in China, rice cost 17.19 grams of silver per hectoliter.[5] In England, however, it was 384 grams.[6] This was twenty times higher than the Chinese price simply because England did not produce rice. Nor was it consumed as a daily staple. England's rice was shipped from the Orient, and ranked, along with perfumes, as a luxury item.

Wheat ranked in importance to the Chinese second only to rice. Unfortunately Chinese wheat price materials are much poorer than those for rice. Fortunately, Ming Dynasty wheat prices were generally some 80 percent of rice prices. The climate needed to grow wheat differs from that required for rice, and so changes in their prices need not have been parallel, but in actual fact, in all the sources wheat prices are only very rarely higher than those for rice.

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WHEAT-RICE PRICE RATIOS
OVER THE COURSE OF CHINESE HISTORY

Date	Rice-wheat price ratio	Sources & Notes
Qin-Han	1:1.33	Nine Chapter Calculating Techniques, 2, exchange rate for paddy (grain?) and wheat is 20:15
E.Han,		
xingping 1	1:2.5	500,000 piculs grain, 200,000 wheat (Jin Hist)
Tang		
linde 2		Rice 5 cash per dou, wheat not set out in market (Old Tang History, 4, "Gaozong," first pt)
N.Song		
jingde 4	1:2	Between Huai and Cai, wheat price 100 cash, glutinous rice 200 (Song History, 7)
dazhong/		
xiangfu 1	1:2.5	Wheat 120 cash, rice 300
S.Song		
shaoxing 6	1:1.2	When 1 picul 2 dou commuted for rice 1 picul
qiandao 6	1:2	Wheat picul 1,500, rice picul 3 strings
qingyuan 5	1:1.4	Wheat 5,000, rice 7,000 (Song Coll.Stat.)
Ming		
hongwu 1	1:1.25	Picul rice 25 strings, picul wheat 20 strings (Ming Collected Statutes, 179)
9	1:1.25	1 oz silver commutes 1 picul rice; wheat 20 percent less (Ming Veritable Records, 105)
yongle 5	1:1.2	Wheat 25 str, rice 30 str (Ming Coll Stat)
zhengtong 1	1:1	Rice & wheat both commuted for 0.25 oz (MingHis, 78)
12	1:1.2	Wheat 1.2 piculs commutes rice 1 picul (MingVerRec)
chenghua 6	1:1.25	Wheat 0.4 oz, rice 0.5 oz
10	1:1.5	1 dou rice or 1.5 dou wheat for 10 str Certif.
hongzhi 14	1:1	Rice, wheat commute 0.3 oz silver
18	1:1	Rice, wheat commute 0.6 oz silver (MingVerRecords)
zhengde 4	1:1.33	Wheat 0.3 oz, rice 0.4 oz (Ming Veritable Rec.)
10	1:1.33	Wheat 0.3 oz, rice 0.4 oz (Ming Veritable Rec.)
jiajing 21	1:1	Rice & wheat equally at 0.45 oz
wanli 28	1:1.5	Wheat 0.4 oz, rice 0.6 oz
29	1:2	Wheat 1 oz, rice 2 oz
31	1:1.25	Wheat 0.4 oz, rice 0.5 oz
38	1:1.167	Wheat 0.3 oz, rice 0.35 oz
chongzhen 9	1:1	Rice & wheat same price
16	1:1.09	Picul rice 2.3 oz, wheat 2.1 oz (Shanxi stone inscription)

When investigating the purchasing power of silver in China or the cost of rice, there are several difficulties which are hard to avoid. The first is the lack of uniformity in weights and measures. Not only did successive historical periods use different standards, even during the same period the standards in different places were not entirely identical. The second difficulty is that prices differed in different places. These discrepancies arose from two causes.

One was the cost of transportation. In ancient times there was a saying that it cost a *dou* of coins to transport a *dou* of rice. Because China's

in England. I equate 1 quarter with 2.909 hectoliters.

[5]Cf. my "Ming Dynasty Table of Rice Prices (3)."

[6]According to the figures derived from James E. Thorold Rogers, *A History of Agriculture and Prices in England*, Vols. I and II.

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rice-producing region was in the south, consumption of rice in the north sometimes required its transport from the south. In ancient times, communications were not convenient, and the cost of transportation was frequently higher than the good's original price.

When Qin attacked the Xiongnu, and transported grain to the Bei He from the commanderies of the north, it cost 30 *zhong* to be able to deliver just 1 picul, making the cost of transportation one hundred times higher than the original price of the grain.

During the Song Dynasty's shaoxing 4 [1134], the Sichuan-Shaanxi Proclamator, Wu Jie, had two rivermen transport 150,000 *hu* of rice to Lizhou. On the average it cost over 40 strings to transport 1 *hu*.[7] Therefore, a portion or most of some rice prices is composed of the cost of transportation.

Another factor was natural disaster. In some small countries, if there is a flood or drought, the entire country feels its influence. Prices rise uniformly everywhere, with any discrepancies being relatively small. That is not the case in China. Because of the great size of its territory, while there are floods or drought along the lower Yangtze, in Sichuan an abundant harvest may be occurring, and so there may be wide discrepancies in prices between different places.

These two factors frequently operated together. For example, at the beginning of the zhenyuan period [785] during Tang, there were successive good harvests in the near northwest, while the region between the Huai and Yangtze was suffering floods. Because of the corruption of the ruling class, they at first continued to buy up rice from the latter region for transport to the north. At that time, year-old unhusked rice was selling for 150 cash per *dou* in the prefectures of Huainan. Transportation costs to the capital were 200, making the total acquisition cost for the government 350 cash per *dou*. The cost of rice in the capital was, however, only 70 cash per *dou*. Because of its condition, the year-old rice from Huainan could only sell for 37 cash per *dou*.

This shows that weather could cause the price of rice to vary by several fold between north and south. When the cost of transportation is factored in, the difference would be still larger.

The third difficulty is that figures for Chinese prices are only recorded indirectly in such sources as the veritable records and memorials of advice. We lack primary sources. In England, the thirteenth-century exchange accounts are still preserved in abundance,[8] and they contain even more precise and reliable figures.

In China, matters are not so convenient. The rice prices recorded in the *Veritable Records* of the various reigns are sometimes factual reports by local officials. Some are commutation prices of grain into cash for paying taxes originally levied in kind. Over the long run, these commutation prices may be representative of the trend of goods prices, but any particular commutation price may not necessarily be the same as the contemporary market price for that good.

During the Ming Dynasty there was also army and official salary grain. Since Ming official salaries were calculated in rice, but sometimes actually paid in silver, and their commutation rate was often far lower than the market price, most of these commutation prices cannot be used if averages are not to lose their significance.

The above difficulties can, within certain limits, be overcome. The methods or prerequisites for overcoming them are, in addition to using price data with a certain degree of selectivity, to collect a large number of items. If that is done, then abnormal local prices can be smoothed out of the averages. This is precisely why the average price of rice in China over the course of several centuries seems less unstable than the price of wheat in the nations of Europe. Europe's decade interval

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wheat prices given here are less a reflection of the purchasing power of money than of changes induced by weather. China's decade interval rice prices are more able to reflect the waxing and waning of money's purchasing power.

Prior to Emperor Yingzong [1436], Ming Dynasty prices were still calculated in Treasure Certificates. We can only calculate their equivalents in silver from the silver commutation prices of Certificates, and since the number of instances recorded is too few, it is possible that these calculated prices do not match the genuine market prices of the times.

Beginning with zhengtong 1 (1436), most prices were expressed in silver, and the number of prices recorded increases. From then until yongli 4 (1650), I have collected over 400 usable rice prices. There are never more than 13 per year, as was the case for jiajing 37 (1558). The next largest number is 11, as

[7] *Song History*, "Transportation."

[8] For the thirteenth century there are sometimes 80 or 90 up to more than 100 wheat prices per year recorded for England. For example, there are 103 wheat prices for the year 1289. There are 93 for 1290, and 92 for 1293.

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For the more than 140 years from 1259 to 1400, there are more than 7,000 wheat prices in total. Cf. James E. Thorold Rogers, *A History of Agriculture and Prices in England*.

for wanli 31 (1603) and wanli 43 (1615). The average number per year is only 2. This is quite a few less than for England, but the long-term tendency which they reveal is fairly reliably established.

If we compare the prices of rice during the reigns of different Emperors, we find that during the hongwu [1368-99] period, the average price per hectoliter was 0.46 ounce of silver. During the yongle period [1403-25] it was 0.289 ounce. The yongle period was basically one of inflation, but that was a Treasure Certificate inflation. Silver's purchasing power was high and stable.

During the xuande period [1426-36], a hectoliter averaged 0.29 ounce. During the thirty years from zhengtong to tianshun [1436-65], a hectoliter remained at 0.29 ounce, which represents a fair degree of stability. The highest price was the jingtai 7 [1456] price in the capital of 1 ounce per picul of rice.[9] The lowest was the tianshun 1 [1457] price of 0.1 ounce per picul.

Purchasing power fell somewhat during the chenghua period [1465-88] to 0.44 ounce per hectoliter. During this time, in chenghua 7, drought and hail in Shanxi and Shaanxi brought a picul to 1 ounce and more. In chenghua 20, a Shanxi drought-induced famine brought a picul up to more than 2 ounces. The lowest price is one in chenghua 22 of 0.2 ounce, a commuted price.

The average price during hongzhi [1488-1506] is 0.518 ounce per hectoliter. During hongzhi 1, there were casualties from natural disasters in the northern provinces, and a picul of grain was commuted into 1 ounce, and 2 ounces in Sichuan. In hongzhi 15, activities on the frontier brought a picul to around 2 ounces of silver. The lowest price was 0.1 or 0.2 ounce per picul.[10]

During the zhengde period [1506-22], a hectoliter averaged 0.475 ounce. During these sixteen years natural disasters were few. The highest number of disaster casualties occurred in zhengde 4 in Henan. Frontier granaries in places like Zu, Jing and Xincheng fixed the price of a picul at 1 ounce or more.

During jiajing [1522-67], the average price per hectoliter was over 0.58 ounce, which was within the range of stability. Although a picul sold for as much as 8 or 9 ounces in jiajing 37 because of a great famine in Liaodong, the price remained level in other provinces.

Natural disasters were more numerous during the wanli period [1573-1620], as during wanli 11, when a picul cost 2 or 3 ounces in Shaanxi. Even soldiers' monthly provisions were calculated at 2 ounces per picul.

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In wanli 29, because of drought in the capital province, Shandong, Shanxi, Liaodong and Henan provinces, a picul also reached 2 ounces. During wanli 30, a picul reached 4 ounces in Guiyang and Zunyi. A picul rose again to 2.2 ounces in Henan during wanli 34. During wanli 40, a famine in the Wei River valley drove a picul up to 3 ounces. The average price of rice over the whole course of the wanli period was, however, only 0.63 or 0.64 ounce per hectoliter.

During the tianqi period [1621-28], military operations were already under way in the northeast and southwest, as in tianqi 1, when after the fall of Fanyang a picul reached 12 ounces, or in a besieged city in Yunnan in tianqi 3, when a picul got as high as 190 ounces. These, however, were special prices, and cannot be used in computing the average. The average price during the tianqi period is 0.927 ounce per hectoliter.

Rice prices were in an even more chaotic state during the chongzhen period [1628-44]. Most of those recorded in the histories are abnormal prices, as for example the chongzhen 13 Shandong price of 20 ounces per picul, and one reaching 150 ounces in Henan, or the chongzhen 14 price in Linqing of 24 ounces per picul.[11] Most of the other records of prices are for 1 ounce or more, which is also the average price.

We can only consider changes caused by weather as obstacles in our study of silver's purchasing power. We must exert all our powers to remove or diminish this obstacle before we can discover the real changes in silver's purchasing power. These changes were not the consequence of manipulations by monarchs and their governments.

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[9] The prices cited in this paragraph, aside from the other works cited, are all drawn from the *Veritable Records* of the several Ming reigns. A given year's prices are on the basis of the Ming picul. The average prices for a whole year-period are in terms of the hectoliter. The silver ounce iss the treasury standard ounce.

[10] Statement by Ma Wensheng in hongzhi 8. He merely stated, "In a year of good harvest, 8 or 9 piculs of grain can be exchanged for 1 ounce of silver." Cf. *Hongzhi Veritable Record* and *Ming Officials' Memorials of Advice*, 11. He does not refer to a specific year.

[11] *Ming History*, 275, "Biography of Zuo Maodi," petition of chongzhen 14: "I came from Jinghai to Linqing. . . . A picul of rice was 24 ounces of silver. . . . Last Winter, I went to Su and Qian to confirm the words of the transport official Shi Kefa. In Shandong a picul of rice was 20 ounces, and in Henan it reached 150 ounces."

MING DYNASTY RICE PRICE TABLE (1)

Year-period	Price/hctltr (in oz silver)	Price/hctltr (in gms silver)
hongwu (1368-1398)	0.461	17.19
jianwen (1399-1402)	-----	-----
yongle (1403-1424)	0.285	10.63
hongxi (1425)	-----	-----
xuande (1426-1435)	0.291	10.84
zhengtong (1436-1449)	0.254	9.47
jingtai (1450-1456)	0.413	15.41
tianshun (1457-1464)	0.256	9.56
chenghua (1465-1487)	0.441	16.44
hongzhi (1488-1505)	0.518	19.31
zhengde (1506-1521)	0.475	17.72
jiajing (1522-1566)	0.584	21.78
longqing (1567-1572)	0.591	22.05
wanli (1573-1620)	0.638	23.81
tianqi (1621-1627)	0.927	34.59
chongzhen (1628-1644)	1.159	43.22

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Their attention was concentrated on maintaining the purchasing power of paper money, or at most on maintaining the value of coins. Silver's purchasing power was something that they were unable to manipulate.

What we wish to emphasize are the changes induced by the monetary factors. Of particular interest are changes over fixed intervals, such as changes between decades or half-centuries. Though changes in rice prices from one decade to the next were very irregular, the tendency for the price to rise is very clear.

MING DYNASTY RICE PRICE TABLE (2)

Period	Price/hctltr (in gms silver)	Period	Price/hctltr (in gms silver)
1361-1370	11.12	1511-1520	17.83
1371-1380	34.73	1521-1530	20.14
1381-1390	17.35	1531-1540	21.30
1391-1400	13.02	1541-1550	20.48
1401-1410	10.59	1551-1560	22.75
1411-1420	-----	1561-1570	22.60
1421-1430	12.87	1571-1580	19.66
1431-1440	9.63	1581-1590	25.18
1441-1450	10.41	1591-1600	25.22
1451-1460	12.38	1601-1610	26.60
1461-1470	15.07	1611-1620	22.57
1471-1480	15.33	1621-1630	36.37
1481-1490	18.39	1631-1640	33.57
1491-1500	22.31	1641-1650	47.11
1501-1510	21.30		

If we set somewhat longer intervals, then the oscillations become fewer. With intervals of fifty years, the trend in changes of silver's purchasing power stand out more clearly.

MING DYNASTY RICE PRICE TABLE (3)

Period	Average price per per hectoliter in (in grams of silver)	Hctltrs rice purchasable per kilogram of silver
Last 1/2 14thc	17.19	58.17
First 1/2 15thc	10.84	92.22
Last 1/2 15thc	16.35	61.16
First 1/2 16thc	20.19	49.52
Last 1/2 16thc	23.00	43.48
First 1/2 17thc	32.19	31.07
Average	18.90	52.91

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In studying prices calculated in silver during the Ming Dynasty, there is one fact which commands our attention, and this is the high purchasing power of silver. This was especially the case during the first half of the fifteenth century, and was something which had never occurred during the several centuries from Song through Yuan.

I suspect that the reason for this rise was mainly on the side of silver, and was not because of any great increase in the power to produce rice. Any cause on the side of silver would have had to be linked to the ability to produce silver and the supply and demand relationship for the metal.

China had not previously been a great producer of silver. Northern Song was the time when the rate of production was highest. After the crossing to the south, most of the mines were abandoned, probably because the stock of ore was supposed to have been exhausted.

From Southern Song on, China probably mainly depended for its silver on imports. During the Yuan Dynasty, communications between Asia and Europe were convenient, and there was much coming and going, so there were no obstacles to the movement of silver. After the Mongols took control over China, they used paper money to collect in exchange

for China's silver, which they transported to Central and Western Asia. At that time those regions used only silver for money, whereas in China circulation of gold and silver was prohibited.

At the beginning of Yuan, local merchants carried silver to the southwest, and bought gold from the people living there at an exchange price of 1:5.[12] Evidently the people living there used silver, and so Chinese silver flowed in that direction.

Of greater significance is the fact that in Central and Western Asia minting of silver coins had stopped since the beginning of the eleventh century because of an outflow of silver, but in the middle of the thirteenth century minting was renewed.

The silver they used then was from China, because most of the silver of Western Asia contained lead, and so turned black, whereas Chinese silver contained antimony, and turned white. The new silver coins minted then by Trebizond and Cyprus in Western Asia contain the word "white" in their names.[13]

Because of the outflow of Chinese silver, as soon as the Ming Dynasty formally adopted use of silver, it became evident that the supply was inadequate. In Europe, however, from the end of the thirteenth century to the middle of the fifteenth century, because the shallow mines were becoming exhausted and there was no way to pump out water which accumulated in the deeper shafts, the ability to produce silver weakened, and a number of cities and localities banned the export of gold and silver.[14]

In China, the demand for silver was increasing. Silver had only been a secondary means of payment during the Song Dynasty, and it was not in general use during the Yuan Dynasty. It was during the Ming Dynasty that silver became a full-fledged money, especially beginning with the '30s of the fifteenth century, when the government formally abolished the prohibition on use of silver, and the majority of payments were being made in silver.

This is precisely the time when silver's purchasing power was highest. The Great Ming Treasure Certificates were still being issued and circulated then, but the people took up the use of silver, precisely because the paper money was being depreciated.

They were searching for some way to preserve the value of their personal wealth. This demand for silver exceeded normal demand for it as a money employed for circulating commodities. Under such circumstances, the rise in silver's purchasing power would have been very natural.

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The movements of gold and silver within East Asia also aided the rise in silver's price. Western silver had probably been flowing into China ever since Southern Song, and there had also been a tendency for Chinese silver to flow into Japan. This was because the price of silver in Japan was higher than in China, whereas Japan's gold price was lower than China's.

Viewed over the whole course of the Ming Dynasty, however, the purchasing power of silver underwent a slight fall. The largest part of this fall occurred during the latter half of the fifteenth century and the first half of the seventeenth century. We can explain this fall in two ways:

First, copper coins rose in price. Silver was only circulated among the middle and upper classes, or used in large figure transactions. Pint- and peck-using petty commoners still used copper cash for their daily transactions, and most people fit into this category. That is why prices, especially retail prices, were often expressed in terms of copper cash. The price in silver of rice was sometimes calculated from its price in copper coins, and so when the price of coins rose, that could force down silver's purchasing power.

Second, production of silver increased. It was forbidden to open silver mines during the hongwu period, and in hongwu 24 [1391], only 24,740 ounces of silver were produced.[15] Silver mines were opened in Shanzhou and Fujian during the yongle and xuande periods. Hence in xuande 5 [1430], the production of silver increased to 320,297 ounces.[16]

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[12] *Marco Polo* (Everyman's Library edition), ch. XLIII.

[13] Robert P. Blake, "The Circulation of Silver in the Moslem East Down to the Mongol Epoch," *Harvard Journal of Asiatic Studies*, Vol. II (1937), 291, 328.

[14] W. Sombart, *Der Moderne Kapitalismus* (Sun Yatsen Cultural and Educational Institute translation), 1, part 2, fascicle 4, pp. 405-406.

[15] *Ming Veritable Records*.

[16] *Record of Daily Knowledge*, "Silver": "At the beginning of the dynasty, none of the Empire's land taxes were paid in silver. Only the mining excise was in silver. The *Veritable Records* records the quantity taken in at the end of each year. In hongwu 24, there was but 24,740 ounces. By xuanhe 5, it had reached 320,297 ounces. This was the rate for the year." *Ming History*, "Mines and Smelters": "During yongle, eight silver mines were opened on Fenghuang Mountain in Shangxian, Shanzhou. Officials were sent to Huguang and Guizhou to collect the gold and silver excise. Eunuchs and censors were also sent to check on them. Three mines were also opened in Ma'an in Puchengxian, Fujian. . . At the beginning of Emperor Xuanzong's reign, the Fujian excise was somewhat reduced. Afterward it increased to over 40,000, and the Zhejiang excise also increased to over 90,000." *Ming Veritable Records*.

Though there were several prohibitions during this period, they were of very short duration, and by the tianshun and chenghua periods [1457-88], large scale mining again got under way. In Yunnan alone production was 100,000 ounces per year.[17]

The Ming Dynasty had many trade links with the South Seas, from which China could have imported silver. Some Korean silver could also have flowed into China. Korea's gold-silver exchange ratio in xuande 7 (1432, the Korean Emperor Sejong's [Chinese: Shizong] year 14) was between 1:11 and 1:11.7. Four years later it had changed to between 1:6.7 and 1:7.5. In xuande 6, the ratio in China was 1:6, and hence the Koreans could export silver to China at a profit.

The oscillations during the first half of the seventeenth century can also be explained in two ways: First, natural and man-made disasters caused production to decrease and prices to rise. Second, there was an increased supply of silver. There were two reasons for the increased supply of silver. One was the expenditure of the treasury's silver. The other was the inflow of low priced American silver.

During the last years of Ming wasteful expenditures increased enormously. The reasons for this increase were two: employment of soldiers and government expenditures. Soldiers were used for labor service in Ningxia and Bozhou. Over the course of seven years these operations cost the equivalent of more than 26 million treasury ounces of silver. During the hongzhi and zhengde periods [1488-1522], the Ming court had only spent 430,000 treasury ounces per annum on border defense. During the jiajing period [1522-67], they increased spending to more than 2.7 million, and during wanli times [1573-1620] to more than 3.8 million.
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In addition to its military activities, the court also engaged in other wasteful expenditures. The marriages of the Emperor's children took 24 million treasury ounces out of the treasury, and caused the Board of Revenue to proclaim bankruptcy.[18] The number of supernumerary personnel reached a level rarely encountered in history.

Liu Tiqian drew a comparison on this point. He said that historically the number of men in the official ranks had been 7,500 during Han, and 18,000 during Tang. The number of supernumeraries was very large during Song, reaching 34,000, but for his own dynasty, beginning with chenghua 5 [1469], military officials alone exceeded 80,000 in number. The total number of those in civil and military positions was more than 100,000.[19] In the last years there was a folk rhyme which went: "Bureaucrats are as cheap as dogs, Big shots walk the streets in mobs."[20]

In addition to emptying the treasury of silver to meet these expenses, the government also opened mines, increased taxes and minted coins. All three of these activities were similar in that they were all aimed at money-making, since from the middle years of the dynasty on, large quantity payments were mostly made in silver, and so there was no choice but to obtain silver by opening mines.

Mining began in wanli 24 [1596], when the Korean question had still not been resolved. At first it was limited to the Imperial Domain, but later expanded to Henan, Shandong, Shanxi, Zhejiang and Shaanxi. This measure did not induce violent price rises since Chinese silver mines were not rich, but it had other very bad effects, because the eunuchs took charge of its administration.

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[17] *Ming History*, "Mines and Smelters": "In tianshun 4, the eunuch Luo Yong was ordered to Zhejiang, Luo Gui to Yunnan, Feng Rang to Fujian, and He Neng to Sichuan. The amount of the excise was about as of old in Zhe and Min. In Yunnan, it was something over 100,000, and in Sichuan something over 13,000, for a total of more than 183,000." However, most of China's silver production was in Yunnan.

Song Yingxing (a man of the Ming), *Natural and Man-made Products*, latter part, "Silver": "Of all the silver China produces, Zhejiang and Fujian have had mines from of old. At the beginning of the dynasty, they were sometimes open, sometimes closed. In Jiangxi, the three commanderies of Rao, Xin and Rui have ores which have never been exploited. In Huguang, there is Chenzhou. In Guizhou, there is Tongren. In Henan there is Yiyang, Zhaobao Mountain, Ningqiushu, Bohushi, Gaozuier . . . Sichuan . . . Gansu . . . but what is produced by eight provinces does not come up to half the production of Yunnan. . . ."

[18] *Ming History*, 20, "Annals of Emperor Shenzong, 1," wanli 27, intercalated 4th month: "For the marriages of the Emperor's sons, it was proclaimed that 24 million ounces of Imperial Granary silver be withdrawn. The Board of Revenue informed the treasury and ordered a strict check into the Empire's accumulated revenue."

[19] *Ming History*, 214, "Biography of Liu Tiqian." *Ming History*, 275, "Biography of Jie Xuelong," tianqi 2: "The Ruler said that on the left bank of the Liao the number of soldiers of old was some 94,000, and their annual supply came to 400,000. Now the number of troops at the pass is only a little over 100,000, but their monthly supply is 220,000. The Liao soldiers have all fled to the gate of the pass. . . . At the beginning of the dynasty there were some 5,400 civil functionaries, and 28,000 military officials. In the time of Emperor Shenzu, the civil ranks increased to 16,000, and the military to 82,000. By now, no one knows how many fold they have increased in number."

[20] *Date Grove Miscellaneous Table*, "Humane Collection."
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First, local officials reported the locations of ore deposits. Then, the eunuchs would join these local officials in mining the ore. If they did not succeed in obtaining silver, local residents would have to put out cash to make up the loss. If there was the least disobedience, they would arrest the offender. They confiscated fields and homes if there was some sign that ore was present beneath them. Court officials presented over a hundred petitions of remonstrance, but, isolated in the Inner Palace, Emperor Shenzong never listened to them.

Nevertheless, all over the world during the sixteenth century, the opening of mines was a universal phenomenon among progressive societies. This had the effect of promoting the development of capitalism.

The failure of the movement to open mines in China and the severe criticism it evoked were, of course, the consequences of official extortion, but another factor was the backward attitude of the people.

The people's superstitious belief in geomancy under a feudal society rendered them unwilling to dig up other people's ancestral graves, and they were even more unwilling to let others dig up their own ancestral graves. In the old days, the Chinese generally preferred hilly ground for graveyards, and these were frequently just the spots containing rich veins of ore.

There was an objective basis for the origins of the concepts of geomancy: People hoped to obtain equitable treatment in earning a living, but in actual fact they encountered a number of inequities in trying to make a living: An individual's gains or losses, a family's rise or fall, all depended on whether it enjoyed good or bad luck. Disaster or good fortune, as well as glory or disgrace, nobility or base origins, none of these things had any necessary connection with an individual's virtues, talents, accomplishments or contributions. Optimistic men would take up weapons to compete with each other, hoping to use

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military force to change society. Pessimists would believe in fate or in geomancy. This is one important reason why China's ancient mining trade did not become well developed.

During the wanli period [1573-1620] of Ming, the opening of mines and the increasing of taxes were carried out simultaneously. Because of military requirements they increased the land tax and land rents.

Names of other newly added or increased taxes proliferated, such as the Tianjin shop excise, the Guangzhou pearl collecting tax, the Lianghuai salt tax, the Zhejiang, Min and Guang merchant ship tax, the Chengdu tea and salt tax, the Chongqing named tree tax, the Yangtze River boat tax, the Jingzhou shop tax, and the Baozhi fish and reed tax. These too were managed by the eunuchs, whose extortion reached everywhere, bringing grief to the entire country.

All of the above factors were capable of increasing the quantity of silver in circulation, and of speeding up its velocity of circulation. Furthermore, the inflow of low-priced foreign silver must also have influenced the metal's purchasing power.

Silver flowed in along several routes. The first sourse which is worth mentioning was the importation of Japanese silver. At the beginning of Ming, Chinese silver often flowed into Japan in the form of gifts brought by ambassadors to Japan, but the quantities involved were not large.

However, of the gold and silver which flowed into China from Korea, some of the silver was indirectly from Japan, because Japanese silver production increased during the jiajing period [1522-67], and its gold-silver exchange ratio was 1:10.[21] The ratio in China then was between 1:6 and 1:7, and so both Chinese and Japanese merchants would have found it profitable to bring Japanese silver to China. In fact, Chinese merchants often went to Japan to exchange Chinese goods for Japanese silver.[22] Japanese merchants would ship Japanese silver to China so as to buy Chinese goods.[23] Monetary demand in Japan then for silver was not large, whereas China was right in the midst of a period of increasing circulation of silver.

These inflows of silver into China were not only by way of Chinese and Japanese merchants, but also occurred indirectly by way of the Portuguese and Dutch. The Portuguese transported Chinese silk to Japan by way of Macao, and Japanese silver was brought back to Macao to buy Chinese silk thread and heavy silk cloth.[24]

By the wanli period Japanese silver production had increased, and silver's purchasing power was lower in Japan than in China. For example, in wanli

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[21]Kobata Jun, *History of the Circulation of Money in Japan.*

[22]Korea's *Yi Dynasty Emperor Mingzong's* [Korean: Meijong] *Veritable Record*, 8th year, 7th month, xinwei: "The state of Japan produces much silver. Therefore the people of the Superior State go back and forth to trade and sell, and sometimes, blown by the winds and currents, they work as pirates along our country's shores."

[23]*Compiled Illustrations for Sea Planning*: "Japanese barbarian merchants use only gold and silver to pay for goods, unlike those of the western borders, who bring goods to exchange."

[24]Lindchoten, *Record of East Indian Navigation.*

43 [1615], an ounce of silver could only buy 1.13 hectoliters of rice in Japan, whereas in China it could purchase 1.74 hectoliters. During tianqi (1620-1630), the Japanese gold-silver exchange ratio was 1:13,[25] but China's was between 1:8 and 1:10, and so Japanese silver was transported to China by Chinese and Dutch merchants. By then the Dutch had usurped the position of the Portuguese.

There are no formal statistics on just how much silver came into China in this fashion. We do not even have comprehensive

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estimates. It is said that during the 46 years from wanli 29 [1601] to yongli 1 [1646], around 2.8 million kilograms came in from Japan,[26] which is equal to 7,520,000 treasury ounces.

The main source from which silver flowed into China was, however, America. Columbus reached America in hongzhi 5 (1492), and thereafter America's enormos stores of gold and silver fell into the hands of Europeans. Most of it was shipped back to Europe. A portion of it was carried to China by Portuguese, Spanish, Dutch and English merchants to buy Chinese goods. Another portion was transported directly from America to the Orient.

The Portuguese and Dutch brought a certain amount of this silver, but there is no way to estimate how much, because a portion of it was Japanese silver. The silver brought by the Spanish mainly came via the Philippines. They brought silver or silver dollars from their American colonies to the Philippines to buy Chinese goods from the overseas Chinese there, and the silver was then brought to China by these overseas Chinese. During the jiajing [1522-67] and wanli [1573-1620] periods, a tax of 150 ounces of silver was collected from every ship coming from the Philippines as a surtax over and above the sea and land supply imposts.[27] This was a tariff on imported silver.

There are no reliable statistics on the total quantity of silver imported into China. In wanli 14 (1586), Pedro de Rojas of Manila wrote in a letter to King Phillip II of Spain that 300,000 pesos of silver were entering China annually, and that in the current year this amount had increased to more than 500,000 pesos.[28] A letter from the Manila principal teacher to Phillip II in wanli 26 said that the million pesos of silver coins annually transported from New Spain (Mexico and Peru) was all being exported to China.[29]

Therefore, during the seven or eight decades from longqing 5 (1571), when the port of Manila opened, to the end of Ming, the amount of American silver which could have flowed into China via the Philippines could haave been more than 60 million pesos, the equivalent of over 40 million treasury ounces.

A portion of the American silver being transported to Spain was plundered enroute by the English, and Englishmen coming to the Orient to engage in trade employed this American silver. It mainly went through the hands of the British East India Company. This company was established in wanli 28 [1600], but it was not until chongzhen 10 [1637] that it sent the ship *Catherine* to China. Before long, revolution broke out in England, and few ships came thereafter, so that not much silver was brought to China by them during the Ming Dynasty.

There were limits to the amount of foreign trade carried on during late Ming. The number of ships coming and going was not large. The silver they brought in

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was still not enough to cause any violent perturbations in Chinese prices. The rise in the price of rice then was in part really due to a reduction in production, which we can attribute to military moves and famine. Because extortionate miscellaneous taxes at the end of Ming caused people to flee from responsibilities they could no longer bear, and natural disasters multiplied, production decreased, and naturally silver's purchasing power must also have fallen still lower.

There may be people who will say that the rise in rice prices during the Ming Dynasty was not because of the fall in the price of silver, but because of an increase in population causing an approach to a point of diminishing returns from land. There is a logic behind this thesis which makes it very hard to criticize.

It would, however, be a sufficient refutation of this position to show that the fall in the price of silver did not exceed the rise in the price of copper and of coins. The price of copper in hongwu 1 was 5 ounces of silver per 100 catties. By wanli 5, it had risen to 7 ounces, and after wanli 25 to 10.5 ounces. At the beginning of Ming, the price of 1,000 copper coins was 1 ounce of silver. After chenghua 1, an ounce could only be exchanged for 800 cash; after hongzhi 1 this price fell to 700 cash, and during the

[25] *History of the Circulation of Money in Japan.*

[26] For the estimate of Arai Hakuseki, cf. Otake Bunfu, *Studies in Modern Chinese Economic History*, p. 57.

[27] Zhang [?], *Eastern and Western Oceans Investigation*, 7, "Investigation of Supply Taxes."

[28] E. H. Blair and J. A. Robertson, *The Philippine Islands*, Vol. VI, p. 269.

[29] *Ibid.*, Vol. X, p. 145.

wanli period gold-reverse coins rose to 400 cash to the ounce. After tianqi 1, an ounce of silver could only be exchanged for 550 cash.

A glance at other goods prices demonstrates that the rise was not limited to rice prices alone. We can try heavy silk as an example: There are not many heavy silk price records, but during the two centuries from the latter half of the fourteenth century to the end of the sixteenth century, I have been able to collect for this work some twenty heavy silk prices, and these show a tendency to increase.

MING DYNASTY HEAVY SILK PRICE TABLE

Period	Price per bolt (in ounces silver)
Last 1/2 14thc	0.5
First 1/2 15thc	0.44
Last 1/2 15thc	0.63
First 1/2 16thc	0.7
Last 1/2 16thc	0.7

Plain cloth also had a tendency to rise in price. In hongwu 1 [1368], a bolt cost from 0.125 to 0.25 ounce. In yongle 5 [1407], calculating on the basis of the commutation price, a bolt ran from 0.3125 to 0.375 ounce. The commutation price was between 0.075 to 0.1 ounce in xuande 1 [1426]. These last two years' prices were not, however, genuine market prices. In chenghua 5 [1469], a bolt was 0.25 ounce; in hongzhi 6 [1493], it was 0.15; in hongzhi 20 [1507], 0.3; at the end of Ming from 0.3 **[712]**
to 0.4 ounce. The tendency to rise is very evident.

The speed of the rise in heavy silk's price does not, however, seem to have been comparable to the rise in plain cloth, and was also slower than rice's increase, though the rate of increase for plain cloth seems to have been greater than that of rice, and so these increases were not a reflection of some difference in the productivity of manufacturing as compared with agriculture.

Perhaps there were differences in the plain cloth itself at different times, and this difference would have been reflected in a diproportional rise in prices. Based on the few plain cloth-rice exchange price ratios which we possess, there was a tendency for the cloth price of rice to fall, but this was confined to the period before the mid-sixteenth century jiajing and wanli periods. After that time, the rate of speed of the increase in rice prices increased, but unfortunately we lack plain cloth prices to use for comparison.

MING DYNASTY PLAIN CLOTH-RICE EXCHANGE PRICE RATIO TABLE

Period	Bolts of plain cloth per picul of rice	Source
hongwu 1	0.4-0.8	MingCollStatutes
yongle 5	0.83-1.0	MingCollStatutes
xuande 4	1.0	MingVeritRecords
tianshun 1	0.75	Letters on the Profits and Ills of the Regions of the Empire
chenghua 5	1.0	MingVeritRecords
hongzhi 12	1.2	MingVeritRecords
zhengde 6	1.0	Letters on the Profits . . .
wanli period	0.2	With Literature Calculation Guide
chongzhen 16	0.087	Stone inscription[30]

No clear tendency can be discerned for cotton prices because the sources are insufficiently numerous. We can only say that cotton prices during Ming were lower than during earlier dynasties.

At the end of Yuan, a catty of cotton was worth around 1.15 ounces of silver.[31] At the beginning of hongwu, a catty was only equal to 37 cash, or 0.037 ounce of silver. In both hongwu 28 and 30 [1395, 1397], a catty was 0.1 ounce. By yongle 5 [1407], it had reached more than 0.3 ounce. In hongxi 1 [1425] and xuande 4 [1429], it was 0.06 ounce per catty, in hongzhi 6 [1493] it was back to 0.1 ounce,

[30] Someone had a number of prices carved on a stone in the wall of a small temple in Huazhou, Shaanxi in chongzhen 16. These included: paddy rice and rice in husk, per *dou*, 2.3 ounces; wheat, 2.1 ounces per *dou*; salt, 0.09 ounce silver per *sheng*; clear oil, 0.16 ounce per catty; pork, 0.18 ounce per catty; cotton bolls, 0.32 ounce per catty; shuttle plain cloth, 0.05 ounce per *chi*. These prices are extrordinarily high owing to the chongzhen 8 and 9 plague of locusts and drought, and the chongzhen 13 and 14 great famine. Li Zichun, "A Piece of Historical Material Concerning Late Ming Prices," *Archeology*, 10 (1960), 50.

[31] *Ding Ju Calculating Methods*: "An ounce of silver is worth 5 ounces of Certificates. A catty of cotton is worth 5.74 ounces of Certificates."

in hongzhi 16 [1503] it was 0.08 ounce, in zhengde 3 [1508] and jiajing 10 [1531] it was 0.5 ounce, and at the end of Ming it was 0.16 ounce, except in famine-stricken Shaanxi, where it was 0.32 ounce.

Cotton, like grain, was influenced by climatic changes. Therefore, not only was it unstable in price itself, the cotton-grain exchange price ratio was also unstable. If we use the catty as our unit for both cotton and rice, then the historical cotton-grain exchange price ratio was between 1:2 and 1:100, and it is all but impossible to discern what the normal ratio might have been. The greatest discrepancies in price mostly occurred when cotton bolls were expensive, but

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in chongzhen 16 [1643], it was because the price of grain was higher. At times of abundant harvest for both, perhaps it ranged between 1:20 to 1:30. As the cotton and grain prices I have used are not from the same places or for the same times, it is very hard to say how accurate are the exchange prices I have calculated.

HISTORICAL COTTON-GRAIN EXCHANGE PRICE RATIO TABLE[32]

(Prices in parens not from the same place or time)

Period	Number of catties of rice 1 catty of cotton bolls could exchange for
Song jiayou (1056-1063)	(77-186)
xining 7 (1074)	15
yuanfeng (1078-1085)	(187)
shaoxing 1 (1131)	(20)
2 (1132)	(124)
longxing 2 (1164)	(127)
Yuan zhizheng 15 (1355)	108
Ming hongwu 1 (1368)	19
28 (1395)	32
yongle 5 (1407)	134
xuande 4 (1429)	32
hongzhi 6 (1493)	(22)
18 (1505)	(16)
jiajing 10 (1531)	(129)
End of Ming (mid-17thc)	20
chongzhen 16 (1643)[33]	2

[32] A hectoliter of rice is reckoned at 156 market catties, or 78 kilograms.

[33] Shaanxi stone inscription. Cf. note 30 above.

By contrast, the rice-salt exchange price ratio was relatively stable: During the tianbao period [742-56] of Tang, a *dou* of rice and a catty of salt stood at an exchange ratio of 1:0.75. In xuanhe 4 [1122] of Song, it was 1:0.4; during Yuan's zhizheng 12 [1352], it was 1:0.7; in zhizheng 15, it was 1:0.19; in Ming's hongwu 1 [1368] it was also 1:0.7; and in yongle 5 [1406] it was 1:0.74.

We can also discern the tendency for silver to fall in price from changes in the gold-silver exchange price ratio. Changes in that ratio were irregular, but not very disorderly. After Qin and Han times, it was fairly stable, and it was not until the Song Dynasty that very large changes in it occurred, caused by a sharp rise in the price of gold. Thereafter the price of gold fell back, and by Yuan the ratio was between 1:7.5 and 1:10, and in some places ratios of 1:6 and 1:5 prevailed.

During the more than two centuries of the Ming Dynasty,

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there was a tendency for silver to gradually fall vis à vis gold. The early Ming ratio of 1:4 or 1:5 had become 1:10 and 1:13 by the end of the dynasty.

MING DYNASTY GOLD-SILVER EXCHANGE PRICE RATIO TABLE

Period	Number of ounces of silver for which 1 ounce of gold exchanged	Source
hongwu 1 (1368)	5	Ming Coll Stat, "Coins"
8 (1375)	4	Ming His, "Food & Money,5"
18 (1385)	5	MingCollStat, "Taxes" & Ming His,"Land & Corvee Tax"
19 (1386)	6	MingVeritRec & InvLitRemCon
28 (1395)	5	MingHistDrft, "TrFood&Money"
30 (1397)	5	Ming Coll Stat, "Taxes"
yongle 5 (1407)	5	InvLitRemCont, "InvCoins,4"
11 (1413)	4.8	Book of Ming
xuande 1 (1426)	7.5	Ming Coll Stat, "Taxes"
	4	Ming Verit Rec
6 (1431)	6	Ming Verit Rec
chenghua 17 (1481)	7	Ming Verit Rec
hongzhi 15 (1502)	9	Ming Coll Stat

jiajing 9 (1530)	6	Ming Coll Stat
13 (1534)	6.363	Letters on the Profits and Ills of the Regions of the Empire
longqing 2 (1568)	6	Famous Mountain Hoards
6 (1572)	8	Ming Verit Rec
mid-wanli (1596)	7.5	Record of Daily Knowledge
48 (1620)	8	Bataweiya Diary
mid-chongzhen (1635)	10	Record of Daily Knowledge, Records of the British East India Company
	13	Record of Daily Knowledge, Record of price ratio on left side of Yangtze

The rise in the price of copper also reveals the tendency for the price of silver to fall. I have previously stated that in hongwu 1, 100 catties of copper were worth 5 ounces of silver; in jingtai 4 [1453] they were worth 6 ounces; in wanli 5 [1577], 7 ounces; in wanli 25 [1597], 10.5 ounces; and during the tianqi period [1621-1628], 14 ounces. Therefore, the silver-copper exchange price ratio went from 1:320 in hongwu 1 to 1:112 during the tianqi period. The fall of silver against copper occurred to a degree almost equal to that of its fall against gold. **[715]**

MING DYNASTY SILVER-COPPER EXCHANGE PRICE RATIO TABLE

Year	Number of ounces copper one ounce of silver can be exchanged for	Source
hongwu 1	320	Ming Coll Statutes
jingtai 4	266	Ming Verit Records
wanli 5	229	Ming Verit Records
25	152	Winter Official's Record of Affairs
44	152	Winter Official's Record of Affairs
tianqi period	112	Matters Concerning Minting

The fall in Ming silver prices can also be seen in terms of several important domestic animal prices, but compared to previous dynasties, even after their rise, Ming prices cannot be considered particularly high. Prices during wanli times were approximately double those of the hongwu period. These were higher than Yuan prices because the Mongols' economic foundation was the raising of livestock, and so the prices of domestic animals were especially low then. Compared with the Qin and Han levels, wanli prices cannot be considered high.

The price of horses, to take one example, had displayed a tendency to fall ever since Tang times. In zhenguan 10 [636], a horse was only 25,000 cash.[34] After the An-Shi disorders in the middle of the next century, it rose to 160,000, but that was a time when prices in general were high, and so there is nothing odd about such a price. During Northern Song, the price of a horse ranged from over 10,000 to more than 30,000, and this was reckoned in Reduced-hundreds. The average price was around 20,000.[35] This was probably because Northern Song did not treat military preparations as important.

The price given in the Ming hongwu 1 estimate of the values of stolen goods was set rather high. The nominal price in a horse market like that in Wulangxi in yongle 4 [1406] was 15 piculs of rice or 3 bolts of heavy silk for an upper grade horse, and 8 piculs of rice or 1 bolt of heavy silk for a lower grade horse.[36]

If we use a rice price of 0.3 ounce per picul, and a heavy silk price of 0.45 ounce per bolt, then an upper grade horse was equal to 4.35 ounces of silver or 4,350 cash, which was the same as the price of a horse in the western frontier region during Western Han times. In jingtai 1 [1450], the price of a horse in the capital ranged from 6 to 8 ounces, and was from 3 to between 4 and 6 ounces in Shanxi. These prices are congruent with variations in other local prices.

In hongwu 1, cattle cost 3.125 ounces per head. One horse was worth three head of cattle, so it is evident that cattle prices were lower. Although a

[34] *New Tang History*, 50, "Monograph on Soldiers."

[35] *Yuan History*, 43, "Annals of Emperor Shun, 6."

[36] *Emperor Taizong's Yongle Veritable Record. Ming History*, "Treatise on Food and Money: Horse Markets," contains four grades of horse prices during yongle. An upper grade horse was 8 bolts of heavy silk, 12 bolts of plain cloth; a second ranked horse was 4 bolts of heavy silk, 6 bolts of plain cloth; a horse of the third grade was 3 bolts of heavy silk, 5 bolts of plain cloth; a lowest grade horse was 2 bolts of heavy silk, 4 bolts of plain cloth. Converted to silver, a horse was 3.234 ounces, or 3,234 cash, which is almost the same.

horse could also be exchanged for three head of cattle during Western Han, during Tang's yongzheng 4 [653], the price of a horse was only twice that of an ox. In huichang 2 [842], a stockaded ox was only 500 cash, which was equal to just 0.34 or 0.35 ounce of silver. In Liao's baoda 5 (Song's xuanhe 7 [1123]), the prices of horses, oxen and sheep were fixed. A horse was worth 5 carts of grain, an ox was 3 carts, and a sheep was 1 cart, so a horse was still not quite twice the price of an ox. In Ming's hongwu 1 [1368], sheep cost 0.5 ounce per head,

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whereas a pig cost 1 ounce. During Western Han, a pig and a sheep were the same price.

Actually, there were very few wanli prices which were not higher than prices during hongwu. Pepper, for example, was only 0.1 ounce per catty at the beginning of hongwu. During wanli, it was 0.7 ounce per catty. At the beginning of hongwu, cinnabar was only 0.8 ounce per catty. During wanli a catty was 3.6 ounces. A catty of copper rose from 0.05 to 0.15 ounce. A catty of tin rose from 0.05 to 0.09 ounce. A catty of iron rose from 0.012 to 0.04 ounce.

Among all prices, the price of books is of particular significance because books are important instruments for the transmission of culture. The importance of books lies mainly, of course, in their contents. That substance is influenced by the height of a particular culture. The height of book prices is influenced by a culture's breadth, and the two taken together are a reflection of a society's cultural level, and can also influence this level.

The history of Chinese book prices has not been well studied because of scarcity of materials. Though there have been book stores ever since Han times, there are very few surviving records of book prices. In principle, book prices should change in parallel with the prices of other goods, and jointly with them reflect money's purchasing power.

There are, however, some special factors influencing book prices. For example, the invention of printing had an enormous influence over book prices, and this influence had no particular relevance to changes in the value of money.

There are other rules governing the changes in the very few woodblock edition book prices which we possess. Because China very early discovered and widely employed the technology of printing, Chinese book prices should have fallen substantially since Song and Yuan times. The printing blocks of the Song Dynasty's National Academy could have been borrowed for printing, and it would only have been necessary to pay for paper and ink.

HISTORICAL PRICES OF SIX DOMESTIC ANIMALS
(in treasury ounces of silver)

	Qin-Han[37]	Yuan Dyn[38]	Ming hngwu 1[39]	wanli[40]
horse	22.46	14.37	10.00	20.00
cattle	8.00	1.50	3.125	5.55
sheep	1.46	0.59	0.5	0.54
pig	1.23		1.0	1.5
dog	0.45		0.125	0.12
chicken	0.11	0.04	0.04	0.45

Books from officially carved blocks were sold at fixed prices. It is said that Wang Qi had carved and printed the *Collected Works of Du of the Board of Works* [i.e. Du Fu's collected works. EHK] in an edition of 10,000 for sale at only 1 string in coin.[41]

[37]According to the average of prices in the *Nine Chapter Calculating Techniques*, converted into treasury ounces. I use a gold price of 625 cash per ounce (if a catty was 6,520 cash, then the price was even higher). I use a silver price of 125 cash. An ounce is equated with 19.2 grams. If we were to follow the prices in *Historical Records*, "Biographies of the Moneymakers," the figures would be from ten to a hundred times higher.

[38]According to the average of figures from Zhu Shijie, *Calculation Techniques Primer*. I have not used several doubtful figures. I convert 5 strings into 1 ounce of silver.

[39]According to the *Ming Collected Statutes*, "Hongwu Calculation of Thefts' Values."

[40]Horse and cattle prices are averages of the prices in *With Literature Calculation Guide*, but this work includes two figures copied from *Nine Chapter Calculating Techniques*, and I have not used them here. Also, according to "Memorials of Advice of Governors General of Four Zhen" (*Mystical Observation Hall Collectanea*, continued collection), 6, "Petition Requesting Discussion of the Price of Horses," in wanli 8, 4th month, the price of a horse ranged from 12 to 18 ounces. In wanli 14, a Board of War communication set a regulation for collecting 30 ounces of silver per horse. If we average these three prices, we get a figure of 20 ounces per horse. The prices for sheep, dogs and chickens are drawn from *Wanshu Miscellaneous Record*.

[41]Wang Shizhen, *Residing at Ease Record*. Cf. Ye Dehui, *Pure Words from the Book Grove* (Zhonghua shuju edition), p. 180.

This probably refers to the jiayou 4 (1059) Suzhou woodblock edition in twenty *juan* and an appendix. At that time 1 string was equal to 1 ounce of silver, and if the book was divided into
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ten fascicles, each fascicle only cost 0.1 ounce of silver, so no wonder the gentry competed to buy it.

In Southern Song's shaoxing 17 [1147], there was a woodblock edition of Wang Yucheng's *Small Nourishment Collection* in 30 *juan*, divided into 8 fascicles, with a total of 163,848 characters. It sold for 5 strings diminished, equal to 1.7 ounces of silver, which was 0.2 ounce per fascicle. In shaoxing 28, Kong Pingzhong's *Sayings of the Generation Continued* appeared in a 6 fascicle set. The cost of printing it was only 815 cash full, or 141 or 142 cash per fascicle. In chunxi 3 [1176], Ceng [Tong?]'s *Pure Words on the Great Changes* came in a 20 fascicle set, with a list price of 8 strings full, equal to 2.67 ounces of silver, making each fascicle only 0.13 ounce. If the blocks were rented for printing, the rental fee was only 1 string 200 cash full. In chunxi 10, the Xiangshanxian study edition of *Han Talents* in 10 *juan* divided into 2 fascicles, had a list price of 600 cash full, equal to 0.2 ounce of silver, or 0.1 ounce per fascicle. If the blocks were rented for printing, the rental fee was only 100 cash full, and labor, ink and transport cost came to 160 cash full.[42]

I have not yet discovered any material on Yuan Dynasty book prices. I have only the price of labor for carving the printing blocks. In zhizheng 3 [1343], the carving of Zhang Xuan's *Jinling New Gazetteer* in 15 *juan*, divided into 13 fascicles, altogether cost 143 ingots 29.899 ounces worth of Zhongtong Certificates. Silver then was probably priced at 30 strings of Zhongtong Certificates per ounce. Therefore, over 143 ingots worth of Zhongtong Certificates were worth 239 ounces of silver, or 18.4 ounces per fascicle.[43] If we reckon 20,000 characters to the fascicle, then it only cost 0.092 ounce of silver to carve 100 characters, which is not much. Moreover, free sale and purchase of gold and silver were generally prohibited during Yuan, which lowered their prices, and raised the prices of commodities when expressed in gold or silver.

Book carvers' wages were lower during Ming. To carve the blocks for *Ancient Annotations to the Thirteen Classics* only required something over 100 ounces. During the jiajing period, the labor for carving a page containing about 500 characters was only a bit over 0.15 ounce of silver. At the end of the chongzhen period, it was nearly the same, with 0.03 ounces of silver needed to carve 100 characters.[44]

As a consequence, Ming Dynasty book prices were lower. During the jiajing period, when the Japanese bought books in Suzhou and Ningbo, the *Crane Grove Jade Dew* in a 4 fascicle set cost 0.2 ounce of silver, or only 0.05 ounce per fascicle. *Investigation of Literary Remains* cost 0.9 ounce. The *Pharmacoepia*, in 10 fascicles, was 4.9 ounces. *Unusual Teachings and Good Recipes* was 0.7 ounce.[45]

Some of these books have high, some low prices, probably because of the nature of their editions. The *Pharmacoepia*, for example, probably had line drawings, but that the *Investigation of Literary Remains*, a massive work of 348 *juan*, should have sold for only 0.9 ounce of silver is hard to credit. It may be there is a transcription error or some other reason for the discrepancy.

In summary, ever since the invention of printing, there had been a tendency for the prices of Chinese books to fall, and they reached their lowest point during the Ming Dynasty. This tendency was in keeping with the overall trend in the purchasing power of silver, since the prices of other goods calculated in silver were also lower during Ming than during Song and Yuan.
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[42]The book prices used here all all based on the figures quoted in *Pure Words from the Book Grove*, 6. They are then converted into silver on the basis of the contemporary price of silver.
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[43]Ye Dehui did not understand the nature of Yuan Dynasty money. He supposed that 1 ingot of Zhongtong Certificates meant 50 ounces of silver, and so he calculated that the carving of 1 *juan* required over 440 ounces of silver. He stated "in ancient or modern times, there has never been so great a cost as this for carving a book's printing blocks." He suspected that someone then was taking money under false pretenses (*Pure Words from the Book Grove*, 7, "Cost of Labor for Book Carving During Yuan Times"). Actually, right from the beginning, 1 ingot of Zhongtong Certificates were never equal to 1 ingot of silver. By the zhizheng period, they had fallen to the point that it took 30 ingots of Certificates to equal to 1 ingot of silver.

[44]*Pure Words from the Book Grove*, 7, quoting Xu Kang, *Reflection of a Dream of the Past*.

[45]Kobata Jun, *Studies in the History of Medieval Sino-Japanese Trade*, pp. 447-448, quotes Zhou Liang, *Two Crossings Collection*. The book employs the Japanese unit, the *momme*, which is somewhat heavier than the *qian*, or 0.1 Chinese ounce, but they must have made their purchases with the Chinese standard measures, and so I assume that they have here reverted to the Chinese units.

We can now make comparisons between Chinese and foreign book prices, especially with those of Western Europe. Western Europe only began to employ the technique of printing in the middle of the fifteenth century, and so its book prices were very high.

We may take Pavia in Italy as our test case. Pavia was the capital of Lombardy. During the Middle Ages, it was famous for its university, which was said to have been founded in the eighth century by the Emperor Charlemagne. Therefore Pavia was a city with a high cultural level.

During the fourteenth and fifteenth centuries, its medical books were the cheapest, averaging 4.5 florins per volume. This was equal to 4 ounces of silver. Generally, books ran from 15 to 30 florins per volume, or 13 to 26 ounces of silver. The most expensive were law books, which ran from 25 to 30 florins per volume. Some particular books might be as expensive as 100 florins per volume.[46] Therefore, it cost as much to buy a copy of a book in Pavia as it cost in China to cut the blocks for a book.

This was not just a question of book prices, but also involved the problem of wages. The gap between Oriental and Occidental book prices was, of course, mainly a matter of differences in science and technology. During the Middle Ages, Europe could not even manufacture paper. Books had to written on sheep skins which had been processed into parchment at high cost.

In Spain during the eighth century, the price of a book called *Songs in Response* could be used to pur chase two oxen with something left over. Eventually, the Arabs brought Chinese papermaking techniques into Europe, but paper only came into general use in the thirteenth and fourteenth centuries. Right on down to the fifteenth century they were still completely dependent on hand-made copies of books.

In China, not only was the labor of carving printing blocks cheap, so too was the labor of printing. *The Golden Lotus* alludes to printing a silk-cased set of the classics in an edition of a thousand copies, with each copy only costing 0.03 ounce of silver. In Pavia, a copy of the two-volume *Songs in Response* cost 36 florins, and the illustrations and cases cost another 19 florins, each volume altogether costing 24 ounces of silver.

The discrepancy between the prices of their books reflected the two worlds' cultural levels, and in turn could have influenced these cultural levels. In 1447, a University of Pavia professor's annual salary ranged from 7.5 to 300 florins. Actual salary payments averaged 74.5 florins, or 64.8 ounces of silver, coming to 5.4 ounces per month. Of the 76 professors, 46 had annual salaries of from 10 to 50 florins, or 8.7 to 43 ounces of silver, coming to 0.72 to 3.6 ounces per month. They could not buy many books.

Hence one fourteenth-century man who was both medical doctor and professor had only 30 volumes in his family library. Another man, a rich and powerful lawyer, only owned 46 volumes. Aside from monastic and royal libraries, private book collections then averaged only 10 to 50 volumes in size. The Florentine

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financier, Cosimo de Medici, who was richer than royalty, employed the proprietor of a book copying business to create a private library for himself. This man hired 45 copyists, who worked for almost two years to copy out just 200 volumes, each man only being able to copy a little over two volumes per year. This occurred during the fifteenth century. Actually, even monastic and royal book collections were not very large.[47]

The situation in China was different. In Ming China the equivalent of a university professor was a Doctor of the Five Classics in the National Academy, who was drawn from the eighth rank officials, with a monthly salary of 6 piculs of rice. A Professor of Confucian Studies was from the ninth rank, and his monthly salary was 5 piculs.

During the middle years of the fifteenth century, owing to the depreciation of the Great Ming Treasure Certificates, the monthly incomes of both the Doctor and the Professor were less than 1 ounce of silver, but when payment was changed to silver during the zhengde period, the Doctor of the Five Classics might get up to 4.2 ounces of silver and the Professor 3.5 ounces per month.

Viewed solely in terms of the number of ounces of silver, these were within the same range as the income of a University of Pavia professor, but in terms of their purchasing power in books, there was a great difference between the two.

Even if we use for our calculations the highest salary for a University of Pavia professor of 300

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[46]Carlo M. Cipolla, *Money, Prices, and Civilization in the Mediterranean World* (Princeton University Press, 1956), pp. 58-60.

[47]Italy's Monte Cassino library was considered one of the best of the monastic libraries of the Middle Ages. It possessed 800 chapters worth of copies during the eleventh and twelfth centuries (*Harmsworth Encyclopaedia*, 1906 edition, "Libraries" article). In 1490, the palace library of the English King Henry VII only contained 300-400 volumes. Only the King of Hungary, Keweinusi, had a collection of 50,000 volumes (*Chambers Ency-*

florins, which was the equivalent of 21.75 ounces of silver per month, that could only buy one or two volumes of ordinary books. The Chinese Professor of the Five Classics could buy a book like the *Crane Grove Jade Dew* with its 84 fascicles. At the end of Ming, a private school teacher who only had three to five pupils might get as much as 1 ounce of silver per month,[48] and so could buy several dozen books.

As a consequence, the book collections of Chinese scholars were in general rather large. This is not to speak of official book collections down through the ages,[49] but merely of private ones.

As early as the Warring States Era, Hui Shi had five cartloads of books. Shen Yue of the Northern and Southern Dynasties period had over 20,000 *juan*. Chen Zhensun of Song times had over 50,000 *juan*.[50]

During Yuan and Ming times, scholars of modest status could have book collections of from several thousand to several tens of thousands of *juan*.[51] Mao Jin collected 84,000 fascicles of books.[52] These men were all famous book collectors of their times. The quantity of books they owned cannot be considered representative of the average number held by scholars in general.

Nor can the Chinese *juan* ["chapter," originally meaning "scroll"] be equated with the fascicle or volume of foreign books. A Chinese *juan* sometimes only contained one or two thousand characters. Those with more than 10,000 characters were few. Also, a varying number of *juan* joined together to make a fascicle. Therefore, when a person composed a book, it would often have several dozen to a hundred *juan*. In foreign books, a *juan* was the equivalent of a fascicle or volume.

Still, even after taking such factors into account, it is not hard to discern that the Ming Dynasty Chinese bought more books than did contemporary Europeans. At the beginning of Ming, there was even a pharmacist whose home held no small number of books.[53] Naturally there were also scholars who had no books at all.[54] These can only be considered exceptions to the rule.

The purchasing power of the intellectuals of China and Europe in terms of books cannot be said to represent their

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purchasing power in terms of commodities in general, or their standards of living.

If a professor of Pavia got 5.4 ounces of silver per month, he could buy more than 11 hectoliters of wheat.[55] During the zhengde period [1506-22], a National Academy Doctor, who got 4.2 ounces per month, could only buy a little over 10 hectoliters of wheat, and only 9 hectoliters of rice. The Chinese figures are, however, several decades later than those for Italy.

The minority of high-salaried professors at the University of Pavia received incomes far exceeding those of Chinese professors or doctorate holders. They were even more generous than the income of a Libationer of the National Academy.

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clopedia, 1895 edition, "Library" entry).

[48] *Rousing the Age Marriage Affinity*. Cf. note 36 in section 7.3 of this work.

[49] *Rustic Words from East of Qi*, 12: "Emperor Yuan of Liang collected 240,000 *juan* of ancient and modern books and illustrations in Jiangling. Sui's Jiaze Palace library contained 370,000 *juan*. Tang had the most during the zhenguan and kaiyuan periods. The two capitals each collected books from the four categories to the amount of 70,000 *juan*. During Song, the books collected in the Xuanhe Palace, the Taiqing Pavillion, Longtu Pavilion and Imperial Hall were even more abundant than the collections of former dynasties. Those now verifiable form the 46 Chongwen categories, and total 30,669 *juan*. The History Office possessed 15,000 *juan*, and the rest cannot be enumerated. After the crossing to the south, another record of the collection was added. The office pavilion book catalog has 52 categories, and 44,486 *juan*. Its continuation has more than 14,900 *juan*. These were all kept in the official precincts."

[50] Zhou Mi, *Miscellaneous Knowledge of the Year Guixin*.

[51] During Yuan, Tong Shu collected several tens of thousands of *juan* (*Yuan History*, 189, "Confucian Scholars, 1, Biography of Tong Shu"). During Ming, Yang Weizhen's father collected a similar number of books (*Ming History*, 285, "Garden of Letters, 1, Biography of Yang Weizhen"). Yin Yunxiao collected several thousand *juan* (*Ming History*). Lang Jun collected 40,000 *juan* (*Ming History*, 287, "Biography of Lang Jun"). Hu Yinglin collected over 40,000 *juan* (*Ming History*).

[52] *Pure Words from the Book Grove*, 7, p. 192.

[53] *Ming History*, 285, "Garden of Letters, 1, Wang Xing": "There was a man of Wuxian, who when young accompanied his father in selling drugs in the home of old man Xu. Old lady Xu liked to listen to the stories of minor officials, and so Xing daily took down several volumes and recited them to the old lady. The old lady spoke to the old man, who gave him a copy of the *Analects*. The next day he could recite it all. The old man was amazed at this, and let him read all the books he had collected in the house. Subsequently he became well-versed in the classics, histories and sayings of the Hundred Schools."

[54] *Ming History*, 286, "Garden of Letters, 2, Xu Zhenqing": "There was a man of Wuxian whose wealth was abundant, and though he did not have a single book in his house, there was nothing he did not understand."

[55] There is no material on the price of wheat in fourteenth or fifteenth century Italy. I have here made a conversion based on the figures of Landrin and Roswag (cf. chapter 8.2.4, below). These figures are probably for Europe as a whole. Prices in Italy

It was by no means the case that all Ming Dynasty prices were lower than those of previous dynasties. Some prices were higher.

For example, the price of agricultural land was around 2.3 or 2.4 (treasury) ounces of silver per *mu* during Qin and early Han times.[56] At the time of Emperor Wu of Western Han, 1 *mu* was 6 ounces.[57] During the zhongping period [184-9] of Eastern Han, a *mu* went for 3,000,[58] or 12 ounces of silver. Under the Latter Tang of the Five Dynasties period, a piece of land with shops on it in the capital ranged from 3,000 to 7,000 per *mu*, and averaged 5,000.[59] With a silver price of 800 cash per ounce, this was the equivalent of more than 6 ounces. During Northern Song a *mu* ran from 1-2,000 cash[60] to 7-8,000 cash,[61] or between 1 and 5 or 6 ounces of silver. During Southern Song, 1 *mu* ran from 3 to 9 ounces.[62] During the Yuan Dynasty, a *mu* ran from 0.6 or 0.7 to 1.8 or 1.9 ounces of silver.[63]

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may have been a bit lower.

[56]*Nine Chapter Calculating Techniques*, 7: "Now we have 1 *mu* of good fields at a price of 300, and 7 *mu* of bad fields at a price of 500." The price of a catty of gold was 6,250

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cash. The gold-silver exchange price ratio was 1:5. The ounce of those times was equal to 19.2 grams. Of course the hypothetical component of this price is very great. If we calculate on the basis of a gold price of 10,000 cash per catty, then a *mu* only comes to 0.77 ounce of silver.

[57]*Han History*, "Biography of Li Guang" contains the statement that 3 *qing* of land sold for over 400,000. I calcalculate on the basis that gold had a price of 10,000 cash per catty. In the *Juyan Han Bamboo Slips*, a *mu* is 100 cash. The *Han History*, "Biography of Dongfang Shuo" refers to a price of "mu one *jin*," but that is not a price under normal circumstances.

[58]Fan Lijia's land purchase lead tally (dated guanghe 7) and Fang Taoji's land purchase lead tally (dated zhongping 5) both give the price of 1 mou as 3,000 (*Kahei*, no. 159).

[59]*Five Dynasties Collected Statutes*, 26, edict of tongguang 2.

[60]*Collected Works of Mister Linchuan*, 76, first part, "Letter of Remonstrance by the Transport Commissioner Sun's Office": "Yin is a large city in the prefecture. I was in charge of the district there for two years. I saw that the so-called great households mostly had only a hundred *mu*. The lesser ones had less than a hundred *mu*. The value of a hundred *mu* was 100,000 cash. Even if it was especially good land, it was no more than 200,000 cash." Wang Anshi was magistrate of Yin district from qingli 7 to huangyou 1 [1047-1049]. The prices mentioned here were probably in copper cash. If we reckon 1,400 cash to the ounce of silver, 1 *mu* would have been from 0.7 to 1.4 ounce. *Comprehensive Mirror for Illumination of the Prince, Long Draft, Continued*, 267, xining 8, 8th month, wuwu: "The Suzhou officials all have fields. A mortgage of 1 string would obtain 1 *mu*."

[61]*Song Collected Statutes Compiled Draft*, "Food and Money: Profit From Water, first part," 7.30, xining 9: "I heard that 1 *mu* of fields in Dong Village used to be worth 2-3,000, and their yield was 5 or 7 *dou* of grain. After irrigation, its value tripled, and the harvest reached 2 or 3 piculs." If we use a price of 7,500 cash per *mu*, and a silver price of 1,400 cash per ounce, then 1 *mu* was equal to 5.36 ounces of silver.

[62]*Song Collected Statutes Compiled Draft*, "Food and Money: Official Fields MIscellaneous Records," 61.29, longxing 1, 11th month, the Board of Revenue said: "Yesterday, those being enfeoffed requested sale of the Changzhou, Wuxixien ministerial fields to the amount of 400,000 *mu*. Each *mu* was worth 15 Thousands in cash. An edict was received deputing the Liangzhe Transport Officials to personally see to the transfer. Now, according to what has been announced, there are only 166,000 *mu*, and each *mu* has a price of 2 strings. If people are permitted to rent it, a 40,000 picul net annual contribution will be received. If the land is sold, we deeply fear the amount contributed will be lost, and so request . . . stopping the sale. Assented to." There are two prices here, with a very large difference between them, and so there must have been a false report. If we reckon the price of silver at 3,000 cash per ounce, then according to the first price, each *mu* was 5 ounces. On the basis of the second price, a *mu* was only 0.6 ounce.

Wang Mao, *Wilderness Guest Collected Conversations*, 10, "Han Fields Price Per *Mu*": "Han fields were 10 Thousands per *mu*, which corresponds to the current general rate." Wang Mao lived between the shaoxing and jiading periods. The price of silver then was around 3,300 to 3,400 per ounce, which would make 1 *mu* of fields worth around 3 ounces of silver.

Wei Xian, *Beneficial Observation of Four Famous Landscapes*, first part, "Taosha": "Prior to this, in jiading 7, the acting Prefectural Intendant, Cheng Gongtan, paid 1,200 strings of cash for fields amounting to 40 *mu* 3 *jiao* 29 *bu*." At that time, the price of silver was 3,300 cash per ounce. One *mu* was worth 9.1 ounces of silver. *Ibid.*, "The Ducheng Zhao Signs a Contract for Taosha Rice Fields with Wei Duda": "Hill field land is at a low price in Certificates, including irrigated fields to the amount of 29 *mu* 3 *jiao* 25 *bu*. The original contract reckoned the cash at 631 strings 700 cash, 98 diminished." At that time (jiaxi 3 [1239], 10th month) the price of silver was around 3,500 cash per ounce, and so 1 *mu* came to 7.7 ounces.

Yuan Fu, *Meng Studio Collection*, "Selected Inheritances: Education of the Yan Family's Sons and Grandsons": "There was obtained in strings of cash 6,300 cash to buy fields at a rate of 450 per *mu*. The annual income from this calculated in *hu* of rice was 380." The price of silver then was 3,300 per ounce, and so 1 *mu* was 4.24 ounces of silver.

[63]*Yuan Decrees and Regulations*, 19, "Board of Revenue," 5. Cf. subsection 6.2.3, note 25, above. In zhiyuan 24, an ounce of silver was equal to 10 ounces in Zhongtong Certificates. Therefore, a *mu* was worth 0.667 ounce of silver. In zhiyuan 30, with an ounce of silver at 15 ounces in Zhongtong Certificates, 1 *mu* was worth 1.47 ounces of silver. In dade 1, an ounce of sil-

Ming Dynasty land prices were, however, generally high. During the zhengde period [1506-22], the price of agricultural land in Weizhou fell from 20-30 to 5-6 ounces per *mu*.[64] The purchasing power of silver was very high then, and a price of 20-30 ounces per *mu* must be reckoned very high. By the wanli period, apparently even middle-grade land went for upwards of 35 ounces per *mu*.[65] Of course the size of the *mu* varied over time, and the quality of the land also varied. Documentary evidence on land prices is scanty, and the prices we have may not be an accurate reflection of silver's purchasing power.

Movements in land prices were not entirely the result of movements in the price of silver. There were other factors involved, such as changes in the size of the population, changes in levels of rents and land taxes, and the presence of social stability or disorder.

During the Yuan Dynasty, the Mongols emphasized animal husbandry rather than agriculture, and that may explain the relatively low price of agricultural land then. By the wanli period of Ming, the price of grain had risen, and of course that would have been followed by a rise in the price of agricultural land. It is said that a *mu* rose to as much as 100 ounces.

Because, however, rents and taxes were also high at the end of Ming, society was not peaceful. Many landowners sold out at reduced prices. Sometimes they even had no choice but to abandon their land and flee, and so a *mu* might cost only 1 or 2 ounces.[66]

Generally speaking, Ming Dynasty prices, whether calculated in silver or in copper coins,[67] were a bit lower than those of Song and Yuan. This is not to say that the people's standard of living had been raised, because the amount of money that people received during Ming

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ver was still worth 15 ounces in Zhongtong Certificates, and 1 *mu* was worth 1.85 ounces of silver. Zhu Shijie, *Calculation Techniques Primer*, first part, contains two land prices. Under "Remainder Head Method," there is a statement about 1 ounce of gold buying 6.25 *mu* of land. Under "Nine Returns Remainder Method," there is "land to the amount of 6.25 *mu* worth 1 catty of silver." The two land prices are the same. It is just that one

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is expressed in gold, and one in silver, and both are given in round numbers. I suspect they were arbitrarily chosen. If we average the two, and take the gold-silver exchange price ratio as 1:7, then a *mu* was worth 1.84 ounces of silver.

[64]Yu Bian, *Mountain Tower Leisure Words*: "Of the agricultural land of the south, only that of Weizhou was extremely expensive. The price of 1 *mu* was 20-30 ounces. Now it is only 4-5 ounces, but there are still no buyers."

[65]Matteo Ricci, *Common Language Finger Reckoning Complete Compilation*, 3, gives prices for upper grade, middle grade and lower grade fields. Upper fields were 43.2 ounces per *mu*, middle fields were 38.5 ounces, lower fields were 25. However, *Gudong Trifling Record*, "Record of Things Heard During Tianqi and Chongzhen," says that at the beginning of of wanli, 1 *mu* went for 0.8 ounce, and by chongzhen 15 it had risen to 4-5 ounces.

[66]*Rousing the Age Marriage Affinity*, chapter 9, gives a land price of 2 ounces per *mu*. The Qing Dynasty daoguang 5 paen to coins, *Sandal Garden Collected Words*, 1, "Field Prices": "During the middle years of the former Ming Dynasty, field prices were terribly high. One *mu* was worth from over 50 to 100 ounces. It also, however, depended on the fertility of the field. At the end of the chongzhen period, bandits and thieves rose on all sides, and harvests frequently failed, so that no fields could be depended upon. One *mu* was only worth 1-2 ounces."

[67]For prices during the jiajing period, we can obtain a great deal of valuable material from the novel *Golden Lotus*. Most prices in it are expressed in silver. *Journey to the West* was also written during jiajing, but it contains fewer references to prices. I will first set out prices from *Golden Lotus*:

Residence A (Xia Yanling's house, on the gate side, 7 rooms, 5 levels, ceremonial gate entrance, large hall with rooms on both sides hung with deer antlers, at rear a residence with flower pavillion, surrounded by many houses on both sides, wide and empty street), 1,300 ounces

Residence B 700 ounces Residence C (small house), 540 ounces

Residence D 250 Residence E (gate side, 2 rooms, 4 stories), 120

Residence F (small house), 70

Residence G (4 rooms), 30-40

Residence H (ordinary house, 2 rooms), 30

Residence I (military officer's wife's house, 2 stories, 4 rooms), 10+

Interest rate per month, .03 to .05 ounce per ounce.

Gold, per ounce, 5 ounces

1 pig, 1 sheep, 5 or 6 jars of Gold Flower stillbeer, incense, candles, paper tablet, chicken, duck, wine-feast goods, total: 4 ounces

Fortune telling by analyzing characters, 0.01 Printing 500 copies of silk cased Dharani book of magical spells, per copy 0.05

Printing 1,000 copies of silk cased Classics, per copy, 0.03

Ground mirror, 50 cash

Journey to the West contains the following prices:

paper, per sheet, 1 cash

coffin wood, per set, several ounces of silver

cakes, apiece, 1 cash

pig, per head, 2 ounces

sheep, per head, 1.29 ounces

had also diminished.

We can see this from official incomes. There is no way to tell whether or not official incomes constituted a set proportion of incomes in general over the course of history. From a certain perspective, though the incomes of officials were taken from the people, they were also expended with the people.

However, owing to the austere customs prevalent among the Chinese, very few officials used all of their money income for consumption. A substantial proportion of it was hoarded, and so an increase in official incomes might lead to a certain degree of constriction of the money in circulation.

From another point of view, over the course of Chinese history, exploitation of the people by the ruling class had a limit set to it by the requirement that the people remain able to maintain their existence. Otherwise government itself might be rendered unstable.

At the beginning of Ming, the government wanted to set fairly high salaries for officials so as to cause their real incomes to approximate the levels achieved during Southern Song, but such levels could not be maintained.

For the most part, the standard of living of Chinese officials had gradually risen from Qin and Han times on, reaching its peak during Tang and Song. From Southern Song on, a gradual decline set in. During the Yuan Dynasty, the highest official incomes did not exceed 100 hectoliters of rice per month. During Ming, it gradually fell to a level of 20 piculs.

This cannot be entirely attributed to monetary changes, but must also be explained by such factors as the failure of the Chinese people [or at least those people most easily taxed --farmers, rather than merchants. EHK] to raise their productivity, the increase in population, as well as the incompetence of the administrative agencies and their personnel.

From zhengde times [1506-22] on, official salaries were paid 90 percent in silver, and 10 percent in copper coins, with each picul of grain commuted into 0.7 ounce of silver. The commutation into coin was probably in accord with the exchange rate of 1 ounce of silver for 700 copper cash, or 1 picul of rice for 490 cash.

On this basis, a first rank official got 54.81 ounces of silver per month, and in addition 4,263 copper cash. Commuted entirely to silver, this would come to some 60.9 ounces. At the contemporary market price, this could buy more than 120 hectoliters of rice. A regular ninth rank official could get 3.265 ounces of silver per month, and an additional 269.5 cash.

From the last years of jiajing on, official salaries were paid entirely in silver. A total of 3.85 ounces of silver could buy 7 or 8 hectoliters of rice. By then, however, prices were already rising. During the chongzhen [1628-44] period, rice cost nearly three times what it had during the zhengde period, while the amount of the salary might have been reduced to half its former level. As a consequence, real income must have fallen to around one-sixth of the zhengde period level.

Of course the incomes of laboring people were still lower: During the '30s of the jiajing period [1550s], an ordinary river worker's wage was 0.03 ounce of silver per day. A technical artisan probably could bring home some 0.06 or 0.07 ounce per day.[68] At that time a hectoliter of rice cost 0.6 ounce of silver, so his wages could buy 1.5 to over 3 hectoliters of rice. I have previously mentioned that during the wanli period the daily wage of a hired laborer was from 24-25 to 30 cash, and that he could buy 1 or 2 hectoliters of rice per month. During the chongzhen period, the daily wage could

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be as much as 60 cash. An ounce of silver then was worth from 800 to 1,600 cash, so such a laborer could buy 1.3 or 1.4 hectoliters of rice per month.

Sometimes, the army would hire paupers for substitute labor service guarding walls, and would only give them 30 cash per day.[69] For this they could only buy 6 or 7 *dou* of rice per month.

At this time (around the middle of the seventeenth century), there was a large increase in the money income figures of the English laboring people, but because prices also rose sharply, their real incomes were not as high as at the end of the fourteenth century. An agricultural laborer's wages were 4 shillings per week. If we assume 4.5 weeks per month, he could only buy 0.8 or 0.9 hectoliters of wheat. An artisan worker could sometimes get 6 shillings per week, and per month this equalled 1.2 hectoliters of wheat.[70]

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[68]Cui Dan, *Sea Transport Compilation*, latter part, "Second Letter Sent Up to Lord He Making Estimates for the New Canal." The text contains a price for glutinous rice of 0.2 ounce of silver per *dou*, and so non-glutinous rice must not have been much different. If we calculate on the basis of this standard, then an ordinary labor service worker could only afford to buy 4.5 *dou* of rice per month, and a technical artisan only 9 *dou* of rice per month. However, Ming Dynasty rice prices were never so high as during the jiajing period.

[69]Feng Menglong, *Annals of the Year Jiashen* (*Mystical Observation Hall Collectanea*): "The wall-protecting army was entirely drawn from near-noble families. They falsified names and hazarded grain, so that when the time approached they solicited poor men to serve as substitutes, and only gave them a daily wage of 30 cash."

Evidently their wages were about the same as those of Chinese laboring people.

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[70]Thomas Babington Macaulay, *History of England* (Edinburgh edition),

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p. 342. The agricultural worker's wage is quoted from William Petty's *Political Arithmetic*. The artisan worker's wage figure is based on a statement by John Basset. The price of wheat is drawn from Michael G. Mulhall, *Dictionary of Statistics* (London, 1892), p. 468, using 1641 to 1660 prices.

7.3 Monetary Studies

1. Monetary Theory

With respect to monetary theory, the Ming Dynasty may be divided into two periods. Prior to the jiajing period of the mid sixteenth century, the question of paper money was central. From jiajing on, the question of the copper coinage moved to the fore. Various theories revolving around these two important questions were raised.

When Emperor Chengzu, the Emperor of the yongle period, ascended the throne, the Treasure Certificates were not circulating, and the Emperor asked Xia Yuanji (1366-1430) why this was so. Xia replied:

> When the Certificates are numerous, they are lightly demanded; when few, they are heavily demanded. The notes are not circulating among the people because many of them have been issued and few have been withdrawn. Regulations ought to be made to gather them in. I request that the heaviness of the rates of the various taxes on shops and stands and gates of the marketplaces be measured, and that these rates be increased. When the Certificates are taken in by the officials, they should destroy all those which are worn out. From now on official Certificates should be issued in smaller numbers. When the people find it harder to obtain Certificates, the Certificates will spontaneously become more heavily demanded.[1]

He thought that gathering them in and constricting their circulation would raise their purchasing power.

Chen Ying, who advocated a salt consumption tax, held similar views. In yongle 2 (1404), he said:

> In recent years, the Certificates have not circulated simply because the court has issued too many of them. There has been no way to bring them in, and as a consequence goods have become heavily demanded and Certificates lightly demanded. There is no better method than to temporarily have a household salt consumption tax . . .[2]

His salt consumption tax and Xia Yuanji's increased excise taxes had the same goal.

During the xuande period [1426-1436], tax rates were sharply raised, and the money supply constricted. This was to stabilize the value of money at the expense of lowering the people's standard of living.

Liu Dingzhi opposed this method. He believed that in withdrawing paper notes from circulation, it would do no harm to

[1] *Ming History*, "Treatise on Food and Money."

[2] *Ming History*, "Treatise on Food and Money."

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tax them away from merchants or to have offenders use them to pay fines, or to use gold, silver and copper coins to redeem them, but taxes should not be increased.

Liu Dingzhi (1410-1469), devotes two chapters[3] of his *Outline of Strategies* solely to a discussion of monetary problems. The *Outline of Strategies* was completed in xuande 9 [1434]. At that time he was still pursuing a career in education, and had not yet entered office. As a consequence, he spoke from the perspective of the people. He said: "Laws have not differed from ancient to modern times. Those which convenience the people are good laws. There are no inherently correct doctrines. Those which convenience the people are the best doctrines." His own doctrines were not, however, necessarily all correct.

For example, with regard to the origins of money, he believed that it originated as a way to use the monarch's sovereign power to relieve emergencies:

> In my stupid fashion, I have investigated the stories about the Nine Offices Round System. This originated with Duke Tai. He made it of a square inch of gold weighing 1 *jin*. The coin was round, had a square hole, and its weight was measured by the grain. The Treasure from gold, the profit from knives, the flow from the springs of round money, the spade from the market, these were indeed the sources of coins. But in the times of Yu, because of nine years of floods, the gold of Li Mountain was minted, and because of seven years of drought, the gold of Zhuang Mountain was minted. Thus it was solely to meet the needs of the people that they made these special plans to relieve emergencies. Duke Tai followed this precedent.

This way of looking at things was evidently influenced by men like Lü Zuqian of the Song Dynasty, and goes beyond mere belief in antiquity.

Liu Dingzhi stressed money's function as an instrument for making purchases. He believed that paper money was a substitute for coins:

> Those things which the people depend upon for their livelihoods are grain and cloth. Of what use is a round coin? Nevertheless, coins may be used to obtain grain and cloth, and so their use is permissible. That which the people depend upon for use is coin money. Of what use is a foot of mulberry paper? Nevertheless, mulberry paper may be used to substitute for coin money, and hence its use is permissable.

[3] *Outline of Strategies of Duke Liu Wen'an*, 6, "Household Levies," and 10, "Labor Levies," each in one section. Cf. *Complete Works of Duke Liu Wen'an of Yongxin*.

He goes on to say:

> Pearls, jade, gold and other precious things may be put to use, but not much of them can be obtained. Grain and cloth may be put to use, but they cannot reach far. Girdled with 10,000 strings of cash, with a square inch of mulberry paper in one's hand, one may be clothed against the cold, and fed when hungry. Without pearls or jade, one may make one's self wealthy. Lacking gold or precious objects, one may make one's self a sufficiency. This too is an excellent pattern conferred upon posterity by the ancients to convenience the people.

He not only did not oppose money, he did not even oppose paper money. In fact he stressed paper money's convenience.

But he was not a nominalist. He seems to have been the first man in a thousand years to have said that pearls, jade, gold and other precious objects were useful, to have said that if one had money, one could be clothed against the cold, and fed when hungry. At least on the face of the text, this was in contradiction to the position of the Legalists. Although Lü Zuqian had acknowledged that "in the business of the trades, they all accumulate (coins) to make their livings," he also said, "coins are a commodity that cannot feed you when you are hungry,
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or cloth you against the cold." Hence Liu Dingzhi did not stand on the same side as Lü Zuqian on this important question.

This was a time when the government was promoting paper money with great energy. Therefore Liu Dingzhi for the most part centered his comments on the question of paper money. The Great Ming Treasure Certificates continued to depreciate in value through the yongle and xuande periods: During the yongle period, the market price of a 1-string note was only 0.012 ounce of silver, and in xuande 1 [1426] it was only 0.0015 ounce. Of course he know that this was because too many of them had been issued:

> Mulberry paper money has been in general use since Song. The flaw in mulberry paper money is that it does not maintain a mean between being too expensive or too cheap.
>
> During the tiansheng period [1023-1031], one term's worth involved printing 1.25 million. During shaosheng [1094-1098], one term's worth involved printing 1.4 million. During yuanfu [1098-1101], the amount was increased to 1.8 million. During jianyan [1127-1131], it was further increased to 3.7 million. Under Emperor Xiaozong [1163-1190], one term's worth involved several tens of millions. Under Emperor Ningzong [1195-1225], one term's worth came to several hundred million.
>
> Certificates were issued during the [Yuan Dynasty] zhongtong period [1260-64], but 1 string's worth of Zhiyuan [1264-95] Certificates was worth 5 strings of Zhongtong Certificates. This meant that a square foot of mulberry paper was equated with 50 [should be 5,000] coins. Though there were Zhiyuan Certificates, 1 string in Zhida [1308-12] Certificates was equated with 5 strings of Zhiyuan Certificates. This meant that a square foot of mulberry paper was equated with 50,000 actual coins.
>
> When manufactured in small numbers, Certificates are expensive, and if in too small a number, then there are not enough of them to be used. When manufactured in large numbers, Certificates are cheap, and if in too large a number, then they cannot be circulated. It is necessary to act as in Song's tiansheng period, or Yuan's zhongtong period. Then a mean between being too expensive or too cheap may be approximated.

His figures for the cash equivalents of Yuan Dynasty paper moneys are casual estimates, and his statement that Certificates should be manufactured as during Song's tiansheng and Yuan's zhongtong period is too loose, and provides no clear standard.

Though Liu Dingzhi did not oppose the use of paper money, he was dissatisfied with the government policies of the day. He believed that the Certificates would circulate if the government collected old Certificates and put out new ones, paid rewards and salaries in Certificates, and let the people pay all taxes in Certificates. If the government intended to call back the old Certificates, then it ought to take them from the merchants. It should "be generous to the fundamental activity and repress the secondary activity," "or take them from those sentenced to penal servitude by showing mercy to them by allowing them to redeem their sentences," or by using the silver in the national treasury to redeem them.

> If they are all taken from the people, and a policy is adopted of feeding the head by squeezing those below, then the commodity which the ancients used to profit the people will instead become the basis for harming them in the present day. How dare even a rustic gentleman cease speaking of this?

He continued:

> Now things are different. Manufacture of Certificates is from on high. They are issued, but not taken in. Certificates circulate below. They are dispersed, but not redeemed.
>
> When Certificates are are to be levied from among the people, the rich and great merchants accumulate Certificates in their households, and they are not levied. Crafty officials and cunning functionaries, under the pretext that there are counterfeit Certificates, fish and hunt by the left side of the village gates. The impoverished people sell the produce of

their fields, pawn their wives and children, and only then gain enough Certificates to deliver to the officials.

The great ministers scheme for the state by harrassing the provinces and districts, and tyrannizing over the villages and hamlets, and only then succeed in collectinng Certificates to deposit in the treasury. Alas! They unwittingly take what the ancients used to profit the people, and nowadays use it as the basis for harming them.

Moreover, if the nation

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does not circulate old Certificates, they merely issue an order saying they are not circulating. If it is desired to circulate new Certificates, they simply issue an order saying manufacture them.

If Certificates are cheap, then use taxes to collect them. If Certificates are expensive, then manufacture one term's worth to increase their number. That is all that needs to be done. Even a three foot tall boy knows that.

His anger was greater than his words could express. Later, when he became a high official, he no longer addressed monetary problems. It is ironic that when he was near death, Emperor Xianzong gave him a reward in paper money. At that point a 1-string Great Ming Treasure Certificate was not even worth 0.001 ounce of silver.

Qiu Jun (1420-1495) of the chenghua period had a number of opinions not much different from those of Liu Dingzhi, but his were rather more penetrating. In chenghua 23 [1487], he was serving as Superintendant of the National Academy and Right Expectant Executive of the Board of Rites, when he wrote the work *The Great Learning Expounded, Addendum*. In it there were two chapters on "Copper and Mulberry Paper Money," which deal solely with monetary questions. He chose an historical form of argument. He would first quote a section of historical narrative, then quote some previous writer's commentary, and finally add his own comments.

To begin with, he opposed the objectivists, and opposed the theory of the first century B.C. scholar official Gong Yu, which called for use of cloth and grain in place of coins, saying "this plan simply cannot be used."

Second, like Liu Dingzhi, he believed that money originated to relieve the famines caused by floods and droughts, and not solely so as to circulate wealth. This was because he too believed in the notion that Yu had cast metal coins.

Third, he emphasized money's function as a medium of circulation, and especially its role as an instrument for making purchases. In other words, he did not believe that money's circulation was merely a reflection of the circulation of commodities. Rather, he believed that the circulation of commodities was stimulated by the circulation of money. He supposed that the circulation of money was primary, and that the circulation of goods followed as a consequence. He stated:

That which circulates the many goods so that they flow to the four quarters is money.

He added:

The goods of the Empire all depend on money to circulate. Those too heavy to lift could not go very far but for coins. Those which are obstructed and cannot be brought in touch, but for coins would not get to support each other. Those which are large, and cannot be divided, but for coins would not get to be used on a small scale. Thus goods are heavy and coins light; that is why goods are obstructed, and there is no place that coins do not reach.

He goes on to say:

In ancient times, that the Spring round and Spade coins circulated the goods of the Empire was for no other reason than the convenience of the people. The Spring and Spade coins proceeded from above, commodities proceeded from the people.

None of the people could be fully self-sufficient in commodities. If they wished to bring together that which they had with that which they lacked, they had to use coins to exchange for goods. After that, those who had been without a good came into possession of it.

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He even wanted to employ this function of money to regulate the circulation of goods. He referred to this as using "coins to control the multitude of goods." This phrase can be explained in two ways: In the passive sense as meaning using coins to measure the value of the multitude of goods, and positively to mean using coins to regulate the multitude of goods:

But the gathering in of goods is such that of some there are many, and of others few. For goods used at specific times, there are accelerations and delays. When goods are few and there is an urgency to use them, then they circulate. When they are many and not speedily used, then they are obstructed. The Ruler above, when they are obstructed, uses Springs and Spades to collect them, to make them become fewer and to circulate them. As a consequence he makes the people's lives prosperous. Once the Ruler above has collected them, the people below may be urgently in need of them, and so he will freely sell them at their original price, and thereby aid in supplying people's needs.[4]

[4] *The Great Learning Expounded, Addendum*, 25, "Orders for Market Purchases."

He added:

> There are good and bad harvests of grain, and this cannot be remedied by human efforts, but there are no good or bad harvests of gold and copper. They can be produced by human efforts. Therefore we use them to cast coins, and cause them to broaden the availability of food to relieve hunger.

He everywhere stresses the positive uses of money, and comes close to making money into a fetish:

> The profit from coins is such that the cheap may be made expensive, and the impoverished wealthy.

He hardly mentions the other functions of money beyond the two phrases quoted previously: "coins are used to control the multitude of goods," and "Those which are large, and cannot be divided, but for coins would not get to be used on a small scale," which are linked to its function as a measure of value or as a standard for setting prices [and to permit large goods to be marketed at all, and hence to be produced in larger quantities. EHK].

Nevertheless, when he encounters the question of the source or foundation for the price of commodities, he connects the value of commodities with labor:

> The things of the world, though born of Heaven and Earth, must all nevertheless depend upon human labor before they are capable of becoming useful. In form they are large and small, fine and coarse; the labor power in them may be shallow or deep; their prices may be much or little. When a good's price approaches 1,000 cash, if it is not large, then it is fine, and must have taken more than a day's work to complete. Is it possible to take a square foot of mulberry paper worth 3 to 5 cash and sell it for that?

The terms *gongli* or *gong*, which in modern Chinese normally mean "utility" and "achievement" respectively, must in this context be referring to labor. That is to say, the amount of the value of a commodity is related to the quantity of labor or the amount of labor time expended on it. The greater the amount of the labor expended, the greater the value; the less labor expended, the smaller its value.

This is very close to the position of the thirteenth century Italian scholar, Thomas Aquinas (1225?-1274). Aquinas believed that an object's value must be determined by the labor required to fabricate it. Like Qiu Jun, he deduced this theoretically. For these two men, one of them a theologian who has been thought highly of by his church, the other

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a high official under a feudal government, to have been able to put forth such a theory of value and price is very unusual.

Basically, both in ancient and modern times, in China and elsewhere, the remuneration of labor has generally been calculated according to the time expended. In principle it should have been very easy to link the value of commodities produced by labor with the amount of labor time expended upon them, but not many people have actually done so.

Aquinas put forward this doctrine in the course of discussing the problem of just price. He believed that each type of commodity possessed an objective real value. This value must be determined by its generally established cost of production. This cost of production was primarily a matter of the cost of labor that made it. If a commodity's price corresponds to its value, then it is just. Otherwise, it is unjust.

In his view, however, it is not just any laborer's labor time which was equal to value. Nor did he distinguish the kind or degree of complexity of the labor, but rather he made his distinctions on the basis of the social position and standard of living of the laborer. The just price would allow the producer of the commodity to be able to maintain his customary standard of living.

Moreover, Aquinas also permitted a gap between the selling price and seller's original purchase price, that is with the former higher than the latter. For example, additional labor might have been added to the commodity, or it might have been transported from one place to another. The movement of goods at the expense of their owners was also to be considered one of the costs of production.

Qiu Jun did not go into this question as deeply as did Aquinas. His terms *gong* or *gongli* vaguely referred to labor in general without making such distinctions.

Qiu Jun made a sharp criticism of currency inflation. He not only believed paper money's depreciation in value to be unprofitable for the people, but for the ruling class as well, and even as being capable of shaking the sovereign authority:

> The men of Song made Exchange and Account Notes. Jin and Yuan replaced them with Certificates. The intrinsic worth of a Certificate is only 3 or 5 cash, but they are sold to people for 1,000 cash in goods. . . . The people at first accepted this cheating, and as things continued remained in awe of the Certificates' authority. They could not help but strive to remain obedient. Since they circulated for a long time, it was a matter of Heaven determining what would be victorious among men. In the end, however, they did not circulate. Not only did they not yield 1,000 cash, even their 3 or 5 cash cost of production was lost. And it was for this

reason that men's hearts were lost, the state lost its income, and the disaster of disorder and rebellion occurred. We can discern this from the example of the men of Yuan.

Nevertheless, he did not believe that paper money should not be used at all. What he opposed was a system which circulated nothing but paper money. He advocated parallel circulation of both coins and Certificates, and the use of a silver standard:

> Our dynasty's standard copper coins and Treasure Certificates have circulated together for a century without change. But this having gone on for so long, unintended abuses have arisen. The abuse involving coins has been counterfeiting. The abuse involving Certificates has been their great number. . . . Therefore, I request that those in charge of the circulation of Certificates investigate the ancient system of three moneys, with silver as the superior money, Certificates as the middle money, and coins as the lower money. The middle and lower moneys would be used as instruments of circulation for public and private purposes, and only the superior money would be used to regulate them.

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He added:

> After this system has been set up, then if coins are too numerous, then Certificates will be issued to redeem them. If Certificates are too numerous, then coins will be issued to redeem Certificates. As for the use of silver, its use will be prohibited for transactions of less than 10 ounces. In determining silver's fineness, the standard would be to use fire to test its whiteness. Treasure Certificates and copper cash will circulate above and below, but silver alone will be used to regulate them. This is quite adequate a method for ensuring a sufficiency for the state, and to make things convenient for the people.

During the jiajing period [1522-1567], paper money had become so much waste paper, and was no longer a problem. Silver had assumed a dominating position in the circulation of money, and in some places, not even copper cash were in use. At that point, some people came forth to advocate the use of copper coins. He Liangjun, for example, said that because all forms of natural wealth are limited, except for coins, offices to mint coins should be opened in the two capitals, the thirteen provinces and six salt transport offices, a total of 21 locations.

In longqing 3 (1569), Tan Lun said:

> Those who now debate the coinage regulations all speak of the expense of minting coins, and say that since they are no more useful than silver as money, they are of no profit to the court. I believe that casting coins would annually cost 10,000 in metal, but as a consequence the state would increase the coins in circulation within the country by 10,000 in metal. The more coins that are cast, the more the quantity of silver will increase. This is a technique for storing up wealth.[5]

This had a bullionist tone. He seems not to have been in opposition to silver.

Jin Xueyan went a step further. In longqing 4 [1570], he produced a "Discussion on the Search for Wealth for Use"[6] to oppose the abolition of coins and the use of silver. In fact he strenuously advocated the circulation of coins. There is not much in this work on theoretical matters; it merely deals with questions of policy. Jin acknowledged that so far as serving as a money went, there was not much difference between coins and silver:

> Silver is merely used to be traded for clothing and food. Coins and silver are different in substance, but similar in spirit. Why then solely use silver and abolish coins?

We can see from this that he emphasized money's function as a medium of circulation or instrument for making purchases. He did, however, make a distinction between silver and coins. He believed that coins are better than silver:

> If only [silver] is circulated, then the hoards of the rich will grow deeper, and silver will grow more expensive. If silver is more expensive, then goods will grow cheaper, and it will become more difficult to handle the measurement of silver's fineness. . . .
>
> I have heard that coins are a spring, which like water circulates amidst the land, and may not be halted for a single day. Use of coins thus enriches the people's livelihood, and provides abundantly for the state's needs.

His primary aim and concern remained the welfare of the rulers. The rulers had no way to control silver, but

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they held the power to mint coins:

> I have heard that some of the rich houses of the south have accumulated as much as several hundred thousand ounces of silver. At present, the Imperial Household has only amassed something over a million ounces. If only silver is circulated, and coins are abolished, the holdings of just a few rich

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[5] *Book of Ming*, 81, "Treatise on Food and Money."

[6] *Ming History*, 214, "Biography of Jin Xueyan," says that he responded to an edict to discuss the principles of wealth with a statement of over 10,000 characters. Wang Liu, *Simple Words on Coins*, "Earlier Discussion on the Rectification of Names," records 520 characters of it.

houses will together be comparable in size to the imperial holdings.

If coins were used, then:

this will become the business of the ministers, and only the Ruler will get to make them. Hence it is said that the great treasure of the Sage is his position. It is because of his position that he has the authority to regulate things. It is because of his authority to regulate things that he acquires his needs. Therefore it is said: Coins represent authority. The Ruler grasps authority over wealth and nobility. He has his servants hasten through the Empire. How can this be abolished and not be made use of?

Actually, paper money would have fit his ideas even better.

Guo Zizhang, who lived during the longqing and wanli periods [1567-1620], was a bullionist. He looked upon the coinage as a kind of *vade mecum*. In his *Coin Law Policy*[7] he stated:

If a coin law is instituted, the state will be placed on foundations which will not collapse. The people will be kept inviolate in a valley where they cannot be reached. The masses of the Empire can be without hunger; the wealth of the state can be long preserved. Coin laws will not collect from the fields, will not reckon on the seas, will not take things out of the treasuries. Without great harm to the state's reserves, there will be broad profit conferred on the people's livelihood. It is truly an urgent duty to relieve current abuses.

His so-called coin law included six points: The first was to secure the authority to collect copper. The second was to secure the sources of copper. The third was to profit from mining copper. The fourth was a standard for purity of copper. The fifth was to broaden the distribution of coins. The sixth was to have officials who evoke wealth through coins. Of these the most important was the first, to secure a monopoly of copper for the state:

Once the copper has been taken in by the officials, all of the copper would be used for coins, and then the state will become richer by the day. That which the Sage King alone employs to uphold his great authority and give profit to the Empire does not depart from this. Hence the sovereign authority over copper cannot but be used to gather it in.

He added:

Copper is the substance of coins.

His attitude toward copper was similar to that of fifteenth century European gold bullionists, and may be deemed a kind of copper bullionism. There seems to have been no more extreme example of bullionism in all Chinese history.

Like Yang Cheng, he opposed the theory that minting coins was without profit. He said that if 5 cash were minted, the cost would be 0.01 ounce of silver, which was equal to 7 cash, an apparent loss of 2 cash. The 0.01 ounce of silver had not, however, been destroyed. It remained among men. When added to the 5 cash in newly minted copper coins, the equivalent of 0.008 ounce of silver, total value had actually been transformed into 0.018 ounce.

Therefore, he advocated allowing the people
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to mint coins, so long as they obtained licenses to do so from the government, and supplied their own copper, thereby acting as the government's agents in minting. The government would collect a 10 percent charge from them, and the coins they turned out could circulate as official coins.

By the tianqi and chongzhen periods [1621-1644], owing to government deficits, neither silver nor coins could be increased at will, and as a consequence there were once more people who called for the circulation of Certificates, as, for example, did Hui Shiyang during the tianqi period, He Kai in chongzhen 8 [1635], and Jiang Chen in chongzhen 16 [1643]. At court, Ni Yuanlu and Wang Aoyong supported Jiang Chen's plan for circulating Certificates.

Jiang Chen's method was basically close to what Qiu Jun had proposed. He advocated full backing, with 1 string of paper equated with 1 ounce (which would actually sell for 0.97 ounce) of silver, or 1,000 copper cash. There was, however, one unrealistic aspect to his plan. The backing for his paper money was entirely to be obtained by exchanging these paper notes with the public for silver. He calculated that there was then 250 million ounces of silver in public hands:

If this year 50 million are circulated, and 5 years is set as the limit, this would make a total of 250 million, and this would completely exhaust the silver in the hands of the people. Additional amounts could not continue to be issued. Therefore, after 5 years, old Certificates would merely be exchanged for new ones. A 5 year issue would link up with the Empire's coins, and the amount of money in circulation would become sufficient.[8]

[7] Abridged manuscript edition of wanli 10 [1582].

[8] *Chongzhen Long Draft*, 1.

All we know concerning Jiang Chen's plan is some of the measures proposed, and nothing of the theory behind them.

His near contemporary Chen Zilong (1608-1647) did discuss some theoretical questions. He wrote a book *On Coins*[9] in which he distinguished between paper notes which could and those which could not be redeemed for ready cash. The former were notes for which coins were taken. The latter were notes which substituted for coins:

> Mulberry paper is not coin, but it may be used as a note or ticket to take in coins. Labor which has not reached far yields a generous return. This is how Flying Cash and Certificate Vouchers were created and circulated by Tang, and how Song's Exchange Notes and Account Notes reached the whole Empire from their origins in an out of the way corner of Western Shu.
>
> Beginning as temporary measures to regulate the coinage, over the long run they became substitutes for coins, until by Yuan times, only orphan Certificates were in circulation. During the last generation of Yuan, not a single person knew the use of coins. They clothed themselves with Certificates, ate with Certificates, became poor and rich via Certificates. How then could their prohibition be effected? For the convenience of the people they were specially exchanged for promissory notes, and for a time the constriction was eased.

His statement that during the Yuan Dynasty not a single person knew the use of coins is inaccurate, but his remark that "Certificates alone circulated" is factually correct for certain times. The Qing Dynasty numismatists' practice of calling pure paper money "orphan Certificates" arose from his use of the term. He believed that paper notes could be circulated:

> At present among the people, coin houses mostly employ notes, and merchants employ account notes to lighten the burden of forwarding funds. This was the original intention of those who earlier used Certificates. How can such instruments be circulated privately, and yet it remain impermissible for them to be circulated by the public authorities?

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Why had circulation of Certificates failed previously?

> The trouble lay in the fact that the officials having issued them to the people, they then ordered that a Certificate be valued at 1 string, but when the people carried them back to the officials, they were rejected as bad paper. This fault in their collection forced them out of use, because after issuing them, the officials were unwilling to redeem them. Hence the reason why the Certificates did not circulate lay in the Ruler's own regulations.

Therefore he called for a system under which coins and Certificates would circulate together. All payments by the people to the government would be in Certificates. It would not be permitted to use silver or coins for that purpose, though the people could use them among themselves. Official salaries, provisions for the soldiers and wages would be paid in Certificates, and the people would be permitted to redeem Certificates for metal cash.

Qian Bingdeng (1612-1693) also distinguished between paper notes which could be exchanged for cash and those merely face-valued in terms of coin. In his *Discussion of Coins and Certificates* he assumed a nominalist point of view:

> A Certificate is merely a few square inches of mulberry paper with some labor and ink applied to it. If it is ordered that they be worth one hundred, then they are worth one hundred. If it is ordered that they be worth a thousand, then they are worth a thousand., and the stupid masses treat them as treasures. Clothing and food are both obtained for them. Only the Ruler can circulate them. It is necessary that the official bureaus be willing to accept them so as to keep the people from becoming suspicious. Then they will spontaneously turn over and be circulated at an increased price.[10]

The doctrines of the national determinist theorists of later ages were very close to this view. Qian Bingdeng also believed that there was no reason why a ban on circulation of silver could not be carried out, but he did not emphasize this point. He stated that if silver was not banned, then silver, coins and Certificates could all be jointly used. He would legally fix a rate of 1,000 cash per ounce of silver, or per 1-string Certificate, as well as 50 ounces as the weight for a silver ingot.

Coins would be used for odd amounts. Certificates would be used for round sums. Silver would begin to be used for amounts greater than 50 ounces. If coins were too numerous, they would be commuted into Certificates; if Certificates were too numerous, they would be commuted into silver; but those who used broken pieces of silver as substitutes for coins or Certificates would be punished.

This requirement that whole and not broken silver be used was very peculiar, but his belief that the exchange price between silver and copper coins could be fixed by law was nevertheless a form of nominalism.

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[9]Wang Liu, *Simple Words on Coins*, "Earlier Discussion on the Rectification of Names."

[10]Wang Liu, *Simple Words on Coins*, "Earlier Discussion

There was also Lu Shiyi, who in his *Discussion of Coins*[11] advocated the issue of silver certificates.

on the Rectification of Names."

[11]Wang Liu, *Simple Words on Coins*, "Earlier Discussion on the Rectification of Names."

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2. Monetary History and Numismatics

Intellectual fashion during the Ming Dynasty made it unprofitable to develop the techniques of scholarship. Perhaps the intuitionist philosophy of the period was one reason for this, since it caused most intellectuals to nourish a loose and superficial attitude. Research was not linked to reality. Men did not seek to see things as they really were, but were content to rely on empty conjecture. This was the case for both monetary history and numismatics. Because numismatics must be primarily concerned with the coins themselves, its accomplishment was smaller. In fact, there were no genuine works of numismatics during the Ming Dynasty.

The *Yuan History*, put together at the beginning of Ming, is the worst of the official histories. Those responsible for it did not understand Mongolian, and did their work carelessly. As a consequence, the entire project only took a year to complete. How could it have been other than a hodgepodge of errors!

The *Yuan History* contains a 5 *juan* "Treatise on Food and Money." The first *juan* contains a subsection on the "Certificate System," which begins with the printing of the Zhongtong Certificates and ends with the abolition of the Zhida Silver Certificates. It does this in just 829 characters. Another few hundred characters deal with "The Number of Certificates Printed Annually." It is not until the fifth *juan* that one unexpectedly encounters another subsection on the "Certificate System," which tells the story of the zhizheng 10 [1350] issue of new Certificates in 964 characters. The material for the first of these is drawn from *Major Statutes Through the Generations*, and material for the second from *Six Political Categories*.

Comparable errors and disorder are to be seen only in the old histories. The *Yuan History*'s contents are also too abridged. Of the coins, it mentions only the Zhida Circulating Treasure, the Great Yuan Circulating Treasure and the Zhizheng Circulating Treasure. Nor is its narrative clear even on the Certificates. For example, it blurs together the terms for the silk certificates of the beginning of the zhongtong era and the Original Treasure Certificates, and does the same for the Zhizheng Exchange Certificates issued later. Evidently none of the authors clearly understood these questions, leaving us mystified about these matters as well.

There was no general monetary history written during the Ming Dynasty comparable to the "Investigation of Coins" in *Investigation of Literary Remains*. Qiu Jun's *The Great Learning Expounded, Addendum*, written during the chenghua period [1465-88], contained a discussion of money, but only a very abridged one. Someone extracted a portion of it under the title, "A Compilation of the Coin Laws," but it was only a thousand characters long, forming 1 *juan*. This work mentions a certain number of ancient coins to eke out its narrative, but it cannot be said to be a true monetary history. Moreover, of the things it cites, almost half are mythical, such as the coins supposedly cast by Yu, Duke Tai's Nine Offices Round System, and the large coins allegedly minted by King Jing of Zhou.

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As for numismatics, during the yongle and hongxi periods [1403-1426] there was *Dong You's Coin Catalog* in one *juan*. It was extraordinalily sketchy and full of errors. For example it mistakes an early Han Pod-cash for a 100-cash coin, a Yong'an Five-grainer for a coin of Southern Tang, a Sagely Song Original Treasure for a coin minted by Emperor Taizu of Song, and even makes Zhu Yuanzhang's Dazhong Circulating Treasure a coin minted during the dazhong/xiangfu period of Northern Song. Some people suspect that this work was edited by someone else, but if so, this editor must have retained only the work's errors, and not its good points.

During the jiajing period [1522-67], there was Lu Shen's *Treasure Money Record* and *Coin Register*, both no longer extant, and their contents not specified. His *Yanshan Outer Collection, Leisurely Enjoyment Record* mentions a *Mr. Yao's Coin Catalog* (Mr. Yao is also given as Mr. Zhu), and says that it "collects all the coins of history into a catalog; strange forms and odd shapes, there is none that it does not have, and for each it specifies the time of its origin." Perhaps his own *Treasure Money Record* and *Coin Register* were better works, but unfortunately, they have not survived.

There were also Luo Rufang's *The Meaning of the Ming Circulating Treasure* and *The Meaning of the Broad [or Guang] Circulating Treasure*, each in 1 *juan*, and which are also both lost. It is said[1] that since Luo Rufang served as Viceroy of Yunnan, and Yunnan was a center of coin casting, he wrote these books to set forth the coins produced since anti-

[1]*Complete Works of the Four Treasuries General Contents.*

quity, beginning with Fuxi and the Yellow Emperor, and coming down to the Tang and Song Dynasties.

Such books cannot be classified as numismatic works, and must be put within the category of histories of monetary systems.

Guo Zizhang's *History of the Springs*, in 13 *juan*, was written during the longqing and wanli years of the late sixteenth century, but it is no longer extant. Guo Zizhang was a metropolitan graduate of longqing 5 [1571] who served as Minister of War, and wrote a great deal.[2] Contents of *History of the Springs* are not known in detail.

During the wanli period, there were Hu Wokun's *Circulation of Coins*, Li Yuanzhong's *Record of the Spirit of Coins*, and Hou Xun's *Matters Concerning Minting*. These books were neither monetary histories, nor did they deal with numismatics. Rather they were compilations of material dealing with money.

The *Circulation of Coins*[3] has a total of 32 *juan*, and contains a ralatively large number of categories. Except for the first two *juan*, which give a unified summary of the Ming coin regulations right from the beginning, the remainder is divided into thirteen categories, according to the nature of the materials: origins, systems, forms, use, materials, circulation, management, control, divisions, unusual coins, abuses, writings, and interpolations.

Each category is in turn divided into a number of subheadings. The third category, "forms," fits within the scope of numismatics, and occupies three *juan*. It is divided into the subcategories of regular items, miscellaneous items and unusual items.

There are both illustrations and captions, but the work's contents are for the most part derived from Hong Zun's *Record of Coins*, and I suspect that its illustrations were copied from other coin catalogs. Most of the material in the book is copied from the various histories' "Treatises on Food and Money" and the various compendia of statutes, but it also collects a great deal of heterogeneous material, and some of it has value for reference purposes. For example, the twelfth category, "writings," is divided into subcategories on edicts, memorials, discussions of policy, and debates on measures. If he had collected more material of this kind, its value would have been greater.

The *Record of the Spirit of Coins* has 7 *juan*, and also contains a number of subdivisions, but its contents cannot compare with those of the *Circulation of Coins*. It merely

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collects some anecdotes on coins from ancient records, including earlier books of anecdotes, tales about immortals, demons and spirits. *Circulation of Coins* also contains this sort of material, but not so large a proportion of its total is so formed.

Matters Concerning Minting is a book concerned with the monetary policies of the tianqi and chongzhen eras [1621-44]. Its author, Hou Xun, was a metropolitan graduate of the wanli period, and it is said that he worked for Li Zicheng.

The illustrations appended to Hong Zun's *Record of Coins* were drawn by Xu Xiangmei. Xu Xiangmei's alternate name was Zhonghe. He passed the lower level examinations in Hangzhou, and was a painter. It is said that he copied the paintings of Mi Fei and Wu Zhen as though they had been reincarnated in him,[4] but the pictures of coins that he copied contain a great many inaccuracies.

For example, he drew the characters *yihua* as *baohuo*, he drew the White-cash of Sui with a black ground and the inscription in white, and he drew practically all the knife and spade coins of Wang Mang incorrectly. As a consequence, he has been criticized by later ages. Nevertheless, the majority of his coin illustrations were drawn from the objects themselves, and I suspect that the ones with errors were copied from other coin illustrations.

For example, for one type of unusual spade, the *Record of Coins* gives only the dimensions, and does not state explicitly what the inscription was. Xu Xiangmei drew the inscription [] *yijin*[a] upside down. The Emperor Shaohao *huo* given in Luo Bi's *History of the Circuits* has the same dimensions, and Luo explains that it had this inscription.[5]

The illustrations in the nearly contemporaneous *Circulation of Coins* commit the same errors, and it is possible that these errors may have come from the same source. Hu Wokun's illustrations are, however, inferior to Xu Xiangmei's.

In any event, these are the earliest illustrations to have appeared in a modern numismatic work. For this reason alone, they have a certain historical sig-

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[2]For the *History of the Springs*, cf. *Jiangxi Gazetteer*. Huang Zongxi's *Sea of Ming Literature* also contains Guo Zizhang's "Discussion of the Coin Laws" in one section.

[3]Based on the Yuange reprint edition.

[4]*Compendium of the History of Painting*, quoting *Original Explanation of the Substance of Painting*.

[5]The *Record of Coins*, 9, illustration of an unusual spade gives its inscription as [],[b] while *History of the Circuits*, latter record, 7, under the entry Shaohao, quotes Li's coin catalog on an unusual spade with the same dimensions as having the three character inscription [],[c] and is this not simply an upside down version of []?[d] Probably Xu Xiangmei had seen Li Xiaomei's *Historical Coin Catalog*.

nificance. It is said that Xu Xiangmei also produced a coin catalog,[6] but it has not come down to us.

In addition, there is also an *Ancient Coin Classic* which was quoted by Ming writers,[7] but it is not certain that it was written during Ming times. It mentions the coins of Zhao during the Warring States Era, and says they were round both inside and outside. This point had not been made previously, but we do not know this book's authority for that statement.

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[6]Cf. Li Zuoxian, *Ancient Money and Exchange*, edition not known.

[7]Dong Yue, *Investigation of the Seven States*, "The Coins of Zhao," latter part, cites it.

a 宋一鈔 b 李耀 c 已舌李
d 宋

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7.4 Credit and Credit Institutions

1. Usury and Pawnbroking

There were no particular new developments in the credit trade at the beginning of Ming. Loans and pawnbroking were still the undertakings of private individuals. It was only after the middle years of the dynasty that money shops appeared.

Usury was clearly in a flourishing state. The early Ming figure Shen Wansan was a famous usurer.[1] When an honest peasant saw how much money Shen had, he supposed Shen had found a pot of treasure. Actually, usury was his treasure pot.

There were probably quite a few usurers in the city marketplaces. It is said that in zhengde 3 [1508], on the occasion of visits by provincial officials to the capital for imperial audience, Liu Jin demanded that each of them hand over 20,000 ounces of silver before they would be permitted to return. They had no choice but to borrow the money from the "great houses" of Beijing, and when they returned to their home provinces, they confiscated wealth from the people to pay back twice the original sum.[2]

Of course usurers were not limited to the urban markets. The people of the agricultural villages were also subject to their extortions. A certain number of landlords and retired offcials quite naturally turned into such capitalists.[3] During years of bad harvests, or when emergencies occurred, the peasants had no choice but to borrow from them.[4]

There were a variety of labels for a pawnshop during the Ming Dynasty. It might be called "release treasury" [*jieku*],[5] "release shop" [*jiepu*],[6] "pledge

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[1]The unofficial histories contain much material concerning Shen Wansan, who had become a legendary figure. Dong Hanyang, *Green Jade Village Miscellaneous Holdings*, "Shen Wansan, Xiu," records: "The Most High Emperor Taizu once on the first day of the month summoned Xiu and gave him one Hongwu coin, saying, 'I'll trouble you to make some profit for me within no more than a month. From the second day of the month to the thirtieth, each day give me double the amount you gave on the previous day.' Xiu was overjoyed, bowed, and accepted the commission. He went out and thought through the calculation, and only then realized the difficulty. He would have to produce coins to the amount of 536,870,912 cash. Now since 160 Hongwu coins weighed 1 catty, and 16,000 of them 1 picul, then reckoned in piculs, that number of coins would come to 23,554 piculs and 43 catties. Though Shen was rich, how could he manage this? The Sagely Ancestor's aim was to show that the interest rate should be 0.03 ounce per ounce, and that no matter how long a loan ran, the total interest should come to no more than the principal. This was written into the laws."

[2]Chen Hongmo, *Things Heard in Succeeding Generations*, 2.

[3]Xu Fuzuo, *Conversations of the Elders of Three Family Village*, 1, "Censor Liu": "Censor Liu's given name was Yanhui. He was a native of Wu, the southern lower Yangtze. He entered the capital without any capital, and borrowed 50 strings in cash from the rich man Weng Lütan without a contract." *Ibid.*, "Zhang Di": "On East Street there was a fellow named Li Gui who was a servant of the Zhang family. There was a maidservant who worked with Di, and borrowed 2,000 cash from him."

Unusual Things Seen in Ancient and Modern Times, 3, "Teng Dayin Settles With the Household Privately" (an event of the yongle period): "In Xianghexian in Shuntianfu, northern Zhili, there was a Guardian Ni . . . who had been dismissed from office and was living alone. Although he was growing old, he expended all his nervous energy in strengthening his prosperity. He took an interest in each of the rents he took in and in each of the loans he made."

The Artful Garden (a book of the wanli period), 11, "The King of Broad Profit": "The King of Broad Profit Temple had much incense from the south which it sold to the people for hard cash, which they were permitted to borrow. There was a purchaser who brought a contract to borrow money, and cast divination sticks before the deity three times. All three times the indications were highly auspicious. On three occasions he borrowed several hundred in metal, and then went overseas, where he encountered pirates who took it all away."

[4]*Hongzhi Veritable Record*, 103, hongzhi 8, 8th month, Ma Wensheng said: "The food of the little people is exhausted. It has been drawn off to the capital in taxes. . . . To get silver in years of good harvest, 8 or 9 piculs can only be exchanged for 1 ounce of silver. In years of bad harvest, they borrow from rich families, and pay back twice the original sum."

[5]*West Lake Second Compendium*, 12: "A man of the hongzhi period of our dynasty with the family name Xu and the given name Ao . . . His mother's brother, Zhang Zhen was a rich man who ran a release treasury, and needed a manager, and so taught Xu Ao to take over the management. He resided in a small side apartment in the Eastern Hall." *Unusual Things Seen in Ancient and Modern Times*, 5, "Tenth Maid Du's Anger At Shen's Treasure Box" (during wanli 20): "In the courtyard his lordship glanced at the blue lapel of the gown. When the piece of silver reached his hand, he did not avoid going to the release treasury

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to redeem several articles of clothing."

[6]*Thump the Table in Alarmed Wonder*, 15, "Wei Chaofeng's Lustful Heart Examines Expensive Property; Lower Degree Holder Chen Craftily Plots to Gain Money from His Original House": "Degree Holder Chen was uneasy in his appetite. For the time being, there was nowhere to turn, and he had no silver to use. Some people had hired him to write a contract paper, and

treasury" [*dianku*],[7] "pledge shop" [*dianpu*],[8] "release pledge treasury" [*jiedianku*],[9] "release pawn treasury [*jiedangku*] or "release pawn shop" [*jiedangku*],[10] "pledge pawn shop [*diandangpu*],[11] "pawn shop" [*dangpu*],[12] "collateral treasury" [*zhiku*],[13] "collateral shop" [*zhipu*][14] and "seal shops" [*yinzi pu*].[15] Some of these were carryovers of labels from previous dynasties. Some were new names.

The term *dangpu* became the common name for pawnshop thereafter. [*Zhi* is still used as part of the name for pawnshop, *shichiya*, in Japan. EHK]

We can only discern something of the nature of Ming Dynasty pawnshops from fiction --the infor-

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go to that release shop on Three Mountain Street [in Jinling] which was the location of Wei Chaofeng from Weizhou. There he was to borrow 300 ounces of silver. That Wei Chaofeng was a money-loving devil. In the end, Chen's reputation was the better of the two. Wei Chaofeng did not fear that he would be unable to repay the money, and so lent him the 300 in silver. The interest rate was 0.03 ounce per ounce. As soon as Chen got hold of the silver, he reverted to his former wasteful ways."

[7]*The Artful Garden*, 7, "Little Han Undertakes to Requite the Heart": "And from the time the court said to use the plan to obtain it, the devil only knows what happened. There was a broad extension of pledge treasuries. They were run by young and old, and subsequently by rich men from Hang City." *The Stone Assent*, 6, "Request of of a Beggar Woman to Venerate the Luan Birds": "His lordship's helper got money in his empty hands, accumulating it by the tens of thousands, and because of this could run a pledge treasury. The business of that pledge treasury took interest of 0.02 ounce, and though there were limits to it, they merely called it borrowing army uniforms, or buying army provisions. Interest was taken on interest, and wealth beyond counting was taken. In less than five years he had one of the great households of Yancheng, and his reputation was known as far as his old home town."

[8]*Unusual Things Seen in Ancient and Modern Times*, 14, "Song Jinlang's Gang Smashes the Rich Man's Hat" (an event of zhengde times in Kunshan, Suzhou), "In front of the gate there was a pledge shop." *Golden Lotus*, chapter 57: "Now, once again, the cool of Autumn had come, and her furs had been pawned in the pledge shop."

[9]*Thump the Table in Alarmed Wonder*, 22: "That great merchant who had come had the family name Zhang and the given name Jin. He was passed off under the name Zhang Much-treasure. He ran several release pledge treasuries in the caapital, and also several textile shops. He specialized in making loans to officials, and was pretty brainy. He went to their residences to discuss business, and sold official ranks. He handled everything personally, but there was nothing he did not accomplish, and so some also called him Zhang Much-guarantee [*Duobao*, a homonym for Much-treasure. EHK]. He was given this name because he could guarantee things no matter how numerous they were."

[10]*Golden Lotus*, chapter 21: "He then opened two rooms facing the gate, and entrusted 2,000 ounces of silver to Fu Huoji and Ben Dichuan to open a release pawn shop. The son-in-law, Chen Jingji, merely took the key to make inspections. Ben Dichuan kept the accounts, weighed money and issued goods. Fu Huoji . . . judged the fineness of the silver, and did the buying and selling. . . . Li Ping'r had clothing, jewelry, old books, paintings and antiques on the shelves of that release pawn shop. Quite a bit of silver must have gone out its door every day."

[11]*Journey to the West*, chapter 72: "'Look at that idiot who is looking up and laughing. Teacher originally took him out of a pledge pawn shop.' Sandy said, 'What about him?' Bajie replied, 'Don't let the brothers steal all those clothes of his.'" *Repetitive Words from the Guest's Seat*, 2, "The People's Profit": "Before the zhengde period, pledge pawn shops were all opened by people of this capital [Nanjing]. Now, along with textile shops and salt shops, they are all run by rich commoners from outside the district and province."

[12]*Mending White Furs*, 6th collection, 2, West Qin tune, "The Kidnaped Woman of Banchang": "[*chou* comedian) There is an official named Jin from Yanggu here. He's now opened a pawn shop to earn a living. . ." *Partition Curtain Flower Shadow*, chapter 7: "There are only some twenty or thirty pawn shops, salt shops, incense candle shops and textile shops in the city."

[13]*Qingpingshan Hall Prompt Book*, latter part, "Biography of the Highwayman Yang Wen": "Doctor Zhou Quancha said, 'I am the owner of this tea house, and a wealthy man in the town. I summoned Official Yang to run a gold and silver shop and a collateral treasury." *Repetitive Words from the Guest's Seat*, 8, "Examination of Rewards": "Zhang Shiduan's 'Picture of the Qingming Festival on the River' was said to have once been in a Nanjing collateral treasury, and later to have entered the household of Lord Wei."

[14]*Repetitive Words from the Guest's Seat*: "Up until then . . . there was a ban on collateral shops taking profit . . ."

[15]*Golden Lotus*, chapter 95: "Fu Huoji reached home . . . and with a cry of grief, died. Moon Lady observed this with composure, and merely got back her capital from the seal shop, and put out no more silver for pledges." *Ming Emperor Xianzong's Chenghua Veritable Record*, 209, chenghua 16, 11th month, renchen, words of the Minister of War, Yu Zijun: "Recently, both inside and outside of the capital, . . . young neighborhood toughs and criminals who have fled from various places

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have been assembling . . . to carry on gambling. Those who have been impoverished by gambling become bandits. They take the clothing and goods they have stolen and pawn them at seal shops for cash. They do as they please."

Emperor Xizong's Tianqi Veritable Record, 52, tianqi 5, 3rd month, guiyou, proposal of Gu Bingjian: "The Secretariat official Zheng Rongguang stated that the textile shops, seal shops and pawn shops at the front gate had temporarily closed, and that some had even absconded. This was because to end cheating Tao

mal histories. Pawnshops appear to have already differentiated into classes. A distinction was made between "great pledges" [*judian*] and "short pawns" [*duanya*].[16]

Judging from the meaning of the components of these two terms, great pledge must refer to high priced articles, but if it was an antonym to short pawn, it must also have included the characteristic of being a long-term loan. The amount of money involved in the collateral loan was probably also relatively large, and the proprietors of such establishments were not willing to make petty exchanges.

Short pawn referred not only to low priced articles, but also to loan durations, which were relatively

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short. Naturally the collateral for such loans were mainly small items, which were pawned either for silver or wine and rice. The pawners were all poor people who regularly pawned and redeemed their property.

Nevertheless, most people used labels loosely. Small pawn shops were not necessarily called *yadian*. Sometimes they were called small release shops, small pawn shops or small pledges.

The capital of a firm probably ran from 1-2,000 to 10,000 ounces.[17] Of course the number of employees was determined by the size of the business. If there were three employees, then one was the cashier, one managed the accounts and issue of goods, and one was the manager.[18]

Naturally, their main business was receiving pawned articles, but they probably also engaged in the ordinary loan trade.[19] As was the case with the loans of the *jiedianku* of the Yuan Dynasty, these loans would be secured merely by a written contract. Nevertheless, when Chaofeng made such loans, other arrangements were often made, and he might even attempt to take over the debtor's house and property.[20]

The pawn shop might even run other businesses, such as buying and selling army supplies[21] or exchanging copper cash.[22]

Therefore, pawn shops were still an important credit institution during the Ming Dynasty. In wanli 35 (1607), in Henan province alone there were 213 of them, most run by people from Anhui.[23] Anhui

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Langxian had stopped the shops from lending silver."

[16]Lin Xizhong, *Yikui Pavilion Selected Drafts*, 1, "Advice on changing the Commutation of Rice South of Weizhou": "There are propertied men of Wei who mostly trade outside. People in the register who are constrained by semi-poverty to have nothing to put on the table, frequently take their poor clothing and torn short jackets and temporarily pawn them for a *sheng* of rice. It is most pitiful to see the smoke of their cooking at dawn. And yet the great pledges of the high gates will not deal in fractions of an ounce, and so there are short pawn little shops who specialize in receiving the petty goods of these poor people as collateral for either silver or wine and rice, which are pawned and redeemed from time to time."

[17]*Rousing the Age Marriage Affinity*, chapter 76: "Several days passed. Di Xi said he wanted to open a small pawn shop in the garrison district to lend money at profit to provide for his daily needs. He rented a house, moved some furniture in, and invited Tiger Elder Brother to resign his commission to serve as manager of the shop for De Xi. . . . Di Xi put out 1,000 in capital." (This was probably written during the yongli period, after the fall of Ming.) In *Golden Lotus*, Ximen Qing's release pawn shop had a capital of 2,000 ounces. Cf. note 10.

Bean Shed Words of Leisure, 3rd item, "The Chaofenglang Waves Money Wildly": "Wang Yandao had a sickly nature when young, and used 3,000 ounces to open a small pledge on the lower street. That let him just sit there and watch what was going on. . . . That Pingjiang was a commercial entrepot with a bustling marketplace. People settled in large numbers, and quite a few pledge shops were opened. That 3,000 ounces was far from enough. He opened his mouth and said to elder brother that only 10,000 would suffice. . . . The old chaofeng also agreed that what he had said was reasonable, and so a full 10,000 ounces were put together."

[18]Cf. note 10.

[19]Cf. note 9.

[20]*Thump the Table in Alarmed Wonder*, 15, "Wei Chaofeng's Merciless Heart Takes Over Expensive Goods": "That Provincial Graduate Chen had this debt of 300 ounces. Wei Chaofeng had the idea of taking over this farm of his. He bided his time, and did not have any one come and seek it. He waited anxiously until the third year, until the principal and interest had come to match exactly."

[21]Cf. note 7.

[22]*Rousing the Age Marriage Affinity*, chapter 50: "Di Binliang asked, 'Where can I exchange this for commutation cash?' Huang Guiwu said, 'There are plenty of pawn shops at the East Gate, near Qin Jingyu's house. If it is good fine silk silver, you can exchange an ounce for 92 or 93 cash!'" *Ibid.*, "Noseless Gao came right up and asked . . . 'I'm afraid the only one left in the East Gate is the Qin Pawn Shop. He's still alive, but all the rest are out of business. Outside the West Gate there's still the Wang Pawn Shop . . . Except for these two, none of the others can handle this money.'"

[23]*Emperor Shenzong's Wanli Veritable Record*, 434, wanli 35, 6th month, dingyou, the words of the Governor of Henan, Shen Jiwen: "Among the merchants are those who run pawn shops, but they take both primary and secondary moneys, and are not vexed by land or labor service taxes, boat and cart excises, river or lake dangers. They ought to be paying heavy taxes, but through generous bribes they get to lighten them. . . . Now Wei merchants run pawn shops north of the Yangtze. Their

merchants were very active during the Ming Dynasty. That was a difficult time for the government's finances, and during the tianqi period [1621-28] a tax was collected from pawn shops.[24] There was a 10 percent tax on their capital, from which it was anticipated that 200,000 ounces could be collected.[25] Evidently the capital of pawn shops then was around 2 million ounces.

From the middle years of the Ming Dynasty on, commerce and the monetary economy underwent conspicuous development, and those running pawn shops were mainly merchants. However, some landlords from the official class also put their money into this business.[26] This shows that the monetary wealth of the officials and landlords was not entirely locked up in hoards, but that it was tending to be turned into capital for usury.

The interest on loans during Ming was generally at a rate of 3 to 5 percent per month.[27] The *Great Ming Laws* stipulated that "for all private loans and pawned goods, there shall be paid in monthly interest no more than 0.03 ounce per ounce, and no matter how long the term of the loan, the interest shall not exceed the principal."

Nevertheless, the exploitation involved in pawnbroking was not limited to the interest taken. It took other forms as well. When silver was paid in and given out, they would put their hand on the left or right of the scales: That is, when paying silver out, they would make the weight a bit short, when taking it in, they would make the weight a bit heavier. The fineness of the silver being paid out would be a bit lacking. Silver accepted would have to be completely pure.

Sometimes the proprietor would take the best of the jewelry for his own use, and they would use various pretexts to avoid redeeming things that were worth money.[28] Or, they would surrepetitiously substitute low purity imitations for pure metal ornaments, coarse jewels for fine, low quality stones for good quality ones.[29]

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We do not know what form the pawnshop tickets took, or what words they bore, but for their texts, we may borrow as representative an example from *Golden Lotus*:

> The person who establishes the loan ticket, Jiang Wenhui, is a physician of this district. It is issued because he lacks cash

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capital is several thousand, and their taxes less than 10 ounces. I have seen some 213 firms like that of Wang Ke in Henan, with over 2,600 ounces of silver being sent."

[24]*Emperor Xizong's Tianqi Veritable Record*, 52, tianqi 5, 3rd month, renshen: "Zhou Rumo's communication stated, 'To the east and west provisions are lacking. There is no choice but to take some profit from a variety of items. There are eight of these: First, minting; second, the Salt Administration; third, village cultivators; fourth, taxing contracts; fifth, pawn shops; sixth, dispersing officials; seventh, extra labor service; eighth, postal transmission. . . . The pledge shops' taxes are hard to change. In large cities the shops are numerous and they are generously capitalized. A hundred thousand is not considered extreme. Hui merchants do not hesitate to tread in out of the way districts, where it is hard to make even a little profit. Hence they do not just estimate the lightness or heaviness of demand, and meet a gap in supply. For the mass of taxpayers to not find things difficult, and for that collected to be spontaneously exchanged, is the way to level out what has been inequitable."

[25]Gu Jiheng, *Temporary Obligation through the Ages* (preface dated tianqi 3), 7, "Investigation of Agricultural Field Provisions" (*Mystical Observation Hall Collectanea*).

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[26]Wang Shizhen, *Yanzhou Historical Materials Latter Collection*, 36: "Now the family of Secretary Dong of Wuxing has more than a million. The Xiang clan of Jiaxing controls a million. The Xians' gold, silver and antiques come to more than those of the Dongs. The latter's fields, houses, pledge treasuries and capital are not as great."

[27]*Golden Lotus*, chapter 19 (also sometimes numbered as chapter 20): "This man said . . .'The 30 ounces of silver that you borrowed from me the year before last to send to your wife and child now comes to 48 ounces which you owe me, including both principal and interest.'" *Ibid.*, chapter 39: "Bojue said, 'Elder brother, if you don't do it, have him select someone else. You just borrow 2,000 ounces of silver to give him. Interest will be 0.05 ounce per ounce per month. Have him draw the money to return you.'"

[28]Feng Menglong, *Words to Caution the Generation*, 15, "Jin Lingshi Toasts the Elegant Boy."

[29]Ling Mengchu, *Thump the Table in Alarmed Wonder*, 15, "Wei Chaofeng's Merciless Heart Takes Over Expensive Goods": "That is to say, Wei Chaofeng usually was an extremely exploitative fellow. When he first arrived in Nanjing, he had only a tiny release shop, but he had a hundred conscienceless tricks for gaining a profit. For example, when the other fellow was going to pawn his pledge, he would take those 9 or 6 or 7 pieces of silver only in terms of their value as pure silver. He would also take out a very small measuring weight to short the weight by several tenths of an ounce. Later, at the time of redemption, he would put a much heavier weight on the scales, demand the full amount it indicated, and demand the pure metal equivalent. If it was the merest fraction short, he would not turn over the article. Or, if he took in as a pledge a piece of gold, silver or jeweled ornament, and if he saw that the gold was completely pure, he would make an identical copy and surrepetitiously exchange it with the original. He would exchange coarse pearls for fine ones, good treasure for low quality stones. One is unable to narrate in detail all the things of this sort that he did."

for his wife's funeral. The guarantor, Zhang Sheng, has borrowed from Lu Ming 30 ounces in white silver at a monthly interest of 0.03. From the time it enters his hand for use, it is agreed that the following year both principal and interest will be paid back. No less is to be paid back. In fear that later on there will be nothing on which to rely, this loan ticket is established to testify.[30]

This is a pawn ticket from the jiajing period. We might note that there is no definite date of repayment specified. This was not an omission in the novel. Probably this was also the case in practice, since some lenders were not anxious to receive repayment. They much preferred that the borrower take a long time to repay so that they could keep on enjoying the interest.[31]

[30] *Golden Lotus*, chapter 19.

[31] *Words to Caution the Generation*, 31, "Zhao Chun'r Looks Earnestly on the Cao Family Estate" says: "After a year and ten months, because interest was being earned on accumulated interest, the lender merely turned over a paper contract, and did not press for repayment."

2. *The Rise of the Money Shops*

During the fifteenth and sixteenth centuries, a parallel development occurred in both Asia and Europe. The exchange of coins gave rise to a new and more progressive financial institution.

Because the European city-states circulated a large number of foreign coins of non-uniform size and weight, and whose genuineness was hard to determine, merchants felt this to be inconvenient, and so the exchange business appeared.

At first its scale was not great. Some merchants would merely set up a coin stall in the marketplace, or a coin box or coin table.[1] Later, as trade developed, the number of exchanges increased, and as a consequence large credit institutions were established.

These not only calculated the value of coins and exchanged them for merchants, they also provided them with the convenience of a form of deposit. These businesses took in various coins and converted them all to standard money on their accounts for merchants who could employ this account money to liquidate their debts, and thereby avoid the trouble of weighing and judging the value of coins.

Later, these banks profitably used deposits to make loans. Such institutions flourished during the fifteenth, sixteenth and seventeenth centuries, which coincided with China's Ming Dynasty. In yongle 6 [1408], the Casa di San Giorgio was established in Genoa. The Venetian Banco di Rialto was organized in wanli 15

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(1587). The famous Amsterdamsche Wisselbank was set up in wanli 37 (1609), followed in wanli 47 (1619) by the Bank of Hamburg, and in tianqi 1 (1621) by the New Lunbao [Limberg?] Bank.

In China, the exchange trade had very remote origins. There were already gold and silver shops during Tang and Song. Of course their business was mainly concerned with hammering out utensils and ornaments, with buying and selling gold and silver as a secondary business. Moreover, there is some intrinsic difference between buying and selling gold and silver and the later emphasis on the exchange mainly of copper coins.

Dealing in copper coins also has a long history. This practice was constantly occuring during the Song Dynasty. Because the price of copper coins was high in Sichuan during the taiping/xingguo period [976-84], merchants competed to bring copper coins across the Sichuan border to exchange for iron cash.

During the chunhua period [990-5], large coins were going to be used to pay taxes in Jinghu and Lingnan Circuits, and so merchants exchanged two or three small coins for each large coin.

Officials also used their salary cash to speculate in the exchange market. During the chongning period [1102-7], private dealing in 10-cash coins flourished, though the authorities prohibited the practice.

To halt private coining, in Song Emperor Renzong's jiayou 8 (1063), the Khitan prohibited private dealing of copper coins. There was also an order banning sale of copper coins during the Yuan Dynasty's zhizheng 16 (1356).

These examples, however, involved genuine sales, the treating of copper cash as commodities, and may have had something to do with the activities of private coiners.

By the zhengtong period [1436-50] of the Ming Dynasty, the fall in value of the Great Ming Treas-

[1] The English word "bank" was originally spelled "banck," and meant a board or stool. The term originated in Italy. At first, the Jews of Lombardy probably used benches in the marketplaces as stalls on which to display their coins, and these were called "banco." If such a dealer could not pay off his debts, his creditors would smash his banco. This was called "banco ratto," or in English "bankrupt," and this is how that English word evolved.

ure Certificates had led to relaxation of the ban on use of silver, and thereafter silver and coins could circulate openly and legally.

Later, because of private coining, the weights and fineness of coins fell into disorder, and discrepancies appeared between the price in silver of standard coins and private coins, and these prices frequently changed.

As a consequence, a number of people began to carry on the exchange trade.[2] In jiajing 6 [1527], the Secretary of the Board of Revenue, Zou Wensheng, discussed the private dealing in copper cash by contemporary rich and powerful merchants, and of the abuses this led to.[3]

In jiajing 8 [1529], the Inspector of Zhili, the Investigative Censor Wei Youben mentioned firms which sold Certificates, and sought a profit from the officials for doing so at the official price. He also mentioned firms which sold coins at the market price, taking their profits from the people, this profit reverting to their shops.

He advised that the Certificate offices temporarily halt collecting coins for Certificates, and shift to collecting silver. An official of the Board of Revenue said that some twenty people from this office had set up shops for selling coins and Certificates. These were to weigh and collect silver from merchants to substitute for a certain quantity of coins and Certificates. This had gone on for a long time, abuses had become very numerous, and finally the practice had been prohibited.

The ban was not, however, effective, since in jiajing 15 [1536], Yan Lin mentioned the jiajing 8 ban, and said that at that time evil factions and private cabals had agreed to "close the market for coins, to make prices soar." As a consequence, there was no choice but to relax the order of prohibition.[4] The coin markets referred to here were probably the coin "bancos" or money shops.

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The term money shop [*qianpu*][5] first appears in the novel *Golden Lotus*. This was just after the government began to open mints on a large scale, and the quantity and variety of coins was becoming very great. Just among the standard coins there were the gold-reverse, fire-lacquer and lathed-edge types.

This represented an opportunity for the exchange trade to develop. Some merchants or others who commonly took in copper coins might want to exchange them for silver, and could engage in the business of dealing in copper coins.

For example, monks in temples normally took in and paid out a considerable amount of coins and rice, and so might open coin and rice shops.[6] Even if the development of the exchange trade depended solely on the exchange of coins, it could have been maintained, and surely there would have been peo-

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[2]*Emperor Xianzong's Chenghua Veritable Record*, 260, chenghua 21, 1st month, gengyin, an edict of amnesty on the occasion of a changing star stated: "Relatives of the meritorious and powerful families are not permitted to usurp power over passes, ferry crossings and bridges, or to set up shops selling strings of Certificates, firewood or fodder, or to make profit by usurping water rights so as to encroach upon and harm the little people."

Emperor Wuzong's Zhengde Veritable Record, 1: "Imperial relatives, meritorious officials and powerful families . . . usurp control of passes, river crossings and bridges, and also set up shops to obstruct Imperial orders about foreign goods. They deal in strings of Certificates, and collect firewood."

[3]*Emperor Shizong's Jiajing Veritable Record*, 83, jiajing 6, 12th month, the Secretary of the Board of Revenue, Zou Wensheng, memorialized on the coinage: "Item: Strictly prohibit private dealing. Rich merchants rely on their power to go back and forth, within and outside the capital to either buy up new coins or accumulate good coins. Their coffers fill. They make deals in accord with circumstances, making sudden changes and transforming a situation so as to strike a profit. They take advantage of the cheapness of ordinary labor, and grasp the power to raise or lower the stream of money. This cannot long go on. There must be orders to put a halt to this. Anyone who undermines officially set prices should be punished as though he were engaged in private coining."

[4]*Emperor Shizong's Jiajing Veritable Record*, 191.

[5]The Japanese specialist in Han history, Hino Kaisaburo, in the Heibon edition of his *Outline of World History*, Volume 6, *Medieval Oriental History*, chapter 3.3.2, "Development of Financial Institutions," says that the term money shop appears in Song Dynasty documents, but he does not give an example and cite a source for it, so we cannot rely on this statement. Hino's conclusions are frequently based on conjecture. For example, he says that Northern Song Exchange Notes were issued by counting houses. He has no authority for this point either.

[6]*Golden Lotus*, chapter 93: "From then on Jingji served as a Daoist priest in the Lord Yan Temple. . . . At that time the court had just opened the Grand Canal, and built two locks at Linqing so as to control the flow of water. They did not restrict the officials and people from using it. Whenever a vessel reached the lock, the passengers all came into the temple, some to treat with the spirits, some to present their desires, some to use the divination sticks, and some to do a good deed. There were those who distributed coins and rice, and those who offered up incense, oil, paper and candles. And there were those who stocked pine poles and rush mats. These Daoist monks accumulated a great number of coins and much food, and so they had their acolytes set up a coin and rice shop on the dock to sell these things for silver, and fill their private purses."

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ple who would have opened specialized money shops.[7]

Of course during the early period of their existence, money shops existed on a very small scale. In wanli 5 [1577], Pang Shangpeng memorialized for permission to set up money shops with affluent families from the cities in charge of them. They would buy coins from the official bureaus in proportion to the sizes of their fortunes, and would use them to carry on trade.[8]

When books of the wanli period mention coin stalls [*qiansi*][9] and money shops [*qianzhuang*][10], they give the impression that these entities were a profitable business. One also encounters the term "exchange store" [*duidian*], which also engaged in the business of exchanging silver and coins.[11] This might be another name for a coin store.

We do not know whether there is any connection between the *duidian* and the *duifang* of Song and Yuan times. If the *duidian* was the heir of the *duifang*, then its history may extend as far back as the counting houses of Tang. The first character of *duifang* probably referred to the transfer of funds, while in *duidian* it meant money exchange. Nevertheless, the attitude of the people during Ming toward the *duidian* was the same as that of Song and Yuan people toward counting houses and *duifang*, normally a belief that their widespread establishment was detrimental to society.

By the end of Ming, the money shops had become modern financial institutions. They could not only exchange copper coins for gold and silver,[12] but actively engaged in the making of loans, and also provided to their customers the convenience of withdrawing their funds by issuing checks.[13] There were also small scale money changing shops.[14] Such institutions probably flourished because of the extensive private coining going on at the end of Ming.

However, compared with the banks of Medieval Europe, the money shops at the end of Ming were not only smaller in scale, but had a smaller scope of trade. The European banks had evolved from engaging in money changing to making loans, accepting deposits, and to engaging in the remittance trade. The Chinese money shops merely expanded from money changing to the loan trade.

The deposit business made no progress during the Ming Dynasty, either in the hands of public entities[15] or private persons.[16] Because there was no

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[7]*Golden Lotus*, chapter 93: "This Feng Jinbao tearfully said . . . 'Yesterday I heard Chen San'r say that you were opening a money shop here. I wanted to take a look at you. By chance we happened to meet today, but who would have thought you'd want to kill me.'"

[8]*Emperor Shenzong's Wanli Veritable Record*, 66.

[9]*The Artful Garden*, 13, "The Jiao Family Bridge Female Demon": "People who had long lived in the city ran coin stalls adjoining the Jiao Family Bridge."

[10]*Partition Curtain Flower Shadow*, chapter 36: "When the first season came, Wang Yixiang obtained the capital from Nan Gongji, and opened a tavern downstream. He also sold blue cloth, and opened a money shop. It all went very well with him, and he ate so much that he turned black and fat."

[11]Fan Lian, *Amidst the Clouds Eyewitness*, 2, "Notes on Customs," written during the wanli period: "Circulation of false silver causes great harm among the people, and it has never been worse than in recent years. The false silver of former years could be detected, but now this can no longer be done. Formerly, those who circulated it were few, but now they are everywhere. Formerly, they were isolated and concealed their traces, but now their stalls are shamelessly open. They even enter alliances with the rich and powerful to open exchange stores broadly. The localities dare not arrest them. The official bureaus cannot prohibit them. This causes the masses to grind their teeth."

[12]*Rousing the Age Marriage Affinity*, chapter 11: "He then thought to go to the money shop to exchange the coins that very day. Chao Zhu had exchanged gold in that very same money shop."

[13]*Rousing the Age Marriage Affinity*, chapter 1: "The man who ran the money shop in that city lent money for people to prepare for important ceremonial occasions, and would come to the customer's door to deliver it. The Manager of the money shop said that whenever a household needed cash, no matter what the amount, they could issue a check, and their humble establishment would honor it. They would not dare to have a worse exchange rate than other firms. They would give 20 more cash to the ounce than the other houses, and would accept lower quality coins at par." *Ibid.*, "Within ten days, a firm with several dozen personnel, with several thousand ounces of silver, and daily expenses of 10,000 cash, could issue tickets on the money shop for payment." *Ibid.*, "For miscellaneous daily expenses, there are managers of money shops who are willing to offer the funds."

[14]*Emperor Xizong's Tianqi Veritable Record*, 71, tianqi 6, 9th month, dingchou: "Cui Chengxiu gave an itemized discussion of the requirements for minting. . . . In addition to this, rascals from outside the capital have been sneaking into the capital city to open money changing shops. They carry private coins in the midst of their other goods, and come to the capital to distribute them, and then sneak out of the capital with scrap copper to use as the raw material for private coining. All of this causes harm to the coinage."

[15]Wang Ao, *Mister Chenze Alternate Collection*, "Chenze Notes of Things Heard," latter part, Liang Fang and Wei Xing: "At first a hoard of 10 *jin* accumulated in the inner treasury. When the hoard had accumulated to a certain number of tens of thousands, the court kept on accumulating it to prepare for emergencies on the frontiers. It was never lightly expended."

guarantee of the safety of deposits for interest, everyone kept their money in hoards. Yan Shifan, for example, buried a large amount of silver in the earth.[17] It could not be given to people for profitable use. As a consequence, loans in China were only between individuals, the amounts involved were not large, and the money was mostly used for consumption rather than investment purposes.
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The deposit trade did not become well developed because in a feudal society if someone put his wealth outside his own hands, it was completely vulnerable. Except for the person who one trusted the most, with whom one might sometimes entrust one's property,[18] no one would want to deposit his own money in some unknown shop.

It was still more true that in ancient times that manufacture and commerce were not well developed because comparatively few people could grow wealthy through the management of these activities. Wealth was mainly gained through corruption and graft, and such persons would have even greater need to keep their wealth a secret.

Such lack of security for wealth deposited with other people was not limited to China in ancient times. The same was true of foreign countries. Because the money-changing shops of Venice would lend out people's deposits and be unable to collect them back, depositors incurred losses.

As a consequence these shops were legally prohibited from making loans, and so later on bank loans of a similar type were also not entirely legal. In sixteenth and seventeenth century England, for example, in view of the fact that the Tower of London was a strong prison, and there were government guarantees, much gold and silver was deposited there by merchants. To everyone's surprise, in 1640 (chongzhen 13), King Charles I diverted this money to other purposes because of fiscal difficulties. Thereupon everyone went back to private hoards.

Later, because the credit of the gold shops was good, and because they possessed strong storerooms, people deposited their funds with them. Because, however, these goldsmiths coveted profit,

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[16]Zhou Xuanwei, *Jinglin Continued Collection*: "Shi Bo's ancestor, Anfu, understood wealth. He accumulated a jar of silver, and buried it by hand under the book hall. After a year he was to take it out for use. He had merely put some dirt on it. He became very nervous, and dug into the dirt, but even after digging three feet down, none of the silver was to be seen. He encountered his second son passing by the window, called him over and told him the story. He thought someone must be cheating him. The son took over the digging from his father, and dug until he found the jar by the side of a pillar. As soon as they examined it, they saw that nothing was lost. He took out two ingots of silver and gave them to his son. Thereafter he no longer buried his money in the earth."

Mister Chenze Alternate Collection, "Chenze Notes of Things Heard," latter part, Wan An: "An coveted wealth in the millions. When he passed on, his survivors got a tea urn which was all of silver. The purchaser of his house found a thousand in metal in a hoard. When An died, his wives and concubines fled with his children, and there was no one left in his family."

[17]*Jinglin Continued Collection*: "Shifan paid the bribe. Song did not know the details. First he set it up in a bamboo satchel, and then hid it away. It was stuffed full. Fan's wife then dug up the earth to a depth of one *zhang*, and five *chi* square, and lined it all around and on the bottom with fine stones. The silver was moved into it. It took three days and nights. None of those outside figured it out. Just as they were replacing the dirt, she suddenly said, 'This is what that old man has bequeathed.' She glanced around, and had a slave force Song to the edge of the hole. It dazzled his eyes. Song looked around more widely, and rather arrogantly looked a little more carefully a yard to the left and right. Song covered his ears and walked back. Speaking falteringly he said, 'Much accumulated, much lost. What a disaster!' Thus Song also knew it could not be avoided. After this silver had been lost, the carts went to the Lu River. They loaded 10 big vessels, and the job was still not complete. Finally, it was all confiscated by the officials."

Ibid., "When Shifan was dividing up the silver to be buried, he followed the way it was done in the noble residences of the capital, but doubled the depth and breadth. He piled up the dirt to a height of a yard, and set poles around the edge. He bought stones from Lake Tai, and piled them up into a hill, with the hollow places entirely filled with flowers and trees, so that there was hardly a crack remaining. There was only a hundred million."
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[18]Yan Song's family had some money deposited with outsiders. *Book of Ming*, 149, "Biography of Yan Song": "The Ruler ordered that when the city had been abandoned, and it was said that Song feared a son cheating his lord, he had been greatly obliged for the care of his relatives. Moreover, his grandsons had been given civil and military appointments, but they had all been taken away. His family was arrested. More than 30,000 ounces of gold and 20,000 ounces of silver . . . he sent off, and it was kept without loss for twenty years."

Ma Congping, "Petition on Inspecting Military Officials": "If the matter is to be completed, a gift of thanks of 400 ounces of silver is needed. . . . Dayuan ought to assent. Only 280 ounces have been set aside. It has been deposited in the shop of the cloth-seller Song Ruqi. By the 26th, when Zhang Sitian and Hong Junyu came to an agreement, they went to Song's shop to wait. Dayuan then went to the shop with Hu Cao. The silver was taken out for their inspection, and then redeposited with Song Ruqi to be lent out for collateral." Cf. *Orchid Pavilion Memorials and Communications*.

they lent this money to the government, and before long the national treasury suspended payment on its debts because of war. These losses fell on the heads of the depositors.

These are all examples of failures of the deposit trade. The expropriation of rented safe-deposit chests in China during the jianzhong era of Tang was even worse than this English example. The English king merely defaulted on a debt or encroached on deposits. The Chinese rulers acted in a positive way to plunder the deposits. Given this fact, no one would dare to deposit money in a public shop.

Once paper money was no longer used, Ming Dynasty money exchange became triangular. There was exchange of silver for coins, gold for coins, and gold for silver. The price of gold was too high, and it was not a true money, so we can only discern its price through its exchange price with silver. At the beginning of Ming, the price of gold was very low, but thereafter it rose steadily.

Many of the banks of Medieval Europe were engaged in the remittance business, but the Chinese money shops had not yet developed to this stage by the end of the Ming. The Chinese remittance trade had not received much emphasis after Northern Song times because paper money could substitute for bills of exchange.

Once paper money went out of use after the middle years of the Ming Dynasty, people came to realize the inconvenience of shipping hard money, and so remittance drafts came back into use, still under government management. In chongzhen 16
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(1643), Emperor Sizong issued an order to the Board of Revenue concerning exchange drafts, greatly encouraging their use. People were to be sent to the local offices to manage the paying out of ready cash for them, official extortion and short payment was prohibited, and rewards were to be given to officials who remitted exceptionally large amounts of silver.[19]

The needs of the armies were multiplying then, and the government hit upon this as a way to get hold of some ready cash. This was merely another form of borrowing.

Remittance took the form of the bill of exchange, the Chinese word for which was then written with another homonymous first character (the same one used in Account Note). Such a bill of exchange would be acquired in one place by paying in funds to a government office. When the traveller reached his destination, he would bring it to the branch office there, match it against its stub, and cash it in.[20] Such bills of exchange gradually assumed the status of instruments of circulation, and were transformed into paper money.

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[19] *Chongzhen Long Draft*, 1, chongzhen 16, 10th month, wuchen, proclamation to the Board of Revenue: "Army requirements are multifarious. The matter of remittance exchange is something that ought to be undertaken, and it is capable of helping meet urgent current requirements. The Board must do more to encourage it, perhaps by simultaneously issuing exchange drafts and despatching officials to the local tax offices to pay out the requisite amounts. This can simultaneously both meet the state's requirements and transmit the merchants' capital. It is not permitted for officials or clerks to commit extortion by reducing the amounts paid out. Violators are to be exiled. No matter how the large the amount of silver being remitted, and no matter how unusual the situation, a memorial must be sent within three days that the matter has been cleared. Moreover, the amount remitted on previous occasions is to be examined, to see if enough has been provided. If pressure is brought because there is not enough, then participating units will be reprimanded."

[20] *Amidst the Clouds Eyewitness*, 3, "Notes on Details of the Unusual": "Among the Huating, a son murdered his father. . . . At the time there was a villager named Ma, who had brought his wealth to the capital. Kewen learned of this when he went to pay it in. . . . While recording it, he fooled him, saying, 'I have heard your lordship has set a day for his return, and will walk several thousand *li* alone. Will you not be in danger from brigands? I should send the money for you to Mr. Xu's government office. There is a simple certificate like a contract which you can carry back and show to Xu, who will be certain to pay you the said amount. That way you can have an empty purse and still secure your wealth.'"

Bean Shed Words of Leisure, "The Chaofenglang Waves Money Wildly": "In less than a month that 10,000 ounces of metal coins can all be metamorphized like Zhuang Zhou's butterfly. You just want to have a fellow townsman or relative write a bill of exchange, and put it into your hand."

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8.0 THE QING DYNASTY'S MONEY

8.1 The Monetary System

1. Standard Coins

The Qing Dynasty's monetary system was, roughly speaking, a bimetallic silver-copper cash standard. Large transactions employed silver; small ones used coins. This was similar to the Ming Dynasty situation, except that silver now played a more important role. At first, an exchange price of 1,000 cash to the ounce was maintained between copper cash and silver, and from time to time the weight of the copper coins was raised or lowered to match changes in the market exchange price of silver against coins, but this could be done only with newly minted standard coins. This exchange price could not be maintained for old coins, and eventually not even for [new] standard coins.

Development of the Qing Dynasty's copper coinage may be divided into two stages: The first two centuries continued the traditions of the preceding two millennia, with molds used to cast standard coins. It was not until near the end of the dynasty that the second stage began when machinery was bought abroad to mint new style copper coins and copper dollars.

The Manchus began to mint coins before they entered China proper. Nuerhaci established his state and proclaimed himself Emperor in Ming Emperor Shenzong's wanli 44 (1616) with the year period title tianming. He minted the Manchu language Tianming Khan Cash[a] and the Chinese language Tianming Circulating Treasure [Cf. Plate lxxviii,1-6 at end of this subsection]. The Manchu language coin was bigger than the Chinese language one, and was probably for palace use. There is, however, a large 10-cash Chinese language coin which is the same as the large Tianqi coin, and bears the the three characters for "10 - 1 ounce" on its reverse. In tianqi 7 (1627), which was the Qing's tiancong 1, a 10-cash Manchu language Tiancong Khan's Cash[b] [Plate lxxviii,7] was minted, with the Manchu symbol for 10[c] to the left of the hole and the Manchu word for 1 ounce[d] to the right of the hole on the coin's reverse. It imitated the Tianqi large coin in all respects. It was not until wanli 27 that the Manchus

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created their own written language, patterned on Mongolian writing. They revised it in tiancong 6. Hence the Manchurian on the Tianming and Tiancong coins is in the old script, and lacks the circles and dots which the later new forms had.

Some people have seen Chongde coins, but their existence still awaits verification.

In shunzhi 1 (1644), in imitation of the Ming Dynasty's arrangements, the Board of Works set up a Treasure Origins Office, and the Board of Revenue a Treasure Spring Office, and they began to mint Shunzhi Circulating Treasure. The standard coin had a metal content of 7 parts red copper to 3 parts white lead. A thousand cash constituted a string.

The first year, the weight of a coin was fixed at 0.1 ounce. The following year it was changed to 0.12 ounce, in shunzhi 8 to 0.125 ounce, and in shunzhi 14 the Treasure Spring Office changed it to 0.14 ounce. Minting was halted in the provincial mints. In shunzhi 17, the Treasure Origins Office renewed minting, with each coin weighing 0.14 ounce. The silver-copper coin exchange price was at first maintained at the mid-Ming level of 7 cash per 0.01 ounce of silver, and 14 old cash to 0.01 ounce. After shunzhi 2 (1645) this was changed to 10 cash to 0.01 ounce.

Shunzhi coins come in five forms: The first has a blank reverse, in imitation of ancient coins.

The second type has a Chinese character on the reverse to represent the mint name, such as *hu*, or *gong*, either above the hole or on its right, *hu* meaning it was minted by the Board of Revenue's Treasure Spring Office, and *gong* meaning it was minted by the Board of Works' Treasure Origins Office. Other characters, such as *lin*, *xuan*, *yan*, *yuan*, *xi*, *tong*, *jing*, *he*, *chang*, *ning*, *zhe*, *dong*, *fu*, *yang*, and *xiang*,[e] were abbreviations of the names of provincial mints. These coins were patterned on the Tang Huichang Inaugural and the Ming Dazhong and Hongwu coinages. These first two types were probably minted at the beginning of the shunzhi period.

The third type was the 1-*li* coin, which was adopted in shunzhi 10 [Plate lxxix,1-18]. On the right side of the hole on the reverse was the mint name, and on the left, arranged vertically, were the two characters 1-*li*. There are 17 mint names: *hu*, *gong*, *shan*, *lin*, *xuan*, *ji*, *yuan*, *tong*, *he*, *chang*, *ning*, *jiang*, *zhe*, *dong*, *fu*, *yang and yun*.[f] I have heard that *jing*[g] and *xiang*[h] also appear. The expression 1-*li* refers to a value of 0.001 ounce of silver, so that 1,000 cash would equal 1 ounce of silver. This was a silver substitute coin or a coin commutable to silver, and was very much like a secondary or subordinate coin. It shows how important silver was to the monetary system then.

This sort of silver substitute coin was not just minted by the Qing Dynasty government, but also by a number of other sovereigns as well. For example, the Prince of Yongming's Southern Ming put out a Yongli Circulating Treasure [Plate lxxx,1-3] with three different reverse inscriptions: 1-*li*, 5-*li*,

and 1-*fen*, which pegged their values in silver. Since the large 1-*fen* Yongli coin weighs more than 0.6 ounce (23 grams), this label cannot be referring to the coin's own weight, which was sixty times that amount. The Prosperous Dynasty Circulating Treasure minted in Yunnan by Sun Kewang [Plate lxxx, 4-5]

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bears the labels 5-*li* and 1-*fen*. The Liyong Circulating Treasure and Zhaowu Circulating Treasure minted somewhat later by Wu Sangui [Plate lxxx,6-8], and the Yumin Circulating Treasure minted in Fujian by Geng Jingzhong [Plate lxxx,11-12] all bore face value markers in terms of silver.

Among the Liyong Circulating Treasure, in addition to blank reverse and reverses bearing the characters *yun*[i] and *gui*,[j] others bear just the character *li*, 2-*li*, 5-*li* or 1-*fen*. On the reverse of the sealscript Zhaowu Circulating Treasure large coin [Plate lxxx, 10] are the two characters 1-*fen*. In addition to blank reverses, some Yumin Circulating Treasure reverses bear 1-*fen*, 1-*qian* and *zhe* 1-*qian* inscriptions, all of them establishing face values in terms of silver. Only Wu Shifan's Honghua Circulating Treasure did not have a face value in silver. By then the silver substitute coin method had probably been generally abandoned. Minting of the Shunzhi 1-*li* coins had been halted by shunzhi 17 [1658], and the following year approval was given to circulate them for another two years. By kangxi 2 [1663], they were collected for destruction. Hence these coins existed for a very short time, though they occupy a distinctive place in Chinese monetary history.

The fourth type has two Manchu symbols on the reverse. To the left of the hole is the word for treasure[k] and to the right of the hole is the name of the mint. This mode was adopted in shunzhi 17 [1658], after minting of the 1-*li* coins was halted, but was limited to coins from the Treasure Spring[l] and Treasure Origins[m] Offices.

The fifth type is a bilingual Chinese and Manchu coin. To the left of the hole on the reverse is a Manchu word; to the right of the hole is a Chinese character. Both denote the mint name. Altogether there are twelve[n] of them: *shan*, *lin*, *xuan*, *ji*, *yuan*, *tong*, *he*, *chang*, *ning*, *jiang*, *zhe*, and *dong*.[1]

Kangxi coins [Plate lxxxi] are divided into two types. Those minted in Beijing have only two Manchu inscriptions on their reverses --the words for Treasure Spring and Treasure Origins-- just like the Shunzhi coins of the fourth type. Those minted in the provinces followed the form of the fifth type of Shunzhi coins, and had bilingual Manchu and Chinese inscriptions.

The number of minting offices was, however, frequently added to or diminished. At first, there were only 14 mints in the provinces.[2] Later, the number increased to 21.[3] In kangxi 60 (1721), the principle of one office per province was fixed, and seven offices were removed.[4]

In addition to the Treasure Spring and Treasure Origins versions, as well as the 12 Shunzhi fifth style coins, surviving Kangxi coins include the following ten sorts: Treasure *fu*, Treasure *pu*, Treasure *nan*, Treasure *guang*, Treasure *tai*, Treasure *gui*, Treasure *yun*, Treasure *zhang*, Treasure *gong* and Treasure *xi*.[o] Of these, those with the Manchu for *xi* are the scarcest, with *gong* coming next. The *xi* coins were probably minted at the beginning of the kangxi period, and the Treasure *xi* Office was probably abolished before long. The character *tong*, for "circulating," on these coins resembles that on Shunzhi coins. After the reform of the Manchu script, the calligraphy continued to undergo certain changes, mainly involving further simplification. Hence the same word is written several ways. For example, the syllable for the chang of Nanchang was

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[1]The mint names abbreviated on the reverses of Shunzhi coins are the following:

shan (Shaanxi Provincial Office), *he* (Henan Provincial Office), *lin* (Shandong, Linqing Office), *chang* (Jiangxi Provincial Office), *xuan* (Zhili, Xuanfu Office), *ning* (Gansu, Ningxiafu Office), *ji* (Zhili, Jizhou Office), *jiang* (Jiangsu, Jiangningfu Office), *yan* (Shaanxi, Yansui Office), *zhe* (Zhejiang Provincial Office), *yuan* (Shanxi Provincial Office), *dong* (Shandong Provincial Office), *yun* [abbreviated form] (Shanxi, Miyunzhen Office), *fu* (Fujian Provincial Office), *xi* (perhaps another mint name in Shanxi province), *yang* (Shanxi, Yanghezhen Office), *tong* (Shanxi, Datongfu Office), *xiang* (Huguang, Xiangyang Office), *jing* (Huguang, Jingzhou Office), and *yun* (Yunnan Provincial Office).

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[2]Henan Provincial Office (*he*), Shaanxi Provincial Office (*shan*), Linqingfu Office (*lin*), Xuanfu Office (*xuan*), Jizhou Office (*ji*), Shanxi Provincial Office (*yuan*), another Shanxi province office (*xi*), Datongfu Office (*tong*), Jiangxi Provincial Office (*chang*), Ningxiafu Office (*ning*), Jiangningfu Office (*jiang*), Zhejiang Provincial Office (*zhe*), Shandong Provincial Office (*dong*), Fujian Provincial Office (*fu*) and Yunnan Provincial Office (*yun*).

[3]The seven additional ones established after kangxi 6 were the Jiangsu Provincial Office (*su*), the Hunan Provincial Office (*nan*), the Guangdong Provincial Office (*guang*), the Guangxi Provincial Office (*gui*), the Gansu Gongquanfu Office (*gong*), the Fujian Zhangzhoufu Office (*zhang*) and the Taiwan Office (*tai*).

[4]The seven [*sic*] offices abolished were those of Linqing, Xuanfu, Datong, Ningxia, Jiangning, Zhangzhou.

sometimes written []p and sometimes [].q The *shan* of Shaanxi was written []r during shunzhi and kangxi times, and later changed to [].s

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In kangxi 23 (1684), the weight of a coin was reduced to 0.1 ounce, and its metal content to 6 parts copper and 4 parts lead, but in kangxi 41 [1702] the weight was increased to 0.14 ounce. They minted an additional small coin weighing 0.07 ounce. It was called the light coin. The 0.14 ounce coin was called the heavy coin. Face values of the two coins differed. A thousand of the light coins were worth 0.7 ounce of silver. A thousand of the heavy coins were worth 1 ounce of silver. The light coins were probably a temporary system, but they retained legal standing alongside the heavy coins right up into the qianlong period.

The Treasure Spring Office also minted another Kangxi coin during the kangxi period. It had a golden color, and its calligraphy differed somewhat. The upper left hand vertical stroke on the *xi* of kangxi touched the two horizontals. It is popularly called the Lohan Coin. There are a number of farfetched explanations for it. Some say these were to commemorate the sixtieth birthday of the Kangxi Emperor. This is somewhat plausible, since the quantity of these coins and the number of variant forms are large.

From the yongzheng period on, standard coins were all of the Shunzhi fourth style [Plate lxxxii]. In addition to the year-period name on the faces of the coins, the reverses all bear two Manchu words. There were, however, exceptions. Coins minted by the Treasure Fu Office sometimes employed Chinese characters, but this was not the norm. In addition to the original 12 offices from kangxi times (*he, saan, chang, zhe, fu, yun, su, nan, guang, gui, gong* and *tai*), the Shanxi Provincial Office name was changed to Treasure *jin*,t the Shandong Provincial Office was renamed Treasure *ji*,u and three new locations were established: Hubei's Treasure *wu* Office,v Sichuan's Treasure *chuan* Office,w and Guizhou's Treasure *qian* Office.x There is another Manchu word, []y, which is generally read as meaning the character *nan*, south, but it lacks a dot, and so must be the character *an*, the abbreviation for Anhui. Between yongzheng 9 and 12 [1731-1734] the Treasure *an* Office was open in Jiangningfu, Anhui to mint coins for that province.[5] After yongzheng 11 (1733), the weight of the coins was reduced to 0.12 ounce.

Fifteen of the seventeen yongzheng period offices were retained during the qianlong period, since operations had halted at the Treasure *he* and Treasure *gong* offices. In addition, the Zhili Treasure *zhi* Officez and the Ili Treasure *yi* Officeaa were established, along with several offices in Huijiang (i.e. Xinjiang Southern Circuit), such as Ye'erqiang ([],ab originally called Ye'erqimu [],ac name changed to Ye'erqiang in qianlong 26), Akesuad [Aqsu] and Wushi.ae) [Plate lxxxii,9-12] It is said that offices were also set up in Hetian and in Kashgar, but no such coins have survived. There are people who have seen Hetian coins cast in brass. These were probably minted by the Beijing Treasure Origins Office. In addition, Helashala may may have had a mint.

The coins minted by the Xinjiang offices were all Pu'er coins. [Plate lxxxiii] This was a former copper coin monetary unit. These coins were made of red copper, and they switched over to use of square holes, which coins were also called red cash. The Pu'er coins from Ili and Helashala were used alongside standard coins from China proper. Every Huijiang red cash was equal to 5 standard cash.

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The reverse inscriptions on these coins were also distinctive: To the left of the hole was Manchu; to its right was Uighur. Taken together with the Chinese on the obverse, this one coin bore three languages.

Among the Qianlong Circulating Treasure red cash are some bearing the place name Kulja[af][Ğulja; Chinese: Yining].[6] These come in ordinary and 10-

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[5]*Qing Dynasty Investigation of Literary Remains*, 15, "Investigation of Coins, 3": "In yongzheng 9 . . . Anhui opened an office in Jiangningfu, with four furnaces. The coin reverse bore the two Manchu words for Treasure *an*. . . . yongzheng 12 . . . Minting was halted in the Anhui Treasure *an* Office." At this time, the Anhui civil government offices were in Jiangningfu city. Hence the Jiangning Office coin reverses used the words Treasure *an*.

[6]The Manchurian script on the reverses of the red cash minted in Kulja differed over time. The symbol on the Qianlong coins is []ag; on Daoguang coins it is []ah; on Tongzhi *ku* 10 coins it is []ai or []aj; on Guangxu *ku* 10 coins it is [], or [] or [].ak The daoguang period work *Spring and Spade Unified Record*, 9, "Table of Readings of Huijiang Place Names" uses []al for Kulja, but the several written forms given above seem to be variants of a single word. For the most part they resemble the character for "origins" in Treasure Origins Office, so perhaps the name of the Treasure Origins Office was being used then.

There is also a "*xin* 10" type of red cash, the reverse Manchurian language inscription on which is []am for Daoguang and Tongzhi coins. On Guangxu coins it is [] or [].an The symbol on the Daoguang and Tongzhi coins and on the first type of Guangxu coins also seems to be the word for "origins." On the second type of Guangxu coin it is probably *xin*. *Xinjiang Illustrated Record*, 34, "Food and Money," records that in jiaqing 12, 4th

cash types, the reverse of the latter bearing the two Chinese characters meaning "equals 10", one above and one below the hole. There is, however, no clear historical record of the establishment of an office in Kulja. Nor should there have been a 10-cash coin produced during the qianlong period. Moreover, the fineness of the metal of the small coin is the same as that of the 10-cash of daoguang 8 [1828], so it was probably minted during daoguang 6 or 7, since after qianlong times a portion of the coins minted in Xinjiang continued to use the qianlong year-period.

There is also an Aqsu 10-cash coin, on the reverse of which are the two characters for "equals 10" or "*A* 10." These must all have been minted after daoguang 8. There are even some relatively thin coins which, even though their reverses do not bear the character for 10, can be seen to have been minted after the qianlong period.

The metal content of Qianlong coins changed over time and in different places. Prior to qianlong 5 (1740), tin was not added to the alloy. These are called yellow coins. From that date on, 2 percent tin was added, and these are called green coins.[7] In qianlong 6, for each *mao*[8] of green coins, the Treasure Spring Office minted a total of 12,498 strings of coins.[9] The metal content was 50 percent red copper, 41.5 percent white lead (i.e. zinc), 6.5 percent black lead, and 2 percent black tin.

Green coins were minted to hinder private melting down of coins. It was said that if green coins were thrown back into the furnace for melting down, the metal could not be cast into useful objects, because they would break when struck. On the surface, there were no great differences between green and yellow coins. Though the provinces were ordered to change over to minting green coins so as to have them circulate alongside yellow coins, the metal content of coins minted later on was not entirely in accord with the above formula, and many were made with six parts copper to four parts lead. For example, the Inner Court coins minted in qianlong 17 and the standard coins minted in qianlong 59 were of this sort.

The Jiaqing and Daoguang coins [Plate lxxxiv] both come in 19 types: *quan, yuan, zhi, jin, su, chang, fu, zhe, wu, nan, shaan, chuan, guang, gui, yun, qian, yi, Akesu* and the Dongchuanfu Office newly established in Yunnan. The coin reverse abbreviated this last as Treasure *dong*, the Manchurian for which was the word for *dong* or east used during the kangxi period.

The coins minted during jiaqing 4 used 52 percent copper, 41.5 percent zinc and 6.5 percent black lead. In Hunan and Guizhou, the percentage of black lead was reduced to just 3.25 percent. The coins minted in jiaqing 10 used 54 percent copper, 8 percent black lead, 36.5 percent zinc, and

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1.5 percent high tin. The following year, however, they reverted to the jiaqing 4 formula. The Treasure *yi* Office's Pu'er cash used 70 percent red copper, 29 percent black lead, and 1 percent dot tin, but in general the red cash contained a higher proportion of copper than this.

Xinjiang's Zhang Ge'er [Jahāngīr, a Khoja] revolted against the Qing army in daoguang 6 [1826], and took the four cities of Kashgar, Yingjishar, Ye'erqiang [Yarkand] and Hetian in Huijiang. The Qing armies converged on Aqsu, greatly increasing the demand for army supplies, and driving up the price of coins, so that the authorities added to the number of furnaces to speed up the process of minting. They probably set up the Kulja Office at this time. Those thin-bodied Qianglong red cash were probably made then.

Although the four towns were retaken in daoguang 7 [1827], Zhang Ge'er remained at large. They captured him the following year, but his elder brother, Yusu, continued to resist the Qing armies until daoguang 11. The authorities began minting 10-cash and 5-cash coins in daoguang 8. The faces of these bore the inscription Daoguang Circulating Treasure. The reverses, in addition to the place

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month, the frontier office's Wei Guang[ying?] mentions the Kulja Treasure *xin* Office in a detailed essay. During guangxu times, Dihua established a Treasure *xin* Office, which was probably written []ao on coins. This must mean that not all red coins bearing the qianlong year-period name were minted during that period, and that Qianlong Circulating Treasure were still being minted right down into the guangxu era.

[7] *Dream of the Red Chamber*, chapter 18, notes that when Lady Yuan visited her parents, she brought a thousand strings of green cash to give to Mother Jia. Evidently *Dream of the Red Chamber* was written after qianlong 5.

[8] A *mao* was the quantity minted during a single period. *Imperial Dynasty Universal Record*, 89, "Outline of Food and Money, 9, Coins": "In beginning to mint, one period makes one *mao*. A thousand coins make one string. . . . 12,000 strings make up one *mao*. The amount produced annually is 30 *mao*."

[9] *Qing Collected Statutes*, 214, "Coinage." *Imperial Dynasty Investigation of Literary Remains*, 16, "Investigation of Coins, 4." At that time there was one furnace chief per furnace. He required wages for 8 labor service artisans: a fire artisan, sand-digging artisan, fire-brushing artisan, miscellaneous work artisan, edge-filing artisan, rotating edge artisan, coin-polishing artisan, and eye-washing artisan. The raw materials and tools required were coal, jars, yellow sand, wood charcoal, salt and strings.

name Aqsu in Manchu, bore the two Chinese characters for "8th year" above the hole, and the character for "10" below the hole. The 5-cash coin bore the character for "5" in that position. From this time on, the southern circuit of Xinjiang no longer minted small red cash. Kulja also minted 10-cash coins, the reverses of which bear the two characters "*ku* 10." There is also a "*xin* 10." The 10-cash Qianlong Circulating Treasure were probably minted from daoguang 8 on.

During jiaqing and daoguang times, the leakage abroad of silver and rise in silver's price led some people to advocate the minting of large coins. This was the position of Xu Zuoping and Liang Zhangju,[10] and of Wang Benquan and Liao Hongzao. None of these proposals was adopted by the authorities.

After the Xianfeng Emperor took the throne, the Sichuan student of administration, He Shaoji, also strenuously requested that this be done, but also without success.[11] By xianfeng 3, the Taiping Rebellion was underway. The situation grew more serious by the day, and the government's fiscal situation grew more difficult by the day. The Secretary of the Board of Punishments, Zhou Zupei, renewed the request to collect copper utensils from the people to mint large coins.[12] Finally this policy was adopt-

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[10]Liang Zhangju, *Return to the Fields Locked Notes* (daoguang 25 [1845]), 2, "Request to Mint Large Coins": "When I was serving as Governor of Guangxi, I offered up a memorial requesting minting of large coins. At the advice of the Board of Revenue, this was not done. Afterward, while serving as Governor of Jiangsu, my request for sick leave was granted, and while having audience to express thanks, I again put forth this thesis, and as a consequence was detained and not sent out. In recent years, I have learned from the official gazette that a certain Censor had also requested such a measure, but probably also because of the opposition of the Board it was not put into effect . . . This year I returned to Fuzhou. Liao Yixiang, the Inspector Liao (Hongcao) also advocated this position. . . . set out two drafts expounding it. In recent days I have reread the *Qingyang Hall Collected Works* of my fellow townsman, Xu Huashan (Zuoping). It also contains a draft of a petition "Request for Minting Large Coins." Huashan's official position does not permit him to memorialize on affairs, but this ought to be taken up by some important official. . . . The ten items appended to his petition are all acutely realistic, and suitable for application. . . . The third is to select excellent copper. The method for selecting copper which he requests is to solely employ red copper. Of the coins of the five reigns of our dynasty, only some of the Yongzheng coins employed red copper. Most of these, however, have been privately destroyed to be remade into copper utensils. Of coins presently existing among the people, less than one in a hundred are of this type. . . . The fourth is to cleverly price them. . . . At present it would be fixed that on the first month of the third year after the copper has been bought, each provincial and frontier office is to take the copper contributed by the prefectures and districts and begin minting. They would first mint 1,000-cash and 500-cash large coins. The 1,000-cash coins would have a face value in silver of 1

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ounce. The 500-cash coin would have a face value of 0.5 ounce silver. Each household would pass in 1 catty of copper, and would be given three 1,000-cash coins, with a total face value of 3 ounces of silver. They would also be given six 500-cash coins, also with a face value of 3 ounces of silver. The total would come to 6 ounces of silver. . . . The fifth says to maintain an extra profit, or seignorage. . . . Each catty of copper could be made into 8 large 1,000-cash coins, with a face value of 8 ounces of silver. Less the labor and materials required for minting, each catty of copper will cost 0.4 ounce of silver, and when cost of its transportation from the prefectures and districts of another 0.05 ounce of silver is added in . . . there will actually remain 7.5 ounces of silver. If we now give 6 ounces to the households as the price of the copper, there will remain a seignorage on the copper of 1.5 ounces of silver per catty. If we reckon on a total of 1,300 prefectures and districts, and each one of these has around 30,000 families, and each family pays over around 5 catties of red copper, then 150,000 catties of copper may be obtained from each district, and each province could provide some 195 million catties. . . . This would be the equivalent of 292.5 million in silver. This policy could be taken up at any time. . . . The sixth says that minting should be done finely . . . and the incised script inscription should be Jiaqing Circulating Treasure . . ."

[11]The Xianfeng Emperor criticized He Shaoji's proposal as follows: "Though the small and large coins would differ in system, they would be used the same way. Now even when we mint small coins, the copper is insufficient. Would that not be even more true for large coins? You know the first, but not the second." He Shaoji's large coin would not have been reduced in weight. The weight of a 10-cash coin would have been ten times that of a small coin.

[12]*Qing History Biographies*, Zhou Zupei's petition: "Since the onset of military activity, expenses have reached a level of more than 20 million in metal. The armies will not be finished in a day, and expenses for supplies are hard to reduce in a day. . . Only recently have catties of copper come up short, so that we have been unable to increase the number of *mao* minted. . . . If the families of the major and minor officials of the capital city disperse the copper pans and objects produced by the furnaces, then limits will be maintained. If we collect these things, then there will be an abundance. All copper objects weighing 5 catties or more would have to be called in to the public offices. . . . Beyond this, we can imitate the accomplishments of the Han and Tang by minting 10-cash, 100-cash and 1,000-cash large coins. By following ancient systems, we can meet current requirements. When the Board officials are ready, we can work out the calcula-

ed, but for the most part Xu Zuoping's methods were employed.

There was a large increase in the number of minting offices during the xianfeng period. In addition to the furnaces already in operation during jiaqing and daoguang times, the Treasure *he, ji, ji, tai, gong* and Ye'erqiang offices were reopened, and the Treasure *de* Office[ap] and the Kashgar Office[aq] were newly established. In xianfeng 2 the weight of a 1-cash coin was changed to 0.1 ounce.

Complicated Chinese monetary systems go back to Wang Mang's Treasure Money system, and culminate in the coin and note system of the xianfeng period. The former had many value denominations, and though it was unique in that respect, it made few changes in other respects. For example, coins of the same value had the same inscription. The weights were arranged in a regular series. Wang Mang coins encountered in later ages which do not fit the standard were privately coined.

This was not true of Xianfeng coins. First, as frequently as the value of the money fell, the weights of the coins were also changed, which caused errors in size

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to occur and weight sequences to be disarranged: The 50-cash was larger than the 100-cash, which in turn was heavier than the 1,000-cash.

Second, because the coins were cast with the names of the mints on them, the inscriptions varied mint by mint, and those minted in Fujian had, in addition to markers of value, inscriptions setting out their weights.

Third, there were many different kinds of inscriptions. The Treasure Money system used only Chinese. In addition to Chinese, most of the Xianfeng coins also had Manchu inscriptions, and the coins minted in the several offices in Xinjiang had Uighur as well as Chinese and Manchu inscriptions.

Fourth, there were a number of different kinds of monetary materials. The gold and silver used at the time of Wang Mang were also employed by the Qing Dynasty, but during the xianfeng period they also circulated paper money. To speak merely of coined money, there were also iron and lead coins. Copper coins came in purple copper, pure copper and brass variations. Hence the complexity of the Xianfeng coins exceeded that of the Treasure Money system of Wang Mang's time. In terms of their face values, Xianfeng coins may be divided into sixteen denominations ranging from 1-cash to 1,000-cash.

The Xianfeng coins [Plates lxxxiv-vi] originally had definite appellations. Some were called Circulating Treasure, some Heavy Treasure, and some Original Treasure. Most standard coins were called Circulating Treasure. Coins from 4-cash to 50-cash were called Heavy Treasure. From 100-cash to 1,000-cash they were called Original Treasure. The reverses bore the character for "equals" above the hole and the numeral for the denomination below it. To the left and right of the hole were the Manchu words for the name of the minting office.

Categories of Xianfeng Coins

Denomination	Name of Minting Office	Notes
standard coin	minted by all offices[13]	copper, iron & lead
4-cash	Ili Treasure yi Office	red copper
5-cash	Treasure Spring, Origins, 9 offices	copper and iron
8-cash	Dihua Treasure di Office	red copper
10-cash	all offices	copper, iron&lead
20-cash	Treasure fu, zhe, su	copper cash
30-cash	Treasure zhe, su	copper cash
40-cash	Treasure zhe	copper cash
50-cash	Minted by most except Treasure jin, di	copper, iron, lead
80-cash	Treasure di	copper cash
100-cash	Minted by most except Treasure jin, di, qian	copper, iron lead
200-cash	Treasure Spring, Prince of Kejinjun	copper cash
300-cash	Treasure Spring (only in Qing Coll Stat & East China Record)	copper cash
400-cash	" " " "	copper cash
500-cash	Treasure Spring, Origins, he, shaan, gong, yi, su	copper, iron lead
1,000-cash	" " " " "	copper, iron lead

There are, however, some exceptions. For example, among coins minted in Fujian, those above 5-cash may all have been called

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either Circulating Treasure or Heavy Treasure, constituting two complete separate sets. Some Shaanxi

tions."

[13]In Xinjiang, only the Treasure *yi* Office made small coins. The other offices all started with 5-cash coins. I have never seen small coins from the Treasure *jin*, Treasure *ji*, or Treasure *ji* Offices.

and Zhejiang coins employed Chinese characters to delineate the place names. some other coins did not indicate place names at all.

In xianfeng 11 [1861], at the time of the Anglo-French joint invasion of China, the Xianfeng Emperor took refuge in Rehe. While he lay on his deathbed there, a palace intrigue unfolded. The Xianfeng Emperor secretly plotted with Sushun to set up the latter's eldest son, Zaichun, as Heir Apparent. Li Lianying revealed this plot to the Western Empress. After the Xianfeng Emperor's death, Zaiyuan's clique took over the government, and changed the era name to qixiang, but before long Sushun was killed, and the qixiang year-period was abolished in favor of the label tongzhi.

This historical incident was reflected in the coinage. There are Qixiang Circulating Treasure small coins and Heavy Treasure 10-cash coins, but only ones bearing the marks of the Boards of Revenue and Works. They were never formally put into circulation, but some privately minted small coins did circulate. Their reverses bear the Manchu words for Treasure *dong*.

Very few coins were minted during the tongzhi period. Only the Tongzhi Heavy Treasure 10-cash from the Boards of Revenue and Works are relatively numerous. Minting of small coins had been halted during the xianfeng period, and so too had minting of coins larger than 10-cash, because the people would not use them. Of the Tongzhi Circulating Treasure small coins, only the Treasure *zhe* and Treasure *su* are relatively common. The others, like the Treasure Spring, Treasure Origins, Treasure *chuan*, Treasure *fu*, Treasure *chang* and Treasure *gong*, are all rarely seen. I suspect that some provinces simply did not do any minting. The Boards of Revenue and Works 10-cash coins minted in tongzhi 6 (1867) weigh 0.32 ounce apiece. Later, they were reduced in weight.

Huijiang continued to mint 10-cash red coins. There are Aqsu and Ye'erqiang [Yarkand] "10-cash" and also "*ku* 10" and "*xin* 10" types. Changes in the political situation then in southern Xinjiang are fully reflected in the coinage.

At the beginning of tongzhi, the Muslims of Shaanxi and Gansu came under the influence of the Taiping Heavenly Kingdom, and rose against the government of the Qing Dynasty. This movement spread into Xinjiang. In Kulja, Rashidin arose and proclaimed himself Khan. At that point the Haohan [Khokand] Khanate's ruler, Khan Yibuchuake and his general Yaqub Beq took advantage of this opportunity to invade Xinjiang, and gradually took over the eight large towns of southern Xinjiang.

Before long, Yaqub Beq had overthrown his master, and set himself up as Khan in Kashgar. Later, he also killed Rashidin. By guangxu 3 [1877], he had been wiped out by Zuo Zongtang and Liu Jintang.

Rashidin and Yaqub Beq both minted coins. Those minted by Yaqub Beq were Tiela and Tiangang gold and silver coins of his own country's style. These are subsumed under the monetary forms of Central Asia, but their reverses employ the nominal forms of Sudan in the Turkish (Ottoman) Empire, because Yaqub Beq had received support from Turkey, and considered his realm a frontier dependency of Turkey. The coins minted by Rashidin in Kulja were Chinese-style red cash, except that both faces bore Uighur inscriptions, recording his own name and title, as well as the date and place of minting. These coins were completely identical in size and weight to contemporary Tongzhi Circulating Treasure Pu'er coins.

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In guangxu 1 [1875], a 10-cash coin was still being made, the Guangxu Heavy Treasure. It was 6 parts copper and 4 parts lead. In guangxu 9 (1883), its weight was fixed at 0.26 ounce. A small standard coin Guangxu Circulating Treasure did not appear until guangxu 13.

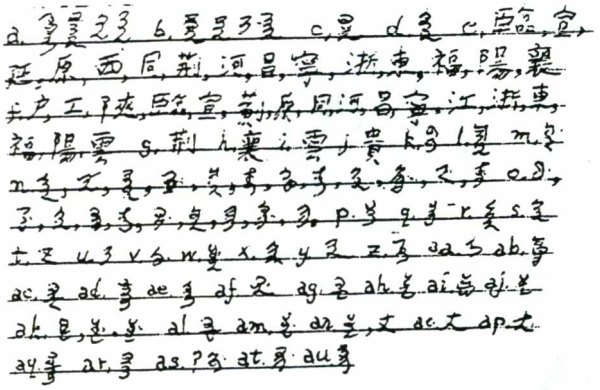
The Guangxu small coins are relatively numerous. Those I have seen, in addition to the original Treasure Spring, Treasure Origins and Treasure *yun, dong, chang, zhi, chuan, qian, fu, su, he, shan, nan, zhe, jin* and *wu*, there are also the products of new offices like the Treasure *jing*,[ar] Treasure *gu*[as] and the Treasure *ji* (meaning auspicious, its Manchu symbol being the same as for its homonym).

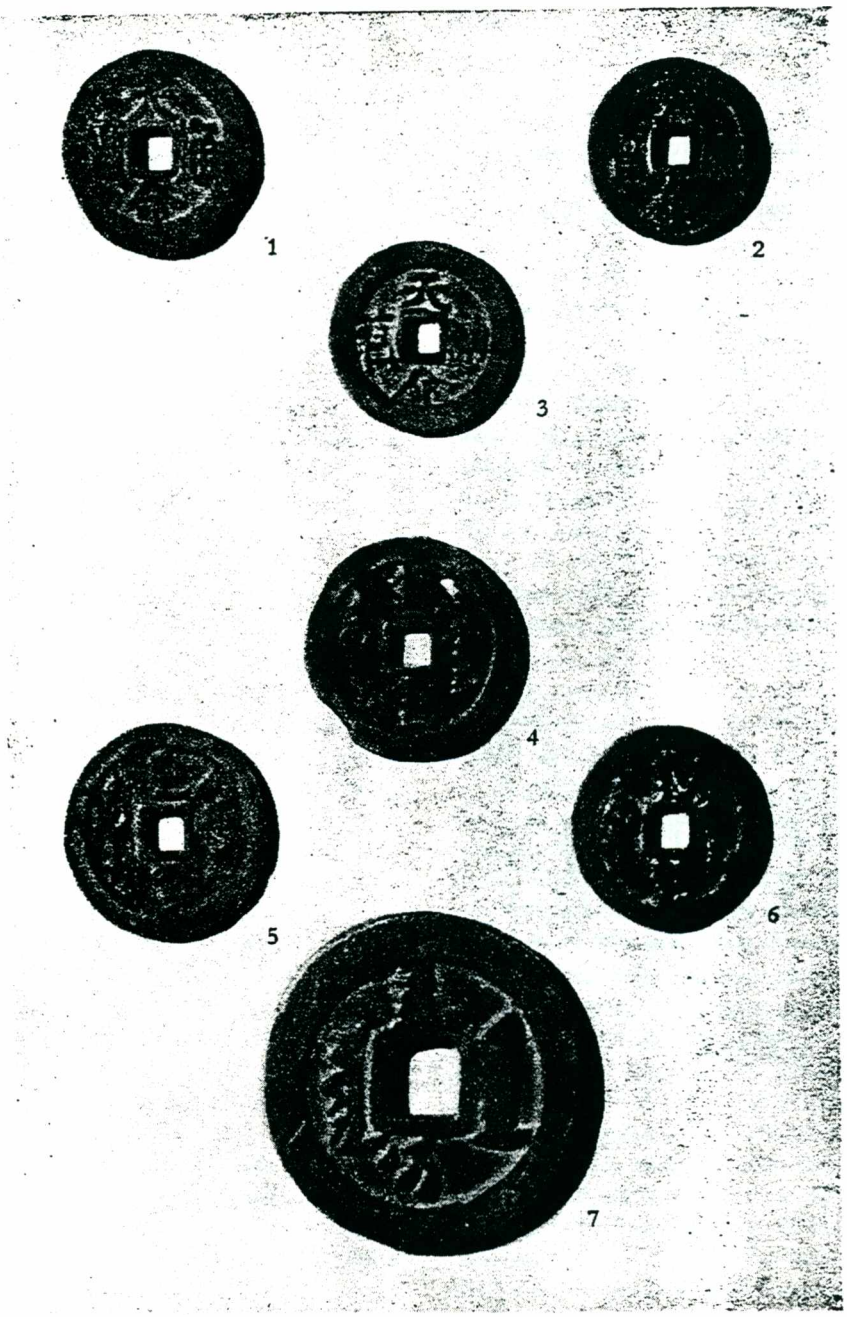
Later, after the introduction of machinery for minting coins, the Treasure *zhang* Office was restored, and the Treasure *feng*[at] and Treasure *ning* ([],[au] the Jiangnan Coin Factory) were newly established. For the most part, however, Guangxu coins are thin and small and underweight. This could be the result of private coining. In Huijiang there were the "*A* 10," the "*ku* 10," the "*xin* 10," and the "*ke* 10," but the reverse Manchu and Uighur inscriptions on the latter are not Kashgar, but rather Aqsu. The "*xin* 10" coin of guangxu 33 and 34 [1907-8] does not bear the inscription Guangxu Circulating Treasure on its obverse, but rather Guangxu Dingwei and Guangxu Wushen. This use of the sexagenary couplet names for the years was an innovation for Chinese coins, but the construction of these coins is of very crude quality.

During the xuantong [1908-1912] period, they formally employed the old way of casting coins

probably only at the Treasure Spring Office. The Treasure Spring and Treasure Origins Offices seem, however, to have been closed down during the guangxu period. There were also machine-made coins of the Treasure *guang* and Treasure *fu* mints, as well as a round-hole Great Qing Copper Coin which weighed 0.03 ounce. Because the price of copper had gone up then, the provinces competed to mint new-style copper dollars. Why should they have been willing to waste their capital making old style standard coins?

Xuantong coins made by other furnaces that I have seen can only be viewed as casual and occasional products. There are red copper Xuantong Circulating Treasure and Republic Circulating Treasure minted in Dongchuan, Yunnan. The two are completely identical in construction, and were probably minted after the 1911 Revolution. Xinjiang also began to mint new style copper dollars at the end of guangxu times, but I have also seen "*ku* 10" Xuantong Circulating Treasure which are the same size as their guangxu predecessors. They bear the Manchu language transcription of the place name Wushi.





圖版七十八　後金的錢幣

1—3.天命通寶。 4—6.滿文天命汗錢。 7.滿文天聰汗之錢。

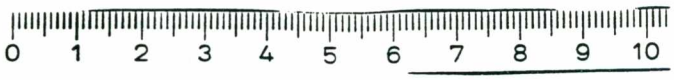
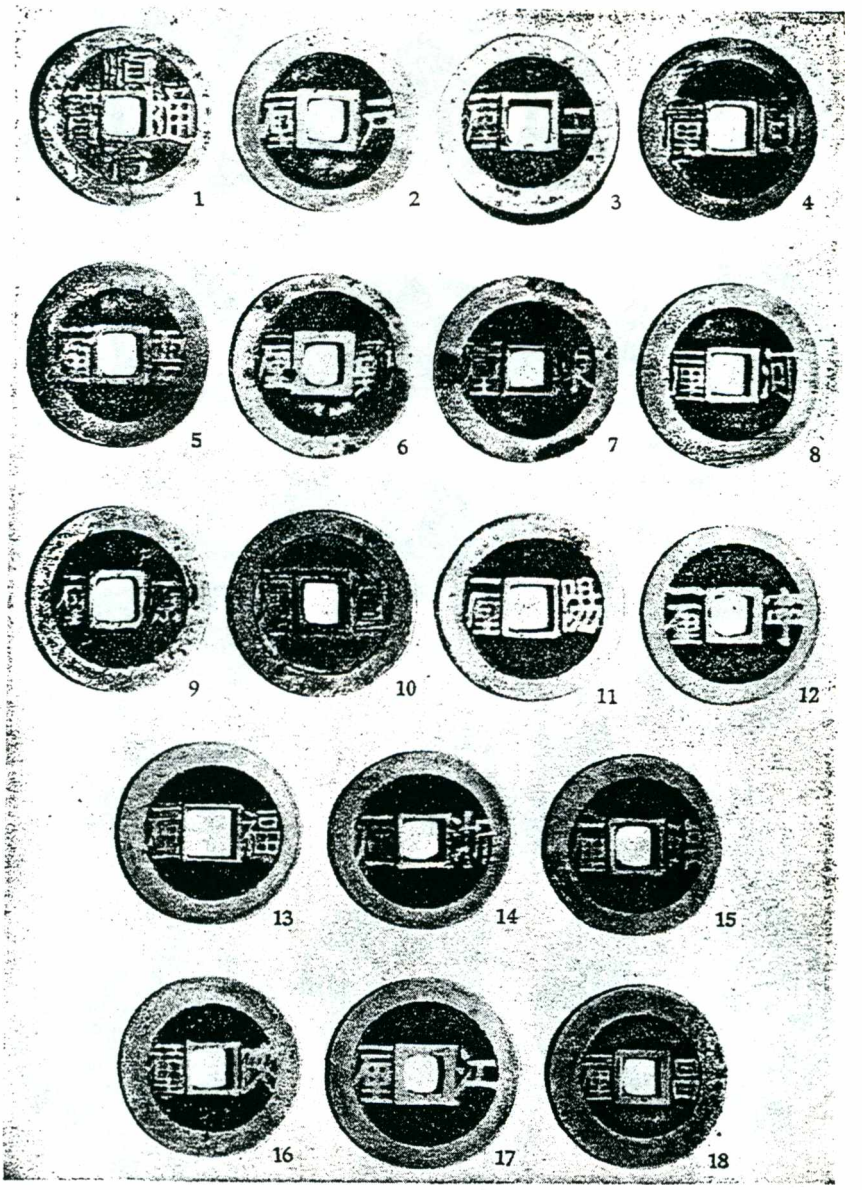


PLATE LXXVIII. LATTER JIN'S COINS

1-3. Tianming Circulating Treasure. 4-6. Manchu language Tianming Khan Cash. 7. Manchu language Tiancong Khan's Cash.



圖版七十九　清世祖朝的順治通寶一厘折銀錢

1.順治通寶。 2—18.順治通寶折銀錢的背文：戶一厘、工一厘、同一厘、雲一厘、薊一厘、東一厘、河一厘、原一厘、宣一厘、陽一厘、寧一厘、福一厘、浙一厘、臨一厘、陝一厘、江一厘、昌一厘。

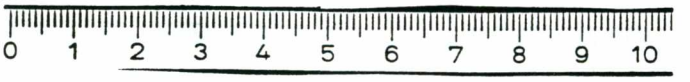
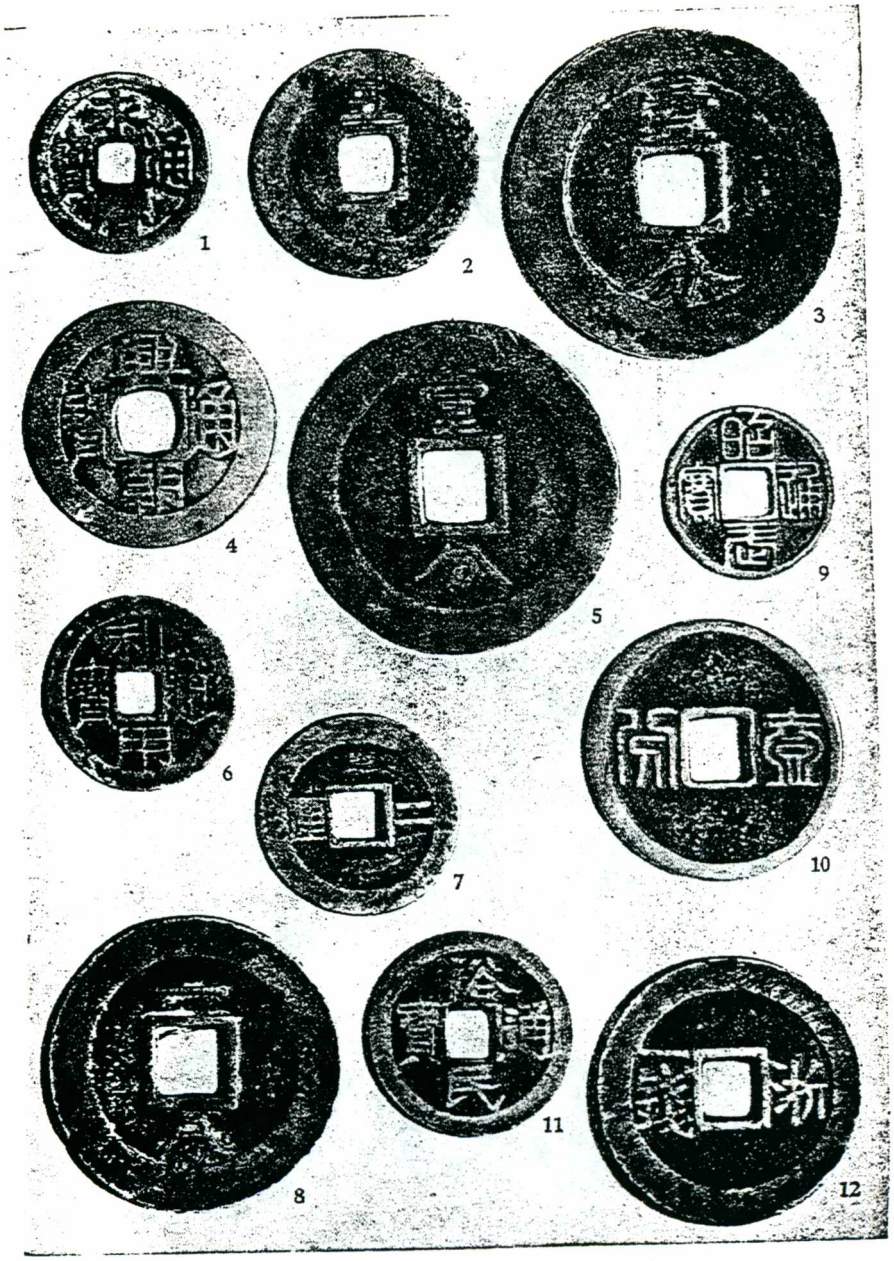


PLATE LXXIX. QING EMPEROR SHIZU'S SHUNZHI CIRCULATING TREASURE 1-*LI* COMMUTATION OF SILVER COINS

1. Shunzhi Circulating Treasure. 2-18. Shunzhi Circulating Treasure commutation of silver coins reverse inscriptions: *hu* 1-*li*, *gong* 1-*li*, *tong* 1-*li*, *yun* 1-*li*, *ji* 1-*li*, *dong* 1-*li*, *he* 1-*li*, *yuan* 1-*li*, *xuan* 1-*li*, *yang* 1-*li*, *ning* 1-*li*, *fu* 1-*li*, *zhe* 1-*li*, *lin* 1-*li*, *shan* 1-*li*, *jiang* 1-*li*, *chang* 1-*li*.

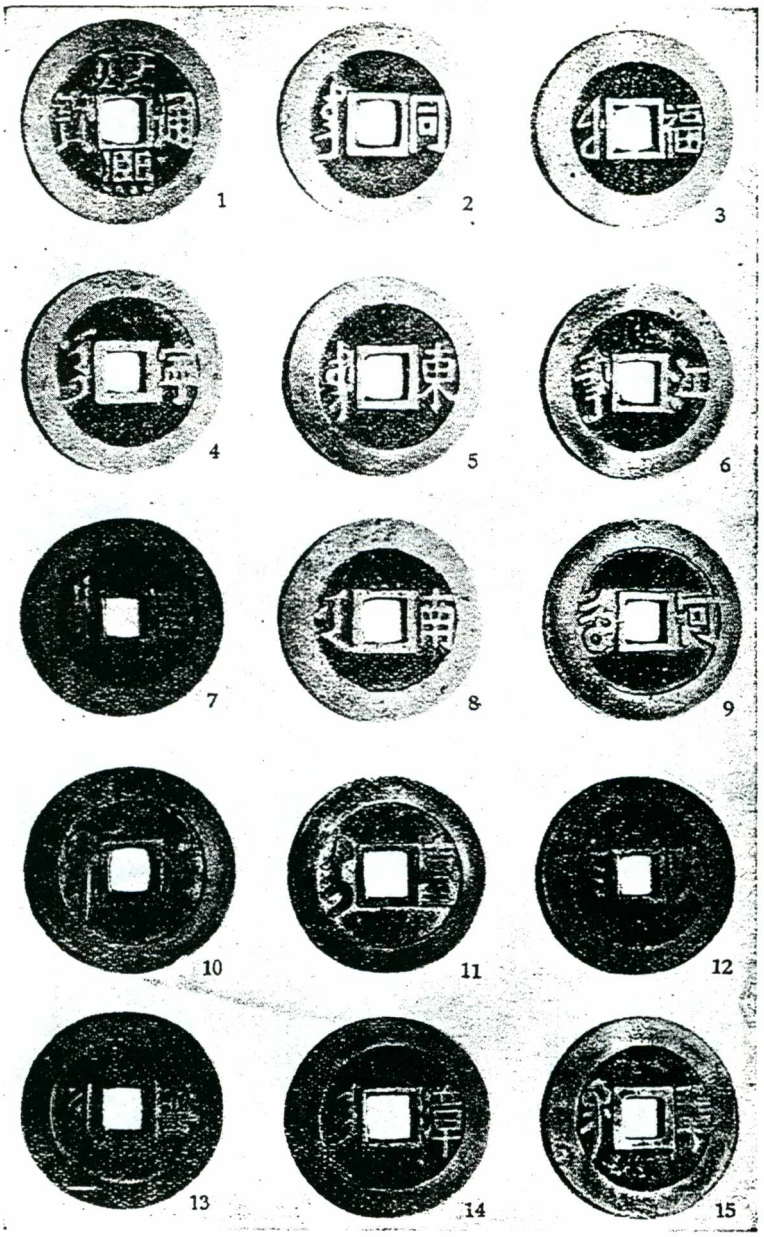


圖版八十 清初的折銀錢

1.折銀二厘的永曆通寶。 2.永曆通寶背五厘。 3.永曆通寶背壹分。 4.孫可望的興朝通寶(背五厘)。 5.興朝通寶背壹分。 6.吳三桂的利用通寶(背厘)。 7.利用通寶背 二厘。 8.利用通寶背一分。 9.昭武通寶。 10.昭武通寶背壹分。 11.耿精忠的裕民通寶(背一分)。 12.裕民通寶背浙一錢。

PLATE LXXX. EARLY QING COMMUTATION OF SILVER COINS

1. Commutation of silver 2-*li* Yongli Circulating Treasure. 2. Yongli Circulating Treasure reverse 5-*li*. 3. Yongli Circulating Treasure reverse one-*fen*. 4. Sun Kewang's Prosperous Dynasty Circulating Treasure (reverse 5-*li*). 5. Prosperous Dynasty Circulating Treasure reverse one-*fen*. 6. Wu Sangui's Liyong Circulating Treasure (reverse *li*). 7. Liyong Circulating Treasure reverse 2-*li*. 8. Liyong Circulating Treasure reverse 1-*fen*. 9. Zhaowu Circulating Treasure. 10. Zhaowu Circulating Treasure reverse one-*fen*. 11. Geng Jingzhong's Yumin Circulating Treasure (reverse 1-*fen*). 12. Yumin Circulating Treasure reverse *zhe* 1-*qian*.



圖版八十一　聖祖朝的康熙通寶

1.北京寶泉局所鑄康熙通寶。 2—15.各省局所鑄康熙通寶的背文:同、福、寧、東、江、昌、南、河、廣、臺、陝、雲、漳、鞏。

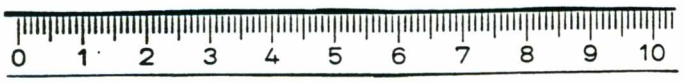
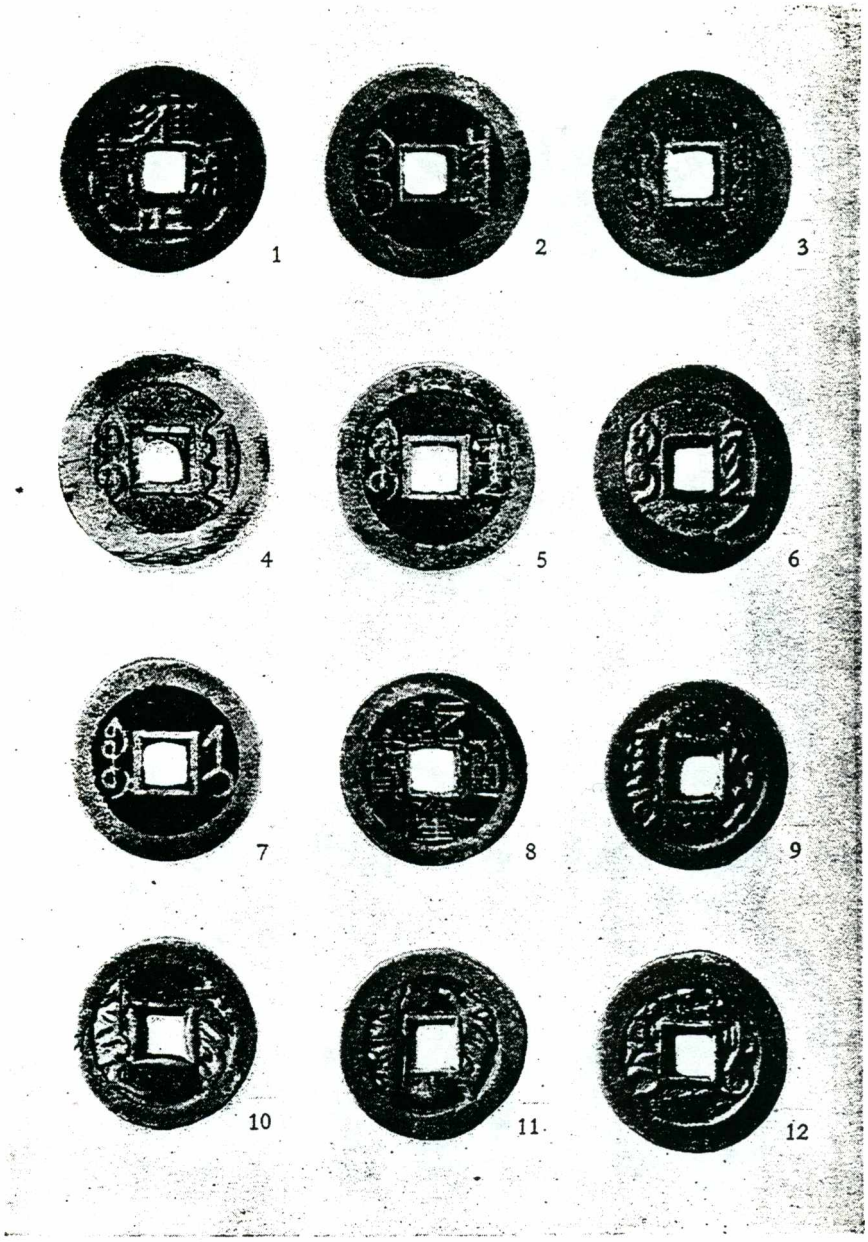


PLATE LXXXI. KANGXI CIRCULATING TREASURE OF EMPEROR SHENGZU'S REIGN

1. Kangxi Circulating Treasure minted by the Beijing Treasure Spring Office. 2-15. Reverse inscriptions on Kangxi Circulating Treasure minted by the provincial offices: *tong, fu, ning, dong, jiang, chang, nan, he, guang, tai, shan, yun, zhang, gong.*

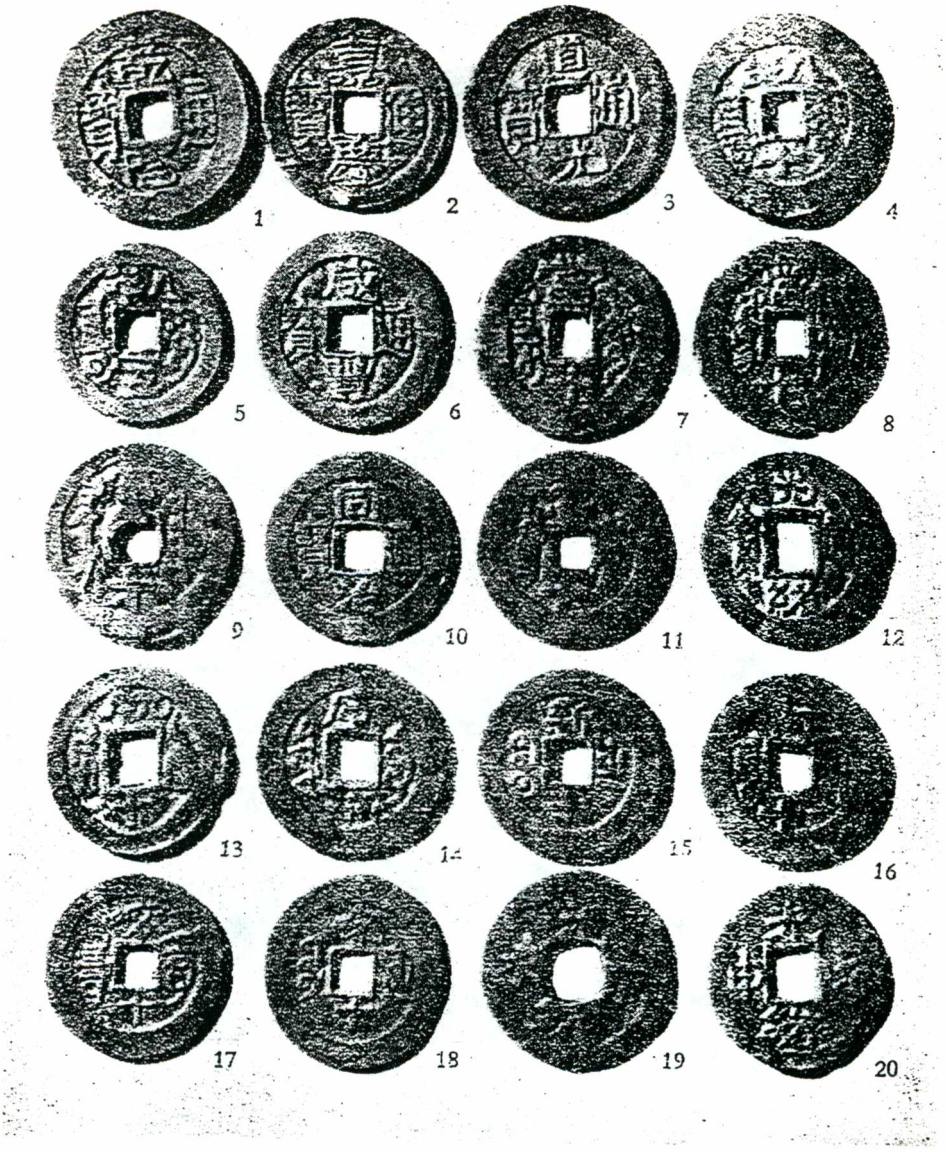


圖版八十二　世宗、高宗朝的錢幣

1.世宗的雍正通寶。 2—7.雍正通寶的背文:寶泉、寶源、寶安、寶南、寶黔、寶濟。 8.高宗的乾隆通寶。 9—12.乾隆通寶的背文: 阿克蘇、葉爾啓木、葉爾羌、烏什。第9—12四品是新疆的普爾錢,左邊爲滿文,右邊爲回文。

PLATE LXXXII. COINS OF THE REIGNS OF EMPERORS SHIZONG AND GAOZONG

1. Emperor Shizong's Yongzheng Circulating Treasure. 2-7. Yongzheng Circulating Treasure reverse inscriptions: Treasure Spring, Treasure Origins, Treasure *an*, Treasure *nan*, Treasure *qian*, Treasure *ji*. 8. Emperor Gaozong's Qianlong Circulating Treasure. 9-12. Qianlong Circulating Treasure reverse inscriptions: Aqsu, Ye'erqimu, Ye'erqiang [Yarkand], Wushi. Items 9-12 are Xinjiang Pu'er coins. The left side is in Manchu, and the right side is in Uighur.



圖版八十三　新疆的普爾錢(紅錢)

1.烏什鑄的乾隆通寶。 2.阿克蘇鑄的嘉慶通寶。 3.阿克蘇鑄的道光通寶。 4.道光八年所鑄道光通寶當十錢之背。 5.道光八年所鑄道光通寶當五錢之背。 6.阿克蘇鑄咸豐通寶。 7—9.咸豐通寶的背文:阿克蘇、葉爾羌、喀什噶爾。 10.同治通寶。 11.同治通寶之背葉爾羌。 12.光緒九年庫車鑄光緒通寶。 13—18.光緒通寶的背文: 九年十、庫十、新十、阿十、喀十(滿回文阿克蘇)、喀十(滿文寶新?)。 19.光緒丁未, 20.光緒戊申。

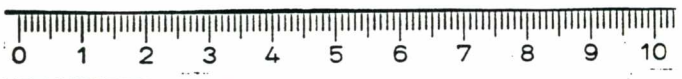
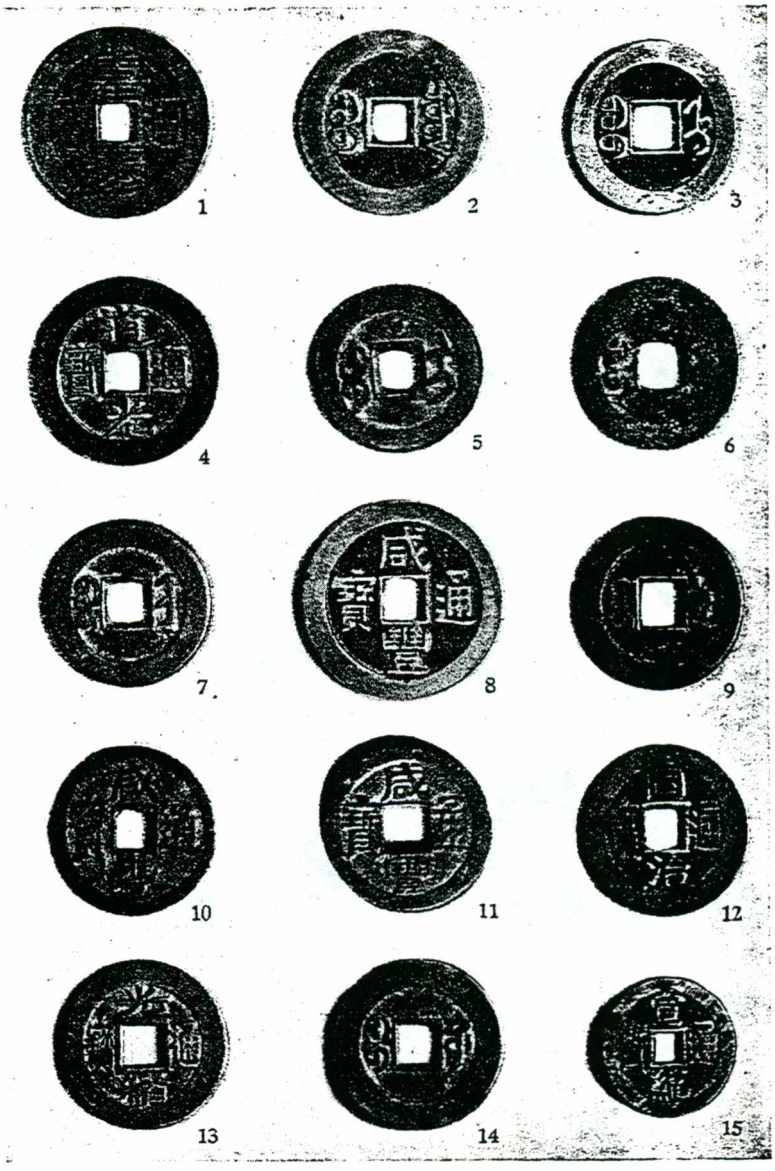


PLATE LXXXIII. XINJIANG'S PU'ER [*PUL*] COINS (RED CASH)

1. Qianlong Circulating Treasure minted in Wushi. 2. Jiaqing Circulating Treasure minted in Aqsu. 3. Daoguang Circulating Treasure minted in Aqsu. 4. Daoguang Circulating Treasure 10-cash coin minted in daoguang 8, reverse. 5. Daoguang Circulating Treasure 5-cash coin minted in daoguang 8, reverse. 6. Xianfeng Circulating Treasure minted in Aqsu. 7-9. Xianfeng Circulating Treasure reverse inscriptions: Aqsu, Ye'erqiang [Yarkand], Kashgar. 10. Tongzhi Circulating Treasure. 11. Tongzhi Circulation Treasure's reverse Ye'erqiang [Yarkand]. 12. Guangxu Circulating Treasure minted in Kulja during guangxu 9. 13-18. Guangxu Circulating Treasure reverse inscriptions: 9th year 10, *ku* 10, *xin* 10, *a* 10, *ke* 10 (Manchu and Uighur words for Aqsu), *ke* 10 (Manchu language Treasure *xin*?). 19. Guangxu year dingwei. 20. Guangxu year wushen.

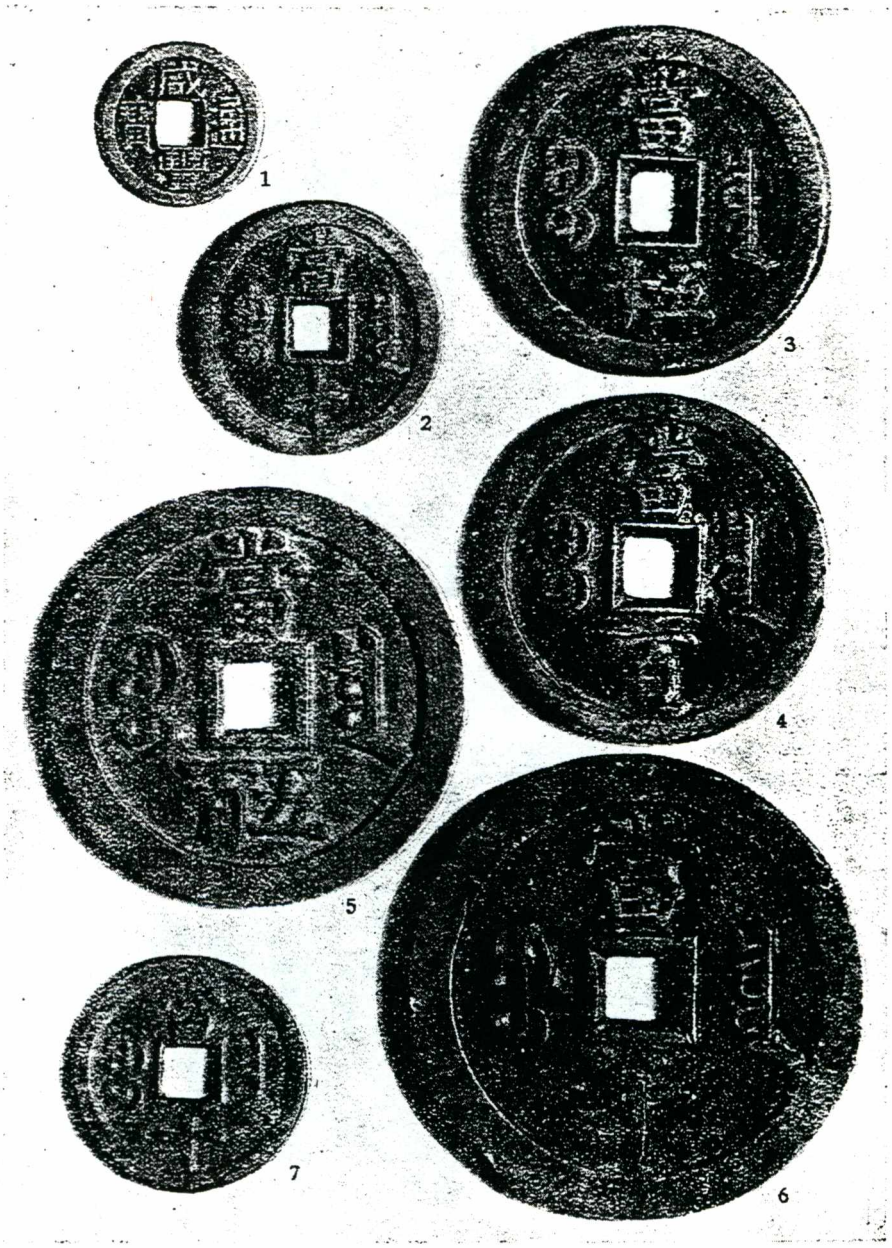


圖版八十四　清中葉以後的錢幣

1.仁宗的嘉慶通寶。 2—3.嘉慶通寶的背文：寶川、寶直。 4.宣宗的道光通寶。 5—7.道光通寶的背文：寶伊、寶武、寶晉。 8.文宗的咸豐通寶。 9.咸豐通寶背寶德。 10.咸豐通寶鐵錢。 11.咸豐通寶鉛錢。 12.穆宗的同治通寶。 13.德宗的光緒通寶。 14.光緒通寶背寶沽(?)。 15.宣統帝的宣統通寶。

PLATE LXXXIV. COINS FROM MID-QING ON

1. Emperor Renzong's Jiaqing Circulating Treasure. 2-3. Jiaqing Circulating Treasure reverse inscriptions: Treasure *chuan*, Treasure *zhi*. 4. Emperor Xuanzong's Daoguang Circulating Treasure. 5-7. Daoguang Circulating Treasure reverse inscriptions: Treasure *yi*, Treasure *wu*, Treasure *jin*. 8. Emperor Wenzong's Xianfeng Circulating Treasure. 9. Xianfeng Circulating Treasure reverse, Treasure *de*. 10. Xianfeng Circulating Treasure iron coin. 11. Xianfeng Circulating Treasure lead coin. 12. Emperor Muzong's Tongzhi Circulating Treasure. 13. Emperor Dezong's Guangxu Circulating Treasure. 14. Guangxu Circulating Treasure reverse, Treasure *gu* [?]. 15. The Xuantong Emperor's Xuantong Circulating Treasure.



圖版八十五　寶泉局的咸豐大錢

1.咸豐通寶小平錢。 2—6.咸豐錢的背文:當十、當五十、當百、當五百、當千。 7.當十鉛錢之背。

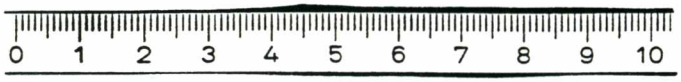
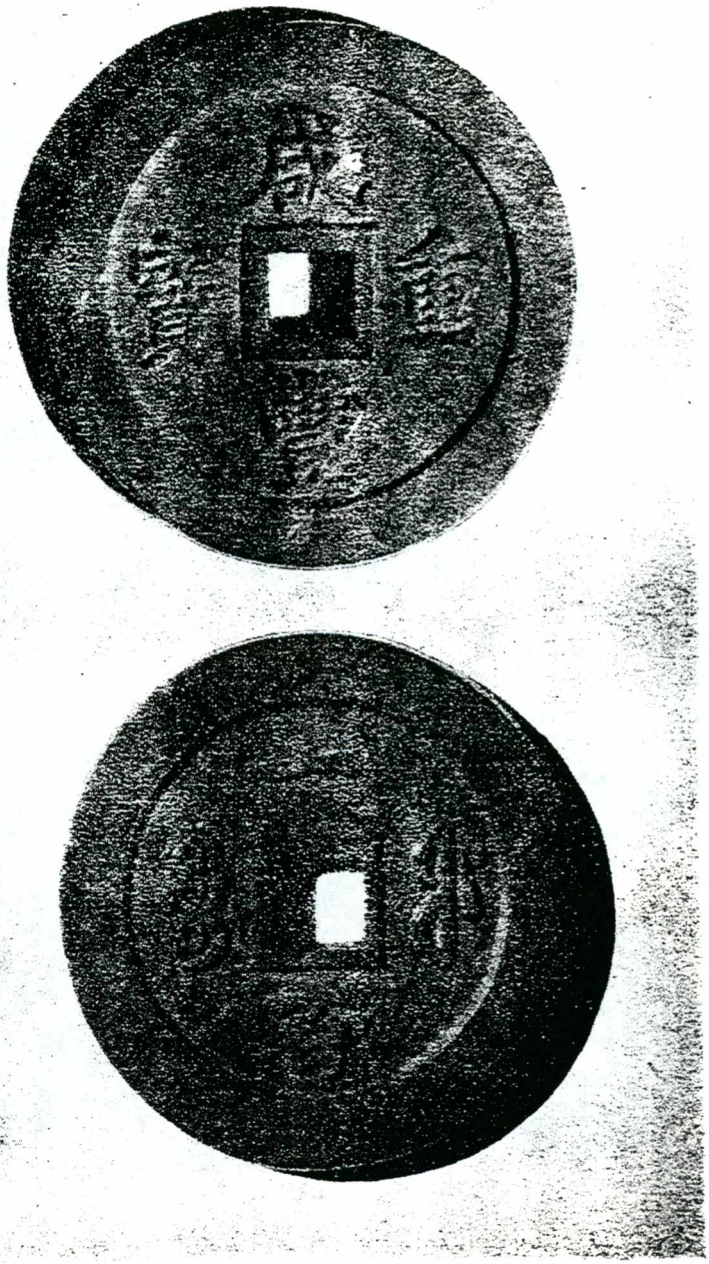


PLATE LXXXV. THE TREASURE SPRING OFFICE'S XIANFENG LARGE COINS

1. Xianfeng Circulating Treasure 1-cash coin. 2-6. Xianfeng coins' reverse inscriptions: 10-cash, 50-cash, 100-cash, 500-cash, 1,000-cash. 7. 10-cash lead coin's reverse.



圖版八十六　寶福局約咸豐當百錢

此錢重庫平五兩，是中國最重的錢幣。

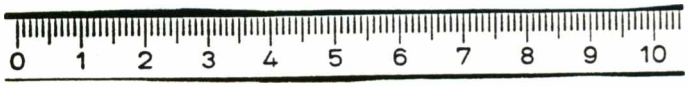


PLATE LXXXVI. TREASURE *FU* OFFICE'S XIANFENG 100-CASH COIN

This coin weighs 5 treasury ounces, and is the heaviest coin in Chinese history.

2. *Coins of the Taiping Heavenly Kingdom*

At the beginning of the xianfeng period [1851] of Qing, the revolution of the Taiping Heavenly Kingdom broke out. The Taipings established an independent political authority, and occupied a large proportion of the territory of the country. Within this territory, the Taiping Heavenly Kingdom's government as well as the political authority set up in response to the Taiping Revolution by the Heaven and Earth Society, issued their own separate moneys [Cf. Plate lxxxvii at end of this subsection].

The Taipings probably began to formally issue money after they fixed upon Nanjing as their capital. This occurred during the Spring of taiping tianguo 3 (Qing's xianfeng 3, or 1853), and it was after that date in particular that use of the term "Sagely Treasure" in the names for their coins began. Because, however, of the movements of armies or for other reasons, there was no unified monetary system within the sphere of the Taiping Heavenly Kingdom. Each local leader seems to have done his own minting of coins. They may have enjoyed the blessing of the Heavenly Capital for this activity, but their coins lacked uniform inscriptions and construction. Even the denominations of coins were not necessarily the same from place to place.

[764]

Of the Taiping coins, there are three sets which form coordinated systems, and so are relatively important. The first set is a block script, wide edged Taiping Tianguo [Plate lxxxvii,2-6] with a reverse inscription label Sagely Treasure read vertically, which came in five denominations. I imagine that these were 1-cash, 5-cash, 10-cash, 50-cash and 100-cash. This set was probably minted in the Heavenly Capital,[1] since most of them have been found in the Jiangsu-Anhui region.

They are characterized by their high degree of polish. Their inscriptions and construction very much resemble those of the wide rim Xianfeng large coins turned out by the Treasure *su* Office, which might almost make one suspect that they had been minted in Suzhou, except that Suzhou was not taken by the Taiping armies until taiping tianguo 10, and the minting of coins must not have been delayed that long. In any event, the influence of the Treasure *su* Office Xianfeng coins is very clear.

Some say that there were only four rather than five denominations of Taiping coins, and that it was merely that the small coin came in large and small sizes. This thesis is, however, merely something thought up to impose arbitrary unity on the data. That this was a five denomination system is fairly clear. Why would there have been a size difference just involving the 1-cash coin and not the other denominations? In terms of weight, the smallest weighs 3 grams, the next heaviest 5 grams, the one after that 8 grams, and the largest two types are 12.5 grams and 31 grams. A 1-cash coin should not weigh 5 grams, and the Qing Dynasty did not circulate a 2-cash coin.

As it happens, the Treasure *su* Office Xianfeng coins include a 5-cash denomination, something rare in the coins of other provinces. Of the Xianfeng large coins, those above 50-cash did not circulate after xianfeng 4 [1854]. Paper money was substituted for these. Therefore it would have been very natural for the Taiping coins to have been somewhat lighter in weight than the same denominations of Xianfeng coins.

The second set bore square bodied Song-style characters [Plate lxxxvii,7]. The inscriptions and their arrangement are like those of the first set, but they are somewhat heavier, their metal has a white cast, and they are not finely polished. They look like sand-copper. This was a characteristic of Taiping coins generally.

The reason why they used square bodied Song characters is probably that the coin molds were carved by aritisans who normally made printing blocks for books. This shows that they were not using old furnances to mint coins.

As to the region whence these coins came, they were probably minted in Hengyang. There is a tradition that a mint was set up in Hengyang then. This set is divided into four denominations, probably 1-cash, 10-cash, 50-cash and 100-cash. There is a particularly large coin, with a diameter of 77 millimeters, which is as big as the biggest Zhizheng Certificate substitute coin. Its inscription is in block script resembling that used on the first set, but the color of its metal and its construction, as well as the place where it is found correspond to the second set's characteristics. Nor is it a coin which had been put into circulation. It is is possible that it is a test minting of a 1,000-cash coin.

The third set has *yinqi* block script inscriptions. The term *yinqi* means that the strokes of the characters are not deep, and that their height is not uniform. The inscriptions are the same as on the two previous sets, except that the two characters for Sagely Treasure on the reverse are not arranged vertically, but rather on the hole's

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[1] Li Gui, *Compiled Outline of the Jinling Military Activities*: "Scrap copper was collected to mint coins. The inscription of one side was Sagely Treasure or Heavy Treasure. Their mad perversity was laughable. An yet they had inner and outer rims, body and hole, and were fairly well made. They may still be seen now. Not all of them have been melted down."

[765]
two sides. This set also has four denominations. These coins are found in Hunan. They were cast in brass, and are somewhat lighter in weight than coins of the second set.

In addition to the above three sets of coins, there are also a number of miscellaneous coins which do not form integrated sets. For example, there is a thick coin from the Shaoxing region bearing a block script Taiping Sagely Treasure inscription, with the characters for Heavenly Kingdom on the reverse arranged horizontally [Plate lxxxvii,8]. These come in three sizes, with not much difference in size between them, ranging from 5 to 8 grams. Since the calligraphy is not very similar, it would seem they were not minted at the same time. Hence it is possible that they are all 10-cash coins.

There is also a block script Heavenly Kingdom Taiping, with the characters for Sagely Treasure arranged horizontally on the reverse. These come in two sizes which do not constitute a set. The small one has a wide hole; the large one a narrow hole. Nor are the strokes on their inscriptions entirely the same. This type of coin probably should have its inscription read as Taiping Heavenly Kingdom Sagely Treasure. It is just that the two characters for Heavenly Kingdom have been put in the primary position, so that when you read it you should first read horizontally, and then vertically.

There is also a 1-cash block script Heavenly Kingdom Sagely Treasure with Taiping on its reverse. In addition, there are coins bearing the four characters for Heavenly Kingdom Sagely Treasure, with Heavenly Kingdom on one face, and Sagely Treasure on the other. Both sides are read vertically, and both are in block script. Some have the ordinary style, others the *yinqi* inscription. They come in large and small types, but these do not constitute a set. The large one weighs around 31 grams, though some examples are a bit lighter. There are a number of variant forms. Most are seen in Nanjing. They are probably 100-cash coins.[2] The smaller ones are probably 1-cash or 10-cash coins.

There is another Heavenly Kingdom Circulating Treasure coin which bears the characters for Heavenly Kingdom on one face and for Circulating Treasure on the other. It is similar in construction to the preceding coin, but is probably earlier in time, when the appellation Sagely Treasure was still not being used on coins.

There are two characteristics which may be discerned in the abovementioned coins, and these may be considered characteristics of Taiping coins in general. The first is the labeling of the coins as Sagely Treasure. This was a manifestation of Taiping religious beliefs, and so is easily explained. The second is that the coins bear no denotations of value. There are some coins which do not have these two characteristics, but are obviously close in construction to Taiping coins. Either these are not genuine Taiping coins or they were produced under special circumstances, as for example those minted before adoption of the coin name Sagely Treasure, or those minted for special applications.

The most difficult problem in studying Taiping coins is the question of face values. I imagine that the failure of the coins to bear any indications of their values made for some inconvenience even at the time when they were in circulation, but this lack has put us later students of the subject to even more trouble.

In fact there are people who believe that Taiping coins one size larger than the 1-cash coins are 2-cash coins, and that the large size Heavenly Kingdom Sagely Treasure coins are 10-cash coins.[3] The weight of the large size Heavenly Kingdom Sagely Treasure is the same as that of the largest Taiping Heavenly Kingdom Sagely Treasure, and so it must be a 100-cash. The relatively light ones were the result of a reduction in weight. Only the 2-cash coin question needs a bit deeper analysis.

[766]
The 2-cash coin flourished during the Song Dynasty, especially during Southern Song. Before then,

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[2]Most students of the Taiping movement's history or of its coins say that it is a 10-cash. This judgment is entirely based on the practice of past numismatists and coin merchants of only emphasizing the size of coins, and not their weights. They merely talk about diameters, but not about thickness, not realizing that over the course of history, when governments have minted coins they have mostly regulated their weights, but were not much concerned with their sizes.

Moreover, when they discuss the sizes of the Taiping Heavenly Kingdom coins, they compare them with Xianfeng coins, and do not seek to discover the rules set for the Taiping coins themselves. This type of large Heavenly Kingdom Sagely Treasure is really not much bigger than the large Xianfeng 10-cash coin, but it is much thicker. None of the Xianfeng 10-cash coins is as heavy as 30 grams. If this is a 10-cash coin, then the heaviest of that set of Taiping Heavenly Kingdom Sagely Treasure minted in Nanjing is also a 10-cash coin, since the weights of the two coins are the same. If that is the case, what could the denominations of the other coins in the set have been?

[3]Most coin dealers say this, if they have been influenced by such students of the Taiping coinage as Cen Ziqian and Cen Lihu in their "The Money of the Taiping Heavenly Kingdom," *Cultural Relics Reference Materials*, 12 (1957), which advocates this theory.

basically all Chinese coins were 1-cash. Large coins were only minted under special circumstances, and they were generally unable to win credibility among the people. Southern Song's 2-cash coin was used more than the 1-cash. This was because Southern Song's paper money made for high prices. The 2-cash coin then was nearly twice the size of the 1-cash, and so it was easy to tell the two apart.

During the Yuan Dynasty and at the beginning of Ming, a multidenomination system was adopted. The Hongwu coins, for example, ranged from 1-cash to 10-cash, and one of these was a 2-cash, but throughout the Ming Dynasty, none but the 1-cash coin proved to be worthwhile to keep in circulation. A 2-cash coin was minted during the wanli and chongzhen periods, but it was not very successful.

As a consequence, the Qing Dynasty did not employ a 2-cash coin, and it was not until the xianfeng period, when they were obliged to carry out a large scale reduction in weight of the coinage so as to respond to the Taiping Rebellion, that a number of large coins with different face values were minted. These included 4-cash, 5-cash and 8-cash, but not a 2-cash coin.

This was no accident. Experience had shown that 2-cash coins were not necessary. If small ones were minted, they were almost the same size as a 1-cash. If large ones were minted, they were too costly to produce, and this would obviate the advantages of a weight reduction. As a consequence, people then had no experience of using 2-cash coins.

Why then would the Taiping government want to mint 2-cash coins? Hence I believe that if we can exclude variations in the size of the 1-cash coin, then coins one size larger are either 5-cash or 10-cash coins, and that generally speaking they are 10-cash, except for the Nanjing-Suzhou region, where there could have been 5-cash coins.

In addition to copper coins, they seem also to have minted silver coins. In tongzhi 1 [1862], Li Xiucheng gave an Englishman twenty dollars in silver coins, and ten dollars in green coins.[4] Such silver coins have not survived. They were probably a kind of show money, and not something in formal use.

Some coins are not labeled Sagely Treasure, but rather Circulating Treasure. For example, there is a Heavenly Kingdom Circulating Treasure bearing Song-style characters, with the characters for Heavenly Kingdom arranged vertically on one face, and those for Circulating Treasure arranged horizontally on the other. They are found in Nanjing.

There is also an Eternal Sage Civil and Military set discovered in Hangzhou, a Heavenly Court Circulating Treasure, with the character for "Eternal" on the reverse, an Emperor Circulating Treasure, with the character for "Sagely" on the reverse, a Taiping Circulating Treasure with the character for "Civil" on its reverse, and an Inaugural Circulating Treasure with the character for "Military" on its reverse.

The inscriptions on these four coins are close to square Song-style calligraphy, but the color of their metal varies, as do their sizes. Those generally seen weigh from 3.8 to 4 grams apiece. Some of the Emperor Circulating Treasure also bear on their reverses the two characters Treasure *zhe*, and the word for Treasure is in the Manchu language. Obviously, this was not minted by the Taipings, and so one might harbor some suspicion that the above four coins are also not genuine Taiping coins, or at least that they were not coins in formal use. The Taiping armies did not attack Zhejiang until taiping tianguo 7 and 8.

There are some coins of this period not labeled Sagely Treasure, and which were probably made under the authority of the Heaven and Earth Society.

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The Heaven and Earth Society was generally very powerful within the movement to overthrow the Qing Dynasty government. It was more deeply rooted than the Taipings, but lacked their unified organization, and as a consequence its accomplishments were not as great. Some of the local Heaven and Earth Society branches did establish governments, and also issued coins. For example, the Great Cheng State in Guangxi and the Great Ming State in Shanghai both minted coins.

By Great Cheng State's coins is meant the several types of Pingjing coins. According to several sources, there were nine of these in all. A 1-cash coin was called the Pingjing Circulating Treasure. On its reverse, to the right of the hole is the character *zhong*, meaning middle. The other eight kinds are called Pingjing Victorious Treasure, and these may be further subdivided into three categories.

Those of the first category bear the character *ying*, meaning garrison or camp, on their reverses, along with one of five other characters: *qianying* (front camp), *houying* (rear camp), *zuoying* (left camp), *youying* (right camp), and *zhongying* (center camp). These are on the two sides of the hole.

The second category bears the character *jun*, meaning army, on their reverses, along with one of two sets of two characters: *changshengjun* (Ever Victorious Army), and *yulinjun* (Imperial Grove Army), with the three characters distributed between the top and the two sides of the hole. These two

[4]Li Xiucheng had gone to an English interpreter for a book on the people of Fu.

categories of coin are bigger than the Circulating Treasure.

The third category is a 1,000-cash large coin with four characters above the hole on the reverse: *xing Han mie Man*, meaning "Raise the Chinese, destroy the Manchus." To the right of the hole is *zhu Tian fu*, meaning "Worship Heaven Felicity." To the left of the hole is *wu zheng jun*, meaning "Martial Upright Army." Below the hole is *dang qian*, meaning "Equals Thousand."

Though these Pingjing coins vary in size, the color of their metal, construction and style of inscriptions are all the same. Except for the 1,000-cash large coin, which comes from Hangzhou, the rest have all been found in the Xiang-Gui region, especially in Xiangtan, Hunan, and in Guilin, Guangxi.

At first, everyone believed that these were Taiping coins, because the reverse labels meaning "army" and "camp" corresponded to Taiping organizational forms. Some people suspected that these were commemorative coins minted to reward their officers after the recovery of Jingjiang in taiping tianguo 4.[5] The inscriptions, however, differ from those on Taiping coins, and Taiping coins are labeled Sagely Treasure, and not Victorious Treasure.

In recent years, some have said they were minted by Li Wenmao of the Great Cheng State.[6] In the Winter of 1856 he was proclaimed Prince of Pingjing, and led a large army to conquer Liuzhou.[7] It was probably at this time that they were minted.

The Great Cheng State was a political authority run by the Heaven and Earth Society. The mountain halls of the Society liked to use the character for "Victorious" in their names, as in Broad Victorious Hall, Exalted Victorious Hall, Constantly Victorious Hall, Joined Victorious Hall, Obtaining Victory Hall, Righteous Victory Hall, Assembled Victories Hall, etc. This matches the use of the coin inscription Victorious Treasure, as does the location where these coins were found.

As for distinguishing of army garrisons or camps as front, rear, left, right and center, this was a procedure followed by the guerrilla armies of the Heaven and Earth Society and Triad Society then in the Xiang-Gui region,[8] and was by no means limited to the Taiping armies.

Nevertheless, if the Great Cheng State minted coins, why did it not employ the hongde year-period name?[9] At the very least these coins ought to have been minted by Chen Kai, and not by the number two man, Li Wenmao, unless Li Wenmao later set up in business for himself. Probably Li Wenmao was by then already thinking of doing just that.[10]

Some suspect that the 1,000-cash large coin does not come from Guangxi, but from Hangzhou, and from Hangzhou at a time when people were counterfeiting Taiping coins. The slogan "Worship Heaven Felicity" on its reverse seems to be a Christian

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way of using words rather than one employed by the Heaven and Earth Society. The Taiping *Exhortation to the Four Peoples* contains the phrase "to receive Heaven's felicity." The Taiping *Trimetrical Classic* contains the phrase "honor Heaven's commandments, receive Heaven's felicity."

In addition, neither Taiping coins nor other coins put out by the Heaven and Earth Society bear notations of value, and it would have been too abrupt a change for this coin to have suddenly sported the face value 1,000-cash. Even the Xianfeng coins issued in the south by the Qing authorities did not

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[5] *Encyclopedia of Ancient Coins*, latter compendium, appendix, five strokes section, "Pacifying of Jing Victorious Treasure," quoting Dai Baoxiang.

[6] The first to have proposed that Li Wenmao minted the Pingjing coins seems to have been Jian Youwen in his essay "Investigation of the Jintian Roving Bandit's Pingjing Coin." The Beijing Historical Museum's *Collected Research Materials and Illustrations Pertaining to Modern History*, first collection, p. 141, says that when Li Wenmao was Marquis of Pingjing, he minted them in Liuzhou. But at that

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time, if he had minted coins, they would have been made in Xiujing (i.e. Xunzhou). Li Wenmao was only enfeoffed as a marquis. If he had minted coins, he would have had to use the current year-period name (hongde). How could he have used the name of his own rank? Zheng Jiaxiang, "The Coins of Great Cheng State," *Cultural Relics*, 1 (1960), 50, says they were minted when Li Wenmao was in Xunzhou as Prince of Pingjing.

[7] Xie Xingyao, *The Taiping Heavenly Kingdom's Movement Against the Qing in Guangxi from First to Last*, p. 62. This book states that Li Wenmao died in 1858 (p. 63), but a table on p. 236 seems to have him still alive in July 1859.

[8] *Ibid.*, p. 55, says that Chen Yongxiu's army adopted the five garrisons system.

[9] *Ibid.*, p. 63, says that Chen Kai minted Hongde Circulating Treasure. This is not correct. The Hongde Circulating Treasure was a Vietnamese coin.

[10] *Autobiography of Chen Kai*: "When I was in Xun City, I set up officials, enfeoffed ranks, and minted coins." "After Li Wenmao successfully attacked Liuzhou, his reputation and power grew large. Although I was the master, he intended not to obey. . . . In Liuzhou he obtained several city ponds, made coins, had operas performed, and congratulated people for merit. He made himself into a king, setting himself up separately." (Liang Hulu, "Concerning Chen Kai's Autobiography," *Guangming Daily*, March 28, 1962.)

bear such a designation. There were 1,000-cash Xianfeng coins from the Treasure *su* Office, but these were probably from a test minting.

There was also a Sitong Circulating Treasure and Mingdao Circulating Treasure with reverses carrying the character *tian*, meaning heaven, and also blank reverses, as well as a Huangjian Original Treasure. These all resemble Taiping coins in color of metal and construction, and they must at least have been nearly contemporaneous with them. Some believe that the Sitong Circulating Treasure was minted by Shi Dakai after he entered Sichuan, since they come from Sichuan, but others attribute them to Zhang Baoshan.[11] The Mingdao Circulating Treasure and Huangjian Original Treasure are from Jiangxi, and have not been verified.

The Shanghai Small Sword Society established the Great Ming State government during taiping tianguo 4, and minted two types of Taiping Circulating Treasure [Plate lxxxvii,10]. The first type has sun and moon marks above and below the hole respectively on the reverse.[12] These were a disguised form of the character for the name of the Ming Dynasty. This was called the sun and moon coin. The other type had a drawing of a moon above the hole on its reverse, and the character *ming* below the hole. These people had as their slogan oppose the Qing and restore the Ming.

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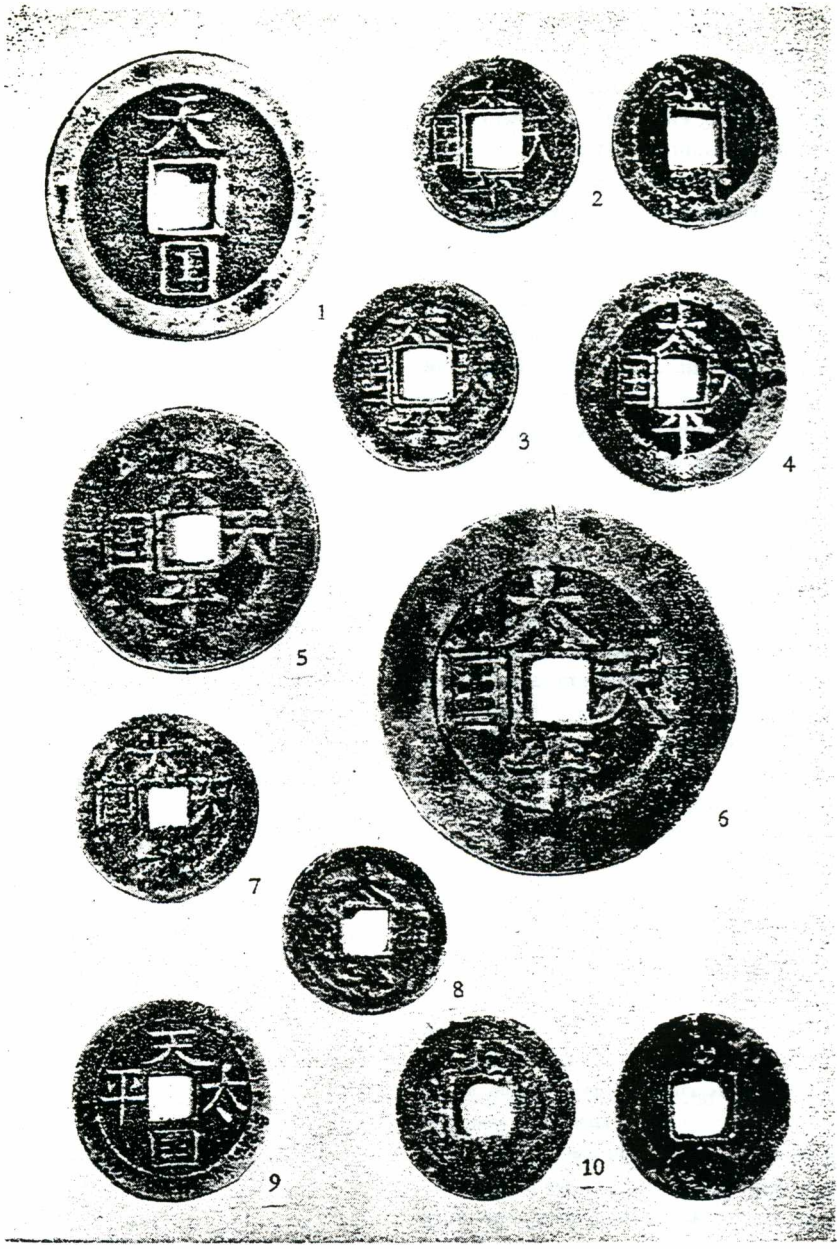
[11]Li Shuchang, *Clumsy Respect Garden Compiled Drafts*, 2, p. 57, says that in xianfeng 10 [1860] Zhang Baoshan "was expelled by the magistrate of Zunyixian, Lord Zheng Erxun, and took on a pseudonym, falsely calling himself a scion of the Ming Dynasty. The masses were deluded and honored him as the Prince of Qin. He led his mob under the appellation Zhu Minyue, or Prince Zhu. He minted Sitong coins and distributed them to cause the people to strengthen their belief in him." Obviously this was linked to the Heaven and Earth Society. Also, Ding Dongheng, *Petty Words of Hexiang Hall* sets down a Taiping proclamation which mentions changing the year tiande 3 into sitong 1. That proclamation was a fabrication by the Heaven and Earth Society.

[12]Huang Benquan, *Small History of Wulin*: "At this time in the city (Shanghai), there were riches in gold and silver, but coins alone were lacking in the treasury. . . . Now, waste copper was collected and all of it was minted. The inscription on the coins read Taiping Circulating Treasure. On the reverse were two images, of the sun and the moon."



圖版八十七　太平天国的錢幣

1.天国(背聖寶)。 2—6.楷書太平天国背聖寶。 7.宋體字太平天国(背聖寶)。 8.厚肉太平天国(背聖寶)。 9.天国太平(背聖寶)。 10.上海小刀會的太平通寶背日月。第1—6品出於南京一帶。其中第2—6品應爲一套，雖然前兩品同後三品有細微的差別，那大概是先後鑄的關係。第7品出於衡陽。第8品出於紹興。

PLATE LXXXVII. COINS OF THE TAIPING HEAVENLY KINGDOM

1. Heavenly Kingdom (reverse Sagely Treasure). 2-6. Block script Taiping Heavenly Kingdom, reverse Sagely Treasure. 7. Song-style characters Taiping Heavenly Kingdom (reverse Sagely Treasure). 8. Thick body Taiping Heavenly Kingdom (reverse Sagely Treasure). 9. Heavenly Kingdom Taiping (reverse Sagely Treasure). 10. Shanghai Small Sword Society's Taiping Circulating Treasure, reverse sun and moon. Items 1-6 come from Nanjing. Of these, items 2-6 must constitute a set. Though there are slight differences between the first two and the last three, these are probably due to the chronological order in which they were minted. Item 7 comes from Hengyang, and item 8 from Shaoxing.

3. The Late Qing Coinage Reform

A revolution in the techniques for minting coins took place near the end of the Qing. From Spring-Autumn and Warring States times down to the Guangxu period, for more than two millennia, the Chinese way of minting had been to cast coins from molds.[1] There had been very little progress, and after Northern Song there had even been regression.

Foreign countries had also employed the method of casting from molds in ancient times. The earliest Roman coin, the *as*, was cast from a mold, but even the older Greek silver coins were already being struck from dies. That was during China's Warring States Era. Later, the Roman silver *denarius* was also stamped from dies. The stamping method required more in the way of preparation and a higher level of technique, which made counterfeiting or illicit minting difficult.

A large proportion of the problems involving money over the course of Chinese history involved private coining, and a number of instances of price instability were caused by private minting. Of course there were very many reasons for private coining, and one of them was the simplicity of the methods used for minting. Given the simplicity of these methods, practically anyone could mint coins.

There were, however, reasons why China was unable to employ

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the method of stamping coins from dies. Foreign countries had been making their money out of gold and silver ever since ancient times. The quantities involved were small, and the values large, which rendered the stamping method practical. Moreover, their money did not really penetrate deeply into people's lives. Right on up to modern times, there were a great many people who never even laid eyes on a gold coin right on down to the end of their lives. Under such circumstances, the quantity demanded was relatively small.

The situation in China differed: Ever since antiquity, Chinese money had consisted mainly of copper coins, and since Qin and Han times, money had been in general use among the people. China is also a large country, requiring an extremely large amount of money, and it would have been inconvenient to stamp out so many coins one at a time. Early silver coins, like the God of Longevity, Ruyi Sceptre, and Brush Treasure seem to have been stamped, but the Xianfeng silver cakes and the Treasure *su* Office's xianfeng 7 dingsi silver coin and copper coin came between the stamping and machine minting periods.

Both stamping and casting from molds were handicraft methods of production, methods belonging to a feudal society. The consequences of both were that the quality of the coins produced did not match their high cost of production. As for the quality of the coins, not to mention the non-uniform mixture of gold and silver in the coins of Lydia, or the depreciation in value of the Roman Empire's silver coins,[2] as well as the low quality silver coins of Medieval Europe,[3] even modern England exhibited the same phenomenon prior to the introduction of machine minting. The seventeenth century English silver crown, at its lightest, was worth 4 shillings 9 pence. The heaviest ones were worth 5 shillings 3

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[1] *Imperial Dynasty Investigation of Literary Remains*, "Investigation of Coins," yongzheng 3: "The method of minting is to cast into molds from the red furnace, brush off the carbon, file the edges, polish the edges, buff the coins, wash them, and thus make coins. Now, privately minted coins only weigh 0.08 or 0.09 ounce apiece. They merely cast them from the furnace, and do not file, polish or wash them. The result is popularly called a 'sand board.' By clipping edges, catties of copper are saved as well as economizing on labor."

Ibid., 16, "Investigation of Coins," qianlong 6: "The universal method for casting coins is to first chisel a copper model weighing 0.23 ounce. This is called the ancestor coin. From this you cast models weighing 0.16 or 0.17 ounce, which are called mother coins, and then you imprint these to cast standard coins. Whenever it is necessary to fix the standard for coins, the model coin is put forward. When provincial mints are to begin production, the Board of Revenue mint first casts ancestor coins, mother coins and standard coins so that one of each is sent to each province to serve as models for their minting operations."

The paen to coins *Sandal Garden Collection* (of daoguang 5), 3, "Coin Molds": "The Taishou, Weng Yiquan, has a coin mother, and says it is a coin mold of Zhu Zhu[zhai?]. It is made of copper, and is used for minting coins. Now the official mints all use sand molds. What are called boards each hold 64 coins. I have been to a mint and observed the minting process. Some boards contain 20 or 30, and some 40 or 50 coins. The number is not necessarily 64. Coin molds now also vary. There are Five-grainer coins, one board of which makes 8. There are Large Spring 50s, one board of which makes 6. There are some that make 4 or 2. The mold is made of two pieces which are brought together.

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In the middle are two small bamboo shapes made into a cat shape so that the pieces may be kept from moving against each other."

[2] A. R. Burns, *Money and Monetary Policy in Early Times*, p. 412.

[3] According to a law of March 15, 1359, the French silver coin, the *denier blanc a l'étoile*, was only 12.5 percent silver. The remainder was copper. Cf. A. Del Mar, *Money and Civilization*, p. 199.

pence.[4]

Over the course of history, evidence of mistakes on the molds and signs of the pouring of the molten metal often appeared on Chinese copper coins, and these caused the coins to be irregular in appearance. There were innumerable discrepancies in weight and fineness of metal. The Qin Half-ouncer was supposed to weigh 12 grains, or half an ounce. Some of them are as heavy as 0.6 treasury ounce, but others are as light as less than 0.2 ounce. Even coins cast at the same furnace might not be the same weight.

It was even more difficult to distinguish differences in metal content. In ancient times they circulated what were called mountain cast coins, the metal content of which varied with the purity of the copper ore of various localities. In later times the metal was deliberately adulterated with lead, tin and iron.

As for the expense of minting, when Europe still employed the stamping method, it was six parts per thousand for gold coins, and 1.5 to 3 percent for large silver coins. For small denomination coins it ranged from 8 to 25 percent.[5]

China's use of molds for casting was a simple technique, but China used copper coins which were of small intrinsic value. This made their relative cost of production high. Over the course of history, high cost frequently led to the suspension of minting. This was the reason Southern Qi ceased minting in yongming 8.[6] Southern Song frequently stopped minting in Sichuan because of excessive costs.[7] The same sort of situation arose during the dading period of Jin [1161-1190].[8]

In Ming's wanli 4 [1576], when the Board of Works made a recommendation concerning minting, it estimated that making 10,000 cash

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would require the expenditure of 14.89 ounces of silver.[9] The price of silver then was 800 cash per ounce.[10] That would make the cost of production 15 percent.

At the beginning of the qianlong era [1736-1796] of Qing, the cost of minting ran from 9.77 to more than 22 percent of the price of the metal content, and for the whole country it averaged more than 15 percent.[11] During the qianlong period, the cost of minting silver coins in Tibet was also 11 percent.

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[4]W. Sombart, *Der Moderne Kapitalismus*. Cf. the Sun Yat-sen Cultural and Educational Institute translation, *juan* 1, first fascicle, chapter 26, 2, p. 314.

[5]*Ibid.*

[6]*Southern Qi History*, 37, "Biography of Liu Fu."

[7]According to *Miscellaneous Record In and Outside Court Since Jianyan*, at the beginning of jianyan, Qiongzhou minted 120 (thousand) strings of cash at a cost of 210,000 cash, and hence stopped minting. In Lizhou during shaoxing 10, it cost 2,000 cash to mint 1,000 cash. Cf. chapter 5.2.4, note 34, above.

[8]*Universal Statutes Continued*, dading 29.

[9]Cf. the Ming *Emperor Shenzong's Wanli Veritable Record*, 49. During the longqing and wanli periods, the gold-reverse coins were always 800 cash per ounce. Cf. chapter 7.2 above.

[10]In longqing 1 [1567], an ounce of silver was commuted from 800 cash. Cf. *Collectanea of Ancient and Modern Books and Illustrations*, quoting *Ming Collected Statutes*: "In longqing 1, it was ordered that in buying and selling commodities, for transactions of 0.1 ounce of silver or more, both silver and coins could be used. For transactions of less than 0.1 ounce of silver, only coins could be used. The current dynasty's standard coins and old coins of former dynasties could be commuted at the rate of 8 cash per 0.01 ounce of silver." In wanli 26, Hao Jing's "Itemized Recommendations on Coins" stated that the people exchanged silver for coins with the government at a rate of 85 cash per 0.1 ounce of silver. Those who paid taxes in coins in lieu of silver had to pay 83 cash per 0.1 ounce. Cf. *Investigation of Literary Remains Continued*. Thus, on the average, an ounce of silver was equal to 840 cash.

[11]*Great Qing Collected Statutes* (Commercial Press, guangxu wushen edition), 21, "Board of Revenue Coins," records in a note that the cost of production of coins in the 16 mints of Treasure *zhi, jin, su, chang, fu, zhe, wu, nan, shan, chuan, guang, gui, yun, dong* and *qian* as well as Dading was divided among four items: the purchase and transport price in silver of a catty of copper, the purchase and transport price in silver of a catty of lead, the cost in silver for labor, and the expenses of the mint office. It only has the latter for the Treasure *chang* Office. The prices and transport costs of copper and lead are given in ounces of silver, but the cost of labor is only calculated in silver for 6 mints. For the other 10 it is calculated in strings of cash. For the 6 mints which calculated in silver, the expense of minting at the Treasure *zhi* was 9.77 percent. The Dading figure was 22.2 percent. These were the lowest and highest, respectively. If we calculate 1,500 cash per ounce of silver for the other 10 mints, and total the figures for all 16 mints, then the labor cost over the whole country for minting coins was 15.33 percent.

Imperial Dynasty Investigation of Literary Remains, 16, "Investigation of Coins," qianlong 4, the Executive of the Board of Works, Han Guangji, said: "The Treasure Spring Office and the Treasure Origins Office each mint 41 *mao* of coins. The Treasure Spring Office must annually give in wages to the furnace heads some 90,000 strings. The Treasure Origins Office gives half that amount. The total comes to 130,000 strings for the cost of minting over the course of a year. Before the coins have left the mint, something over 20 percent of their value has been lost in the furnace." If the figure for the number of *mao* given in this text is not in error, and each *mao* is reckoned at 12,880 strings, then the overhead must have been 12.78 percent. A *mao* often

The two difficulties involved in hand manufacture can be obviated by use of modern machinery to mint coins. In modern nations, the metal content and weight of coins cannot vary from the legally fixed standard by as much as three parts in a thousand, and the cost of production for gold coins also falls to less than three parts in a thousand.

By the tongzhi period [1862-1875], there were people proposing to use machinery to make coins. In tongzhi 6 [1867], the Fujian Shipping Administration Rear Study Hall Inspector and Board of Punishments Manager, Zhong Dakun, memorialized a request that motorized machines be acquired to imitate Western minting methods, but since he feared that they would not be able to do this, he recommended imitating the methods of the private coiners.[12] He was probably referring to silver coins.

In guangxu 8 (1882), Jilin used machinery to produce copper models of silver coins. The following year, the Dowager Empress Cixi told the authorities to buy foreign copper to send to the machine mint for making coins. The Board of Revenue said that would be inconvenient, and so she told Li Hongzhang to begin minting in Tianjing. He probably did not comply. In guangxu 11 [1885], the Governor-General of Min-Zhe requested use of the shipyard steam machinery to mint coins, each coin to weigh 0.085 ounce. It is said that the operation was very successful, but these coins have not survived. Machine made coins I have seen from the Treasure *fu* Office are all small coins weighing 0.03 ounce. I suspect they were minted later.

In guangxu 13 [1887], the government ordered Zhili and Jiangsu to engage in production of machine-made coins.[13] There are several types of machine-made coins from the Zhili Treasure *zhi* Office, among which is a large one which could have been minted at that time. Jiangsu's Treasure *ning* Office produced machine-made coins.

Also in guangxu 13, Guangdong's Zhang Zhidong was planning to mint machine-made coins weighing 0.1 treasury ounce.[14] It was not until guangxu 15 that minting formally began [Cf. Plate lxxxviii at end of this subsection]. These machine-made coins had a fixed exchange price in silver. Those among the people who wanted to trade silver for coins could do so at any silver shop. Those who wanted to exchange coins for silver could do so at an official coin office. Both kinds of transactions would be carried out at 1,000 coins to the ounce of silver. This fit these coins into a bimetallic silver-copper coin standard.

These coins originally bore the four characters for "Treasury Weight 1 *Qian*" on their reverses, but the Guangxu Emperor's criticism led them to change this to the Manchu for "Treasure *guang*," and to omit the former inscription.[15] Actually, both types were minted, and in very large quantities, which were circulated over a broad area. Evidently, minting was already under way before they had obtained permission from the Beijing government. There are also 5-cash and 10-cash coins, which were probably model coins or test mintings, and were not put formally into circulation. The 10-cash coin weighs 8.6 grams, or 0.23 treasury ounce.

The Treasure *guang* Office also seems to have turned out machine-made coins for the Treasure Origins Office, since the latter are identical in construction to the former. In guangxu 13 and 14, the Treasure *jing* Office was still using native methods

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to make coins. It was not until guangxu 22 [1896], 4th month that they attempted machine minting. The Treasure *zhe* Office commenced operations in the 5th month of the same year.

Other provincial mints to use machines were the Treasure Spring, Treasure *zhi, gu, ji, feng, wu, chuan, dong, zhang* and Shandong, but the weights of their coins were not uniform. In guangxu 13, the capital mints and those provincial mints turning out standard coins were ordered to make such coins at a weight of 0.1 ounce apiece. The other provinces followed the Fujian standard of 0.085 ounce per coin. In fact, however, the Treasure *jing* Office's coins weighed 0.08 ounce, those of the Treasure *zhe* Office weighed 0.07 ounce, and the Fengtian coins 0.04 ounce.

In guangxu 21 [1895], the Governor-General of Liangjiang, Liu Shenyi, memorialized for permis-

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did not, however, come up to the set amount.

[12] *Imperial Administrative Law Compiled By Category*, "Coins, 1." Cf. Yang Duanliu, *Qing Dynasty Money and Finance Draft History*.

[13] Memorial of guangxu 13, 1st month, 27th day, by the Army Machine Shop Head, Wang Yiqiung.

[14] Zhang Zhidong's "Memorial on Purchase and Management of Machinery For Test Minting of Standard Coins" of guangxu 13, 1st month, 24th day states: "I now propose this test (for Inaugural coins). Each coin will weigh 0.1 treasury ounce. I also propose that on the reverse the four characters for 'Treasury Weight 1 *Qian*' appear." Cf. *Complete Works of Duke Zhang Wenxiang*, 19, "Memorials of Advice," 19.

[15] Guangxu 15, 8th month, 6th day, Zhang Zhidong, "Memorial on the Beginning of Minting Standard Coins and the Circumstances of their Circulation" (*Complete Works of Duke Zhang Wenxiang*, 25,

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sion to let each coin weigh 0.07 ounce. The following year, the Governor-General of Huguang, Zhang Zhidong, asked that coins weigh 0.06 ounce. In guangxu 32 [1906], Guangdong changed over to a machine-made coin weighing 0.032 ounce. Nor did the other provinces necessarily honor the standard fixed by Beijing.

During the xuantong period [1908-1912], the machine-made coins of Guangdong and Fujian were all small ones. Fengtian used red copper to mint a 10-cash machine-made coin. Its obverse was inscribed Guangxu Circulating Treasure, and around the circumference of the reverse was the motto "Fengtian Machinery Office Made Purple Copper Equals 10 Cash Weight 2 *Qian* 4 *Fen*." This may be said to have been a transitional form in the evolution of a 10-cash copper dollar. Anhui made a trial minting of a 10-cash machine-made coin which was exactly the size of the later 10-cash copper dollar, except that it still had the hole in its middle.

Not only was there a great reform in the techniques for minting coins at the end of Qing, there was also a revolution in the shape of coins [Plates lxxxix-xc]. Ever since Qin and Han times, China had used square holed coins almost exclusively. Exceptions were few, and all of them were either not important or temporary. The coins at the end of Qing no longer had square holes.

"Elder Brother Kong Fang," or "Hole Square" was an expression which had stood for a variety of emotions in Chinese history and in the works of literature which had made it into a proper name with historical connotations.

This revolution was not limited to China. It was one which encompassed the entire sphere of the square-holed coin. Japan had begun this revolution prior to the Meiji Restoration (1870) with the minting of some elliptical copper coins, but square-holed coins continued in circulation right down to the establishment of a new coinage during the Meiji Restoration. Only then were European style coins adopted completely. Korea also reformed its coinage. In guangxu 17 [1889] it issued new style coins without the square hole.

Vietnam preserved the old monetary culture a bit longer. Although it minted new style silver coins long before Japan and Korea, it continued to mint its square-holed coins right up to most recent times. In the middle years of the twentieth century it was still minting the Baodai [Chinese: Baoda] Circulating Treasure machine-made square-holed coin. Its silver coins also retained traces of the old monetary culture. Its earliest silver dollars were still called Circulating Treasure, as in Mingming Circulating Treasure and Shaozhi Circulating Treasure. Some of the latter even retained the square hole. The somewhat later Si'de Circulating Treasure also had a square hole.

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Viewed from the perspective of its entire history, Vietnam minted a number of different types of square-holed coins in relatively large numbers, and the custom of using square-holed coins was deeply and firmly rooted among people in general.

Though China no longer minted square-holed coins after the overthrow of the Qing government, such coins continued to circulate for a very long time in farming villages, especially in remote regions. During the time of paper money depreciation, they enjoyed renewed circulation for a time. Even in Korea various square-holed coins continued to circulate down into the twentieth century.[16] During the Second World War there were places in Indonesia that were still using square-holed coins.

Guangdong began to mint copper dollars [literally, *tongyuan* --"copper round"] in guangxu 26 [1900] [Plate lxxxix,1]. The coins weighed 0.2 ounce apiece, and were 95 percent copper, 4 percent lead and 1 percent tin. The obverse bore the four characters for Guangxu Original Treasure. There was no hole in the center of the coin, but instead the two Manchu words for Treasure *guang*. Below, near the outer rim, was the Chinese language motto "Guangdong Province Made, Each Hundred Coins Exchange One Dollar." The reverse bore a coiled dragon design, outside of which near the outer rim was the English language inscription "KWANG-TUNG ONE CENT."

Evidently the earliest copper dollar was given a face value in terms of silver coinage, and was probably intended for use as a supplementary money. Later the "ONE CENT" on the reverse was changed to "TEN CASH," but the obverse was not changed. At this point the Chinese inscription on the obverse expressed a face value in terms of silver while the English inscription on the reverse expressed a face value in terms of copper standard coins. It was not until guangxu 30 [1904] that the obverse Chinese inscription "Each Hundred Coins Exchange One Dollar" was changed to read "Each Dollar Equals Standard Coins Ten Cash." Later this copper dollar became an independent coin with no fixed exchange price against silver coins, but it maintained a price

[16]The July 1914 (Taisho 3) Japanese *Archeology Magazine*, 4, no. 11, says that at that time among the ancient coins in circulation in Korea were coins from six of China's dynasties: Tang, Southern Tang, Northern Song, Southern Song, Jin, Ming and Qing. In addition there were Annamese, Japanese and Korean coins. The most numerous were Chinese Northern Song coins.

ratio of 10:1 against standard coins from beginning to end.

The newly minted copper dollar was a uniform and finely made coin, and was greatly welcomed by the people. The government also obtained great profit from it, and as a consequence the provinces imitated it one after the other. By guangxu 31 [1905], twelve provinces were minting copper dollars. These were Guangdong, Zhili (Beiyang), Shandong, Henan, Anhui, Jiangsu, Jiangxi, Zhejiang, Hunan, Hubei, Fujian and Sichuan [Plates lxxxix, 2-14; xc,1-15].

The new style copper coins of the end of the Qing were divided into five denominations: 1-cash, 2-cash, 5-cash, 10-cash and 20-cash. According to the "Adjusted Dollar Regulations" proclaimed in guangxu 31, 7th month, the alloy of the copper coins was to be 95 percent copper and 5 percent lead, or 95 percent copper, 4 percent lead and 1 percent tin. The weight of a 20-cash copper dollar was to be 0.4 treasury ounce; of a 10-cash copper dollar, 0.2 ounce; of a 5-cash, 0.1 ounce; and of a 2-cash, 0.04 ounce.

The 2-cash was not minted then, and the old standard coins were used for the 1-cash denomination. Later, however, the Beiyang (Zhili) and Hubei provincial mints minted a 1-cash small copper coin, and Fujian had a 2-cash small copper coin. The coin circulated most

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commonly was the 10-cash copper dollar, which was called the single copper dollar or single copper board [*dan tongyuan/ban*]. The 20-cash copper dollar, or double copper dollar, only circulated in the north and in Hunan, Hubei and Jiangxi provinces. Very few of the 5-cash circulated at all.

The copper dollar only circulated in China for some two decades, but developed a number of different types. So great a variety makes its study a unique department of Chinese numismatics. However, at its heart was the 10-cash copper dollar, since these constituted 97 or 98 percent of all the copper dollars. The 20-cash denomination was less than 2 percent of the total, and the remainder --the 5-cash, and the 1-cash and 2-cash-- came to less than one in a thousand.[17]

These Qing Dynasty copper dollars are divisible into two main categories: the Guangxu Copper Dollar, and the Great Qing Copper Coin. The Guangxu Original Treasure model variants are the most numerous. The inscription in the center of its obverse consists of the four characters for Guangxu Original Treasure, arranged from top to bottom and then right to left. Above is the name of the province or locality minting the coin. It might be written as such-and-such a province manufactured, or the mint name alone might be written. These included Hunan, Jiangxi, Hubei, Henan, Beiyang, Jiangsu, Anhui, Fujian, Guangdong, Guangxi, Sichuan, Zhejiang, Shandong, Jilin, Fengtian, Jiangnan, Qingjiang and Xinsheng.

The lower edge gave the face value, either in terms of silver dollars, as did the first copper dollar minted in Guangdong with its "Each Hundred Coins Exchange One Dollar," or in terms of ounces of silver, as did the one minted in Xinjiang with its "Market Silver 2 *Fen* 5 *Li*" [i.e. 0.025 ounce]. The majority gave the face value in terms of standard coins, but the Chinese wording used varied considerably. Just among the copper dollars minted by Hunan province there were a number of different ways of writing it. These included "Each Dollar Equals Coin Ten Cash," "Equals-Ten Yellow Copper Dollar," "Equals-Ten Copper Dollar," "Equals Coin Ten Cash," and "Equals Ten."

In addition, they also all employed Manchu to represent the mint names, sometimes placed in the center, or sometimes put along the two sides. Those minted by Beiyang and Qingjiang, however, merely had the four Manchu words for Guangxu Original Treasure on the upper edge, and did not employ Manchu for the mint name. Those minted in the southern provinces employed Manchu inscriptions on their reverses. Though Uighur inscriptions are on some Xinjiang province coins, some are entirely in Chinese, having neither Manchu nor Uighur nor English. These are unusual exceptions.

On the remainder of the 10-cash copper dollars, there is always an English inscription going around the circumference of the reverse specifying the province and the face value. The face value is generally given as "TEN CASH," but in Jilin it was given as "TEN CASHES," and Anhui has some which make it "ONE CEN" and "ONE SEN."

The reverse illustration is of a coiled dragon. This appears in a multitude of variations. The shape of the dragon, the clouds beside the dragon, and the stars on the perimeter, all go through a large number of permutations, and coin collectors have distinguished a number of variant types based on these small differences. There are several dozen variants for each province.

The Great Qing Copper Coin is a rather simpler and more uniform coin [Plate xc,4-9]. At the very

[17] According to a survey of December, 1913, by the Ministry of Finance Coinage Office into the quantity of copper dollars produced by the various mints. Cf. *Modern Chinese Coinage Question Compendium* (2), pp. 797, 798. The figures for Guangxi are omitted, and the standard coins for Guangdong are included. These should be subtracted.

center is a single small character or two small characters to represent the name of a province. These are *xiang, gong, e, bian, zhi, su, wan, min, ao, chuandian, chuan, dian, yun, zhe, feng, ning, ji* and *dong*. There are also
[775]
some without names. At the top are the four Manchu symbols for Great Qing Copper Coin, and on each side of the Manchu text is one of the two sexagenary cyle characters for the year, such as bingwu or dingwei. On the left and right along the perimeter are the two characters, *hubu*, meaning Board of Revenue. Later on, the three characters *duzhibu*, meaning Ministry of Payment Measures were used instead. Sometimes the sexagenary cycle characters dingwei are put in the position of the characters *hubu*. Below is a line in Chinese reading "Equals Standard Coin 10 Cash."

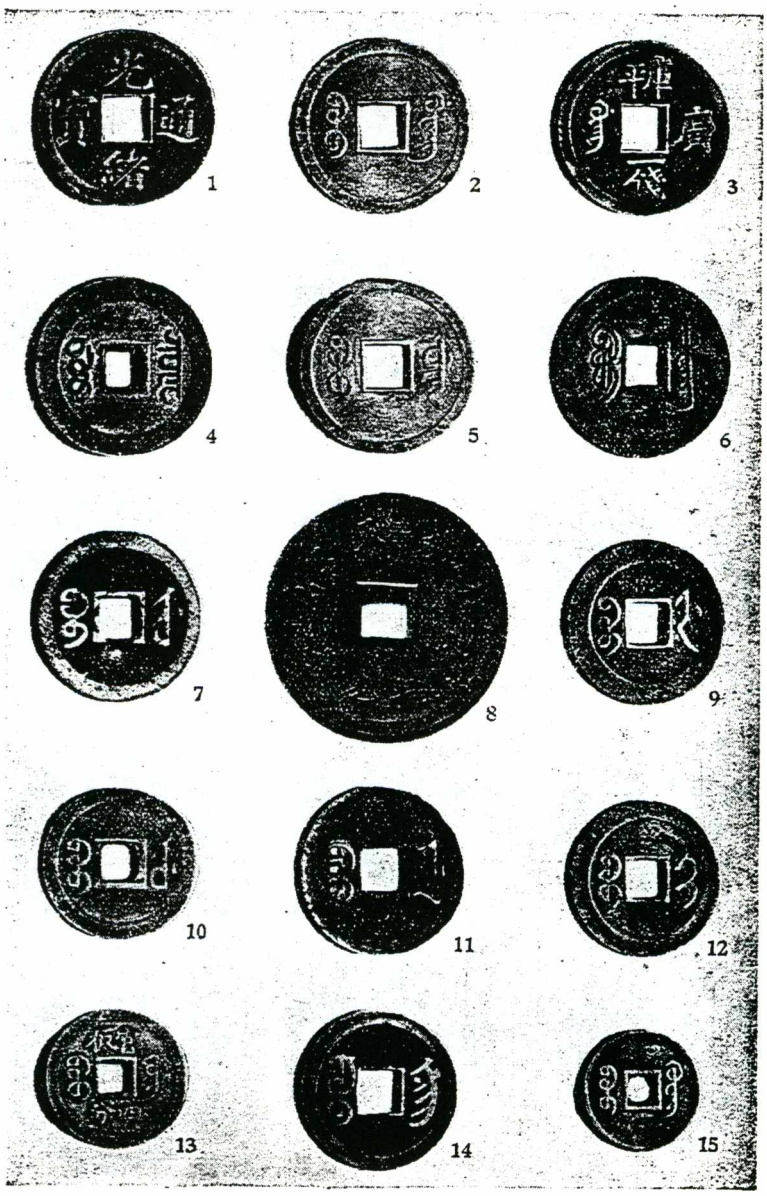
There is also a coiled dragon in the center of the reverse. There are relatively few variations in that design. Above, in Chinese, are the words "Guangxu Years Made," or "Xuantong Years Made." On the lower perimeter is the English sentence "TAI-CHING TI-KUO COPPER COIN" (Great Qing Empire Copper Coin).

This transformation of the form of the coins is almost comparable to that made by the First Emperor of Qin. The First Emperor of Qin changed a variety of large and small knives and spades into square holed round coins, and this was undoubtedly a progressive step. The change at the end of Qing of square-holed coins into the hole-lacking copper dollars, did not necessarily represent progress. This was a concrete measure, and one not without its advocates, because the coins in circulation then varied widely in weight and size, and a uniform changeover to machine made copper dollars would have had the effect of making a new beginning. This would have produced an improvement in the circulation of money at that particular time.

Over the long term, however, the value of such a transformation is subject to doubt. Use of the square-holed coin was a two millennia long tradition in China, and there was no necessity at all for breaking this tradition.

Viewed from the artistic angle, European-style coins were the sphere of the sculptors, particularly of the sculptors of the human form. In fact human portrait sculpture was the very heart of the European numismatic art. Chinese artists had long since pushed human portrait sculpture to the periphery, and as a consequence the Chinese new style silver and copper coins did not employ representations of human beings. At the end of Qing, only the Sichuan rupee employed a human image, but that one was carved extraordinarily badly. There is nothing much to choose from among representations on the other new style silver and copper coins.

If at that time they had used machinery to mint silver and copper, or gold and silver and copper coins retaining the square hole, it would also have been entirely in accord with what was required.

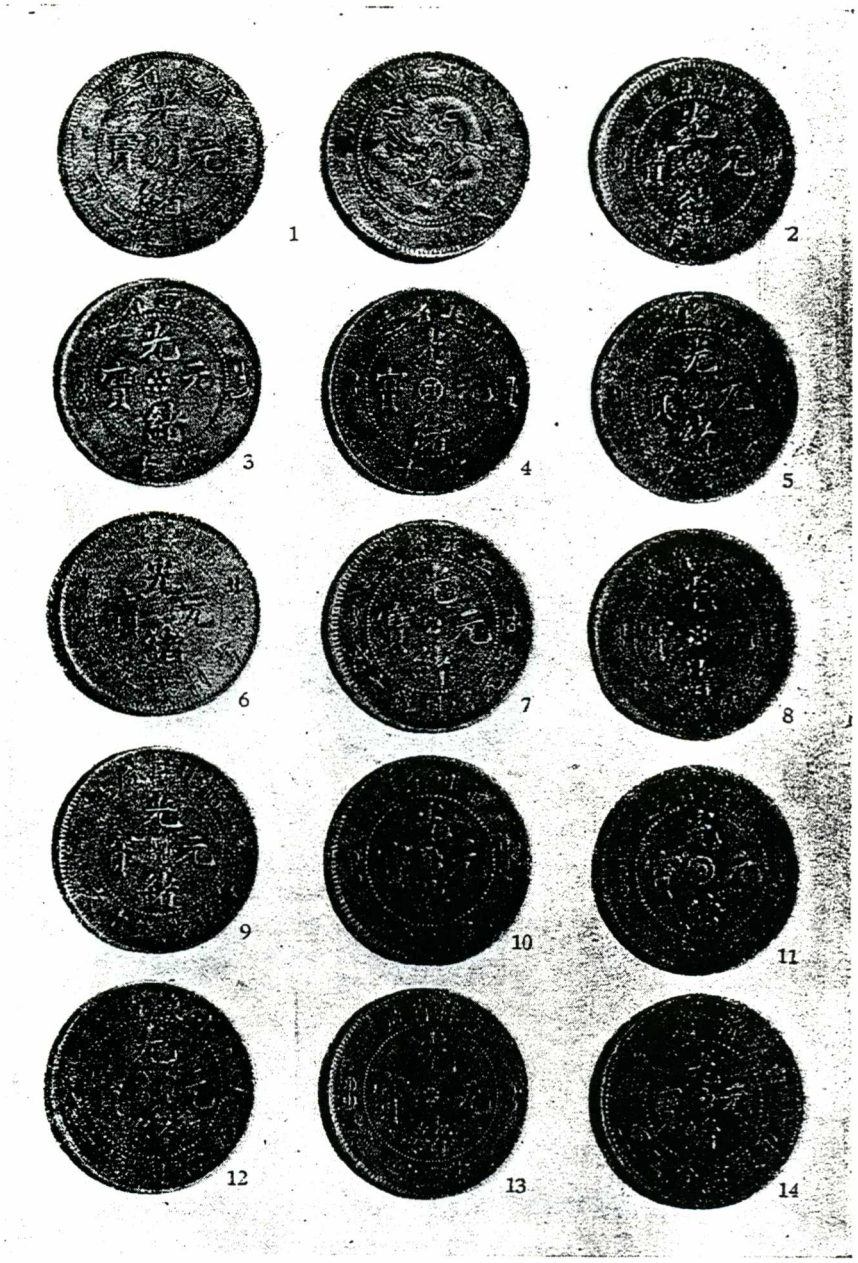


圖版八十八　機器鑄造的光緒通寶

1.廣東鑄光緒通寶。 2.同上之背。 3.廣東鑄庫平一錢。 4—15.各省所鑄光緒通寶的背文：寶泉、寶源、寶東、寶武、奉天機器局造紫銅當十錢重二錢四分、寶浙、寶武、寶津、寶吉、寶奉官板四分、寶漳、寶廣。

PLATE LXXXVIII. MACHINE-MADE GUANGXU CIRCULATING TREASURE

1. Guangxu Circulating Treasure minted in Guangdong. 2. Reverse of Item 1. 3. Treasury Weight 1 *Qian* minted in Guangdong. 4-15. Reverses of Guangxu Circulating Treasure minted in various provinces: Treasure Spring, Treasure Origins, Treasure *dong*, Treasure *wu*, Fengtian Machine Mint purple copper 10-cash coin weighing 0.24 ounce, Treasure *zhe*. Treasure *wu*, Treasure *jing*, Treasure *ji*, Treasure *feng* official board 0.04 ounce, Treasure *zhang*, Treasure *guang*.



圖版八十九　各省所鑄光緒元寶當十銅元

1.廣東省造光緒元寶。 2.湖南省造。 3.江西省造。 4.湖北省造。5.河南省造。6.北洋造。 7.江蘇省造。 8.安徽省造。 9.福建官局造。 10.四川省造。 11.浙江省造。 12.山東省造。 13.吉林省造。14.新(疆)省造。

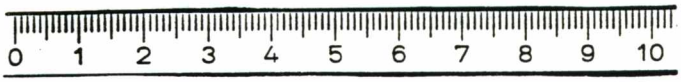
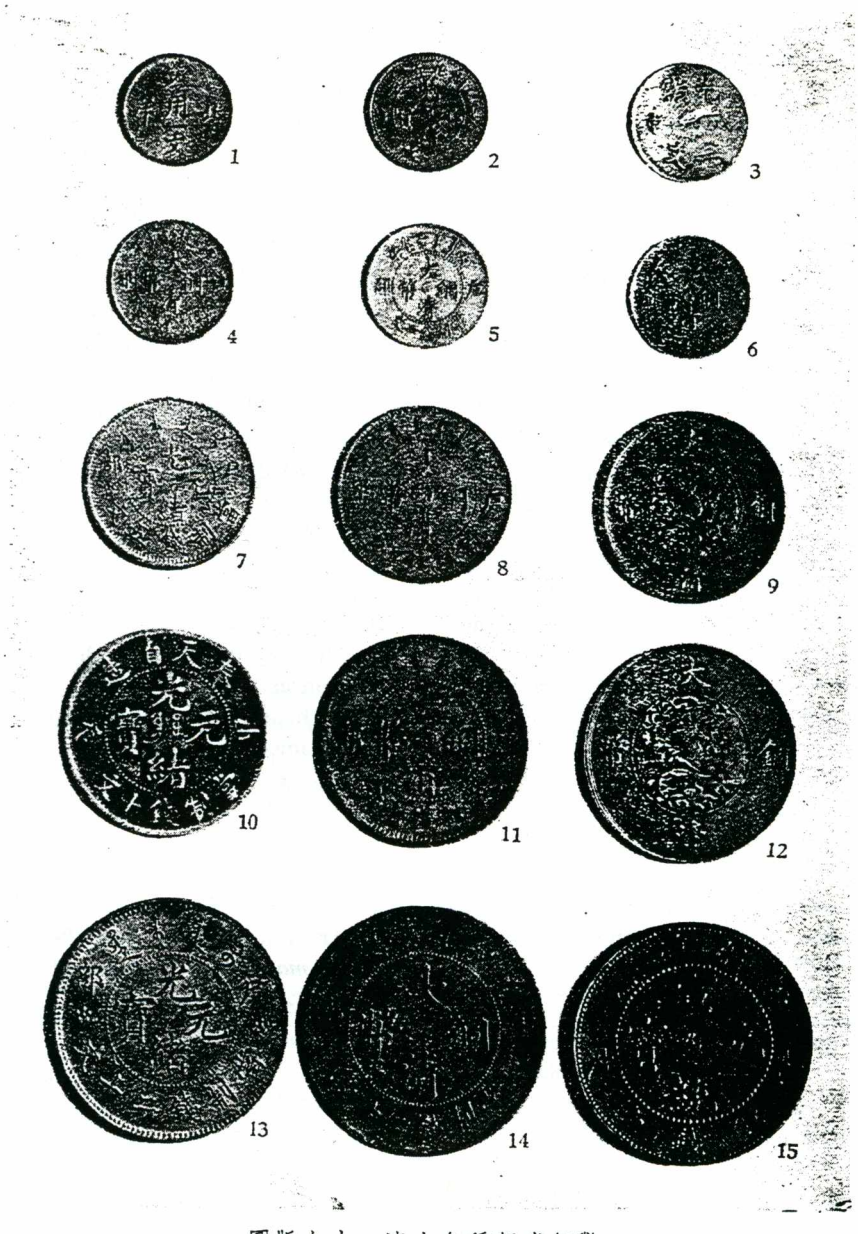


PLATE LXXXIX. GUANGXU ORIGINAL TREASURE
10-CASH COPPER DOLLARS MINTED BY VARIOUS PROVINCES

1. Guangxu Original Treasure made in Guangdong province. 2. Made in Hunan province. 3. Made in Jiangxi province. 4. Made in Hubei province. 5. Made in Henan province. 6. Made in North Seas [i.e. Zhili. EHK]. 7. Made in Jiangsu. 8. Made in Anhui. 9. Made by the Fujian official mint. 10. Made in Sichuan province. 11. Made in Zhejiang province. 12. Made in Shandong province. 13. Made in Jilin province. 14. Made in Xin[jiang] province.



圖版九十 清末各種新式銅幣

1.北洋一文。 2.湖北省造光緒元寶一文。 3.直隸省造光緒一文。 4—6.大清銅幣二文。 7.戶部鑄光緒元寶五文。 8—9.大清銅幣五文。 10.奉天省造光緒元寶當十銅元。 11—12.大清銅幣當十銅元。 13.光緒元寶當二十銅元。 14.大清銅幣當二十銅元。 15.新疆鑄宣統元寶當紅錢十文。

PLATE XC. VARIOUS NEW STYLE COINS OF LATE QING

1. Beiyang 1-cash. 2. Hubei province made Guangxu Original Treasure 1-cash. 3. Zhili province made Guangxu 1-cash. 4-6. Great Qing Copper Coin 2-cash. 7. Board of Revenue minted Guangxu Original Treasure 5-cash. 8-9. Great Qing Copper Coin 5-cash. 10. Fengtian province made Guangxu Original Treasure 10-cash copper dollar. 11-12. Great Qing Copper Coin 10-cash copper dollar. 13. Guangxu Original Treasure 20-cash copper dollar. 14. Great Qing Copper Coin 20-cash copper dollar. 15. Xinjiang minted Xuantong Original Treasure equal to Red Coin 10-cash.

4. Silver and Silver Coins

Though the coinage of Qing was on a standard under which silver and coins were to be circulated with equal emphasis, from the government's point of view, the important thing was silver,[1] and the signs of promotion of silver are clear.[2] Official salaries were calculated and paid in silver, though the actual incomes of officials were not altogether in money. Since salary rice remained important, it is evident that a portion of the economy remained at the level of barter. It was just that this portion was somewhat smaller than in earlier dynasties.

The Qing Dynasty's use of silver may be divided into three stages. The first stage comprises the first hundred years, during which most places in the country used only lumps of silver. Though these were cast into the shape of ingots, they were still reckoned by the ounce. The second stage includes the 80 or 90 years from the jiaqing period [1796-1821] on, comprising the greater part of the nineteenth century, during which foreign silver dollars gradually penetrated deeply into the interior, and became a preferred money in China. The third stage comprised the several decades at the end of Qing, when China minted its own silver dollars and granted them legal tender status. Of course silver continued to circulate by the ounce during the second and third stages.

Silver assumed a number of different shapes and took on a number of different names. During the qianlong period [1736-1796], in Zhejiang in the south there was "Original Threads" [*yuansi*]; in Huguang and Jiangxi there was "Salt Withdrawal" [*yanche*]; in Shanxi there was "Western [*cao*?] Water Threads" [*xi[cao?] shuisi*]; in Sichuan there was "Earth [*cao*?]" [*tucao*], "Willow [*cao*?]" [*liucao*] and "Dill Seed" [*huixiang*]; in Shaanxi and Gansu there was "Original *cao*" [*yuancao*]; in Guangxi there was "Northern Flow" [*beiliu*]; in Yunnan and Guizhou there was "Stone *cao*" [*shicao*] and "Tea Flower" [*chahua*]. In addition to these there were also "Green Threads" [*qingsi*], "White Threads" [*baisi*], "Single Melt" [*danqing*], "Double Melt" [*shuangqing*], "Square *cao*" [*fangcao*] and "Long *cao*" [*changcao*].[3] The number of names was extremely great.

Generally speaking, these may be divided into four categories:

The first is the Original Treasure, generally called Treasure Silver, or Horse-hoof Silver because it resembled a horse's hoof [Cf. Plate xci at end of this subsection]. A large Original Treasure weighed 50 ounces. Such Original Treasure also came in other shapes. The so-called Square and Long *cao*[?] were named after their shapes.

The second category was the Middle Treasure. It weighed 10 ounces, and also came in various shapes, most resembling steelyard weights, but some in the shape of horse-hooves. These were called small Original Treasure.

The third was the small *ke* or *kezi* ingot, shaped like a *mantou* steamed dumpling, but which could also be cast into any number of other shapes [Plate xcii]. They weighed

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between 1 or 2 and 3 to 5 ounces, and were also called small ingots.

The fourth consisted of broken pieces of silver, for which there were such names as "Waterdrop Pearls" [*dizhu*] and "Felicity Pearls" [*fuzhu*]. They weighed 1 ounce and less.

I must point out that the shapes assumed by silver were not fixed by law. They were entirely determined by local customs and convenience. Silversmiths could cast the metal into virtually any shape they pleased. Hence even silver as light as 0.1 ounce or less could be cast into the shape of Original Treasure ingots. I have seen a 0.1 treasury ounce Original Treasure bearing a stamp of the kangxi year-period, and which was of very regular construction. There is another yongzheng [1723-1736] year-period small Original Treasure weighing only 3 grams, which is more coarsely made.

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[1] *Imperial Dynasty Investigation of Literary Remains*, "Investigation of Coins, 1": "In general, from Song to Ming, in addition to copper cash, they always also used Certificates as money. From the beginning, this dynasty has solely employed silver as money. At first, grain and cloth were replaced by coins. Then, because of the difficulty in transport of coins, they were replaced as money. Both Certificates and silver arose as substitutes for coins. Certificates, however, are empty, while silver has real value. Certificates are easily worn out or damaged, while silver can be used for a long time. Paper is hard to divide so as to make change, while silver may be divided in use. The gains and losses may be judged for one's self. Former dynasties feared the obstruction of paper money, and so prohibited both silver and copper coins. They ascribed wicked and crafty doctrines to those who used silver. Those who used copper cash for trade were arrested and punished. This was because the authorities did not distinguish the fundamental from the secondary activities."

[2] *Ibid.*, qianlong 10: "Hereafter, in places where officials issue silver ounces, except for the Board of Works, which ought to issue coins, and will continue to use them, government payments are to be in ounces of silver. Since all issue is to be in silver, the people ought to emphasize silver in their everyday expenditures."

[3] *Ibid.*, "Investigation of Coins, 4," qianlong 10.

In the old days, steelyard weights were not uniform, just as was the case with the ounce, of which there very many local variants. The most important were the treasury ounce,[4] the customs ounce,[5] the Canton weight ounce[6] and the transport weight ounce.[7]

The treasury ounce was what the national treasury used to measure receipts and payments, and was the nationwide standard weight for paying taxes. The Haekwan, or Maritime Customs or customs ounce was used for the tariff. It was adopted after the Maritime Customs was established in xianfeng 8 (1858). The Canton ounce was Guangdong's standard weight. It was important because Guangdong had long been in contact with foreign countries. The transport weight was the standard used for commuting the tax in rice.

There was no fixed standard for these four weights themselves. They varied by time and place. Usually, the customs ounce was the heaviest, followed by the Canton ounce, the treasury ounce and finally the transport ounce.

The silver ounce's metal purity had never since antiquity been standardized. Though at the beginning of Qing the government took pure silver as its standard, the silver used among the people varied from a very low quality right on up to what was called 100 percent pure, and was commuted to pure silver as the occasion demanded. Nor was pure silver absolutely pure silver. It was merely a kind of standard, and did not actually exist. Therefore it was called the empty silver ounce. What was actually circulated was treasure silver.

By treasure silver was meant Original Treasure, such as Su Treasure Silver and Wuchang Treasure Silver. In terms of its metal content, there was full treasure, 24 treasure, 25 treasure, 26 treasure, 27 treasure, etc. Full treasure was the standard pure silver; 24 treasure was short for saying that for 50 ounces of treasure silver 2.4 ounces of "touch" had to be added. In other words, this was silver of which 52.4 ounces was equal to 50 ounces of pure silver.

Pure silver, so-called, was a hypothetical national standard for silver which was 935.374 parts in a thousand pure.[8] Though in fact that form of silver did not exist, all the other silver ounces were calculated in terms of it. For example the silver ounce standard dollar the Shanghai mercantile world used to keep its accounts had its fineness set at
[779]
98 percent of pure silver. Hence it was called the 98 standard dollar.

When making payment in a market with Original Treasure, it first had to be commuted to pure silver, and then calculated into standard dollars. For example, one piece of 27 treasure silver was worth 52.7 ounces of pure silver, which was then divided by 98/100 to get 53.7755 ounces, which was the amount in standard dollar silver. In other words, a 50 ounce piece of 27 treasure silver was equal to 53.7755 standard dollar ounces. Shanghai, however, used the transport ounce as its standard unit, but whether the 98 in 98 standard dollar meant fineness or weight, no one can say, though in fact there was no great difference between the two.

The standard dollar was Shanghai's standard accounting silver ounce. Tianjin's unit of account was called the "market change"[*hanghua*], and its fineness was 992 parts in a thousand. Hankou's unit was the "foreign rule" [*yangli*]. Such standard silver ounces of account were adopted because there was no standard money actually in the market, which made commercial calculations very inconvenient. Shanghai, for example, originally used the Spanish dollar as its unit of account, but after the Spanish

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[4]*Board of Revenue Regulations*, article 4, states that the term "treasury weight" refers to a measure agreed to by the Board of Revenue with the Boards of Agriculture, Works and Commerce, according to which one treasury ounce was equal to 37 grams French measure, or 301 parts of a thousand.

[5]The customs ounce was 37.68 grams. During late Qing various experiments were conducted with non-uniform results. Generally speaking, 102.8 transport ounces were equal to 100 customs ounces. On this basis 1 customs ounce must have been equal to 37.66 [*sic*] grams, but there was no fixed standard for the transport weight ounce. For paying tariffs, Shanghai commuted 111.4 ounces in standard dollars into 100 customs ounces.

[6]One Canton ounce was equal to 37.57 grams.

[7]In guangxu 16, Pascal Martin of the Shanghai Customs conducted an experiment in the Shanghai Public Calculation Office, and 950 grams proved to equal 25.93 transport ounces. Hence 1 transport ounce equalled 36.64 grams. In another experiment, however, a 100 foreign ounce steelyard weight equalled 84.86 transport ounces, which would make 1 transport ounce equal to 36.6527 grams. Nor did different local steelyard weights correspond. Tests resulted in ounces ranging from 36.647 to 36.658 grams, and an average of 36.65 grams. Cf. *Report on the Introduction of the Gold-Exchange Standard into China, the Philippine Islands, Panama, and Other Silver-Using Countries*, p. 245.

[8]The fineness of pure silver is calculated through a chemical test of treasure silver. We first assume that 1 ounce of standard dollar silver weighs 565.697 thousandths of an English ounce, and that the amount of pure silver it contains is 518.555 English thousandths, making its fineness 916.666. Since the standard dollar's fineness was 98 percent of that of Chinese standard pure silver, then the Chinese standard pure silver would be:

916.666 divided by 98/100 = 935.374.

dollar ceased to be minted, cutting off the supply, they adopted the old commercial standard dollar as their unit of account. The intent was the same that lay behind the bank money of Medieval Venice. Nevertheless, each locality had its own money of account, and from a national perspective, this amounted to not having any unit of account at all.

Though minting of treasure silver was mostly carried out by silver shops and silversmiths, some institutions issued treasure silver in their own names. This was true of the Maritime Customs, the official mints and the banks. The Guizhou Mint issued Calculated Weight Full Fine Silver 1-ounce *kezi* small ingots. The Sino-Russian Daosheng Bank minted small Original Treasure in units from 1 ounce down: 1-ounce, 0.5-ounce, 0.3-ounce, 0.2-ounce and 0.1-ounce.

After Original Treasure had been cast, they were sent to the Public Measurements Office for examination. Black ink was used to brush onto them their weight and fineness. That way they could circulate in terms of fixed weights and finenesses. Hence they may be said to have constituted a kind of minted coin. Broken pieces of silver, however, had to be evaluated at the time of a transaction, and a Public Measurements Office's evaluation was only effective in that locality. When brought to some other locality, an ingot could only be evaluated in terms of its actual silver content. In other words, it had to be assayed once again.

Because weight standards varied by locality, and some places lacked silver furnaces, treasure silver or silver bars brought to other places were recast into the forms of treasure silver circulating in those places. Such silver furnaces were mainly established by those in the coin trade in such places. In Shanghai, treasure silver was mostly packed into chests, each chest holding 60 ingots, and weighing some 3,000 ounces. Right down to the end of Qing, in fact right down to 1933, when the ounce was abolished in favor of the dollar, all the banks of Shanghai used treasure silver in clearing their accounts. After each day's accounts had been cleared, silver would be shipped back and forth either by manpower or by cart. From this we can understand that treasure silver was the most important metal for making payments and for the reserves of the financial and commercial worlds.

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We can imagine how inconvenient people felt the variety of silver alloys present to be when they put silver money into circulation. This was particularly so of broken pieces of silver, since it was necessary to calculate the commutation of various pieces of different fineness silver at the time of each exchange[9] at the cost of who knows how much mental effort. The trouble of weighing the metal[10] came next. No wonder people were happy to use coins. It is still less surprising that once foreign silver dollars had penetrated into the interior, after a short period of experimentation, they received a great welcome, and that they circulated at a price higher than their intrinsic value.

Foreign silver dollars had been flowing into China since the Ming Dynasty. By then China was already in contact with Europeans and Americans. While the Portuguese were coming to Macao, Canton, Quanzhou and Ningbo to carry on trade, the

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[9] *Dessicated Words of the Old Man of the Wilderness* (a work of the kangxi period), chapter 12: "Jingheng broke open the silver. There was only one ingot, which was 93 pure. The rest had both

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9 pure pieces, and a number of 8 pure pieces. And so he said, 'This silver isn't up to the 9 pure standard. It's 4 or 5 parts short. What's to be done?' He thought about it and then said, 'The contract called for 95. The standard was 93. The most we can reckon this silver at is 92. If we send it down to the furnace to exchange it for 93, that would be extremely fair.' Suchen laughed and said, 'The old man himself said it was only 92. How could you have written 95 in the contract? Anyway, the silver has been commuted to 9, not including miscellaneous expenses. The old man has the nickname "Big Plans," but he's all talk and no action.' At these words Big Plans turned red in the face, but he had to let his neck puff up and add 0.18 ounce to make up the sum of silver."

[10] *Story of a Stone* (written during the qianlong period), 51: "Baoyu said, 'Doctor Wang has come. How much shall we give him?' The old woman laughed and said, . . . 'With this new one coming, this time we must give him an ounce of silver.' . . . Baoyu listened to what she said, and ordered Sheyue to go and fetch the silver. . . . She then began to pull out drawers until she saw a small basket in which several pieces of silver had been placed. Underneath there was also a steelyard. Sheyue picked up a piece of silver, raised the steelyard, and asked Baoyu, 'Is that a one ounce star?' Baoyu laughed and replied, 'Your asking me is amusing. All you've done is pick something up.' Then Sheyue laughed too, and was going to go off and ask someone, when Baoyu said, 'Give him that big piece, and that should do it. We aren't in trade. What's the point to being so calculating about this?' Sheyue listened, then put down the steelyard, picked up a piece, weighed it in her hand, and laughingly said, 'I just hope this piece is one ounce. I wish it could be a bit more. You shouldn't have a joke at the expense of that poor youngster. I'd rather we didn't understand the steelyard than dare to be mean spirited.' The old woman stood in front of the door laughing, and said, 'That's a 5 ounce ingot. Break it in half. Doesn't this piece have at least 2 ounces in it? . . ."

overseas Chinese in the Philippines were coming back and forth to China. Both of these were routes for the entrance of foreign silver dollars into China.

In shunzhi 4 (1647), foreigners were restricted to Macao for purposes of carrying on trade, but in fact their sphere of operations expanded constantly, as did the number of foreign silver dollars flowing into China. Sino-foreign trade then was virtually one-sided, because while the Chinese did not use foreign goods, the foreign merchants wanted to buy Chinese silks, tea and porcelain, and so had to purchase these things with silver. As a consequence, the ships they brought to China were entirely filled with silver dollars, and were filled with commodities for their return voyages.

The foreign silver dollars which flowed into China during the kangxi period [1662-1723], included, in addition to the doubloon, the *ducaton*, *écu*, and the so-called national silver dollar [Plates xciii, xciv].

The term *ducaton* was applied to a large silver coin minted by Venice, Florence and Holland during the seventeenth century. It is said that the ones which came to China then were Venetian silver dollars.

Écu is a French coin name. All coins bearing shields on their obverses were called *écu*. These included both gold and silver coins of various sizes. Those coming into China were, naturally, large silver dollars, weighing some 0.78 treasury ounce. They probably bore the face of Louis XIV. Louis XIV and the Kangxi Emperor were contemporaries. Of course pre-Louis XIV silver dollars could also have entered the country.

National silver dollar was the name of a north European and Dutch silver dollar.[11]

Of these silver dollars, the *ducaton* had the highest degree of fineness of metal. Next came the doubloon and the *écu*. The national silver dollar was inferior, and so in kangxi 42 (1703), the phenomenon of making up the deficiency, called *tieshui*, or "touch," appeared. For each 100 dollars, an extra 5 dollars had to be added. At that time foreign silver dollars still circulated in China by weight rather than by number.

Even more foreign silver coins came into circulation during the qianlong period. In addition to being used to purchase Chinese products, a portion of them

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were drawn in by China's high interest rates. Annual interest rates in Guangzhou then ranged from 18 to 20 percent compounded, and large numbers of silver coins flowed into China from India. In qianlong 44 (1779), the total sum owed by Guangzhou merchants to foreign merchants was more than $3.8 million, and the amount they had actually borrowed or the value of the goods they had bought was only $1 million.[12]

The Chinese called foreign silver coins *yangqian* --overseas cash. The Cantonese called them *fanyin* -- frontier silver.[13] At the beginning of the qianlong period, the three foreign silver coins most commonly circulated in China were as follows: The largest was the Horse Coin. Next was the Flower Border Coin. Third came the Cross Coin.[14]

The Horse coin or Horse Sword Coin was minted by Holland (the Netherlands) beginning in 1659 alongside the *ducaton* silver coin. They weigh 32 grams apiece, or 0.867 Chinese treasury ounce. On one face is a fully armored cavalier, brandishing a sword in his hand, and mounted on horseback. On the other side is the image of a lion. Such a coin could not have been put out in large quantities during the seventeenth century, since the price of silver

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[11] H. B. Morse, in his *The Chronicles of East India Company Trading to China, 1635-1834* (Oxford, 1926), cannot determine the nationality of the national dollar (rixdollar). He merely says it came from Northern Europe or the German Empire. As the term rixdollar is English, and the English and Americans did not possess such a dollar, it must be a transliterated term. The Danes called it the *rigsdaler*. The Swedes called it the *riksdaler*, the German Empire called it the *Reichsthaler*, and the Dutch the *rijksdaaler*. The Dutch version of this silver dollar was lower in fineness of silver than other Dutch silver dollars. The one minted in 1583 was 88.5 percent pure. That minted after 1606 went down to 87.5 percent. All other Dutch silver dollars were more than 9 parts fine.

[12] *Chronicles of East India Company*, Vol. II, p. 43.

[13] *Qing Emperor Gaozong Veritable Record*, qianlong 56, 4th month, proclamation.

[14] *Imperial Dynasty Investigation of Literary Remains*, 16, "Investigation of Coins," qianlong 10: "In places near the ocean in Fujian and Guangdong, many overseas coins are circulated. Their silver is all in the form of coins which have come from the Western and Southern Oceans. There are several classes of them: The large ones are called Horse Coins. They bear the image of a sea horse. The next are called Flower Border Coins. The third kind are called Cross Coins. Flower Border Coins come in large, middling and small denominations. The large ones weigh some 0.7 ounce; the middling ones 0.3 ounce; the small ones 0.1 ounce. They bear the engraving of the face or the whole body of a man. The reverse bears the image of a palace, a utensil, a bird, animal or flowers and plants, surrounded by foreign writing. Some of them have human images on both sides. The people of Min and Macao call these *fanyin* --border silver-- or Flower Border Silver. All of the Dutch and Frankish nations' merchant ships carry them by the tens of thousands in each vessel."

was falling then. The price of silver rose during the first half of the eighteenth century, and they flowed out in large numbers. Those minted in different provinces varied slightly in their images, just as was the case with the late Qing Chinese copper dollars.

The term Flower Border Coin refers to the Doubloon, since beginning in 1732, the Mexico City mint used machinery to mint new style Doubloon silver coins, on the borders of which were ears of wheat. The Horse Sword Coin of that time had blank borders. Hence the Doubloon was called the Flower Border. This name later became a common appellation for silver dollars. The images on the new style Doubloon were somewhat different: Between the two pillars appear outlines of the eastern and western hemisphere, and above each of them is an axle going through a scroll-like shape forming $$ --dollar signs. This was the source of the abbreviation for the silver dollar, the $ symbol. Large and small types of Doubloon circulated in China then. The large one weighs 0.72 ounce, and the small ones came in half-dollar and quarter-dollar sizes. There were also one-eighths, one-sixteenths and one-thirty-seconds sizes, but they probably never reached China.

There were a number of different kinds of Cross coins, since the cross was the badge of Christianity, and ever since the Middle Ages, large and small silver coins from a number of countries had used the cross as the image on their faces or as a part of that image. During the seventeenth century the silver coins of Geneva and one type of Spanish silver coin, the "cob dollar," bore a large cross, but the one probably used during the eighteenth century in China was the Portuguese *crusado*. Large size ones weigh around 0.56 ounce. There are also several kinds of silver coins bearing human images.

In jiaqing 4 (1799), the family property of Heshen was confiscated, and included within it were 58,000 foreign silver dollars.[15] Evidently foreign coins had reached Beijing. At this time the Qing Dynasty government discovered that while foreign silver coins were flowing into China, pieces of silver were flowing out of China, and some people advocated prohibition of the latter, since the fineness of foreign silver coins

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was only a little more than 9 parts silver, while the pieces of Chinese silver were pure silver, supposedly 100 percent silver. Because Chinese liked the fine construction of foreign silver coins, they treated these coins like pure silver. Foreigners exchanged their silver coins for Chinese pure silver at par, and shipped the silver to Calcutta in India, where they could sell it at a profit.[16]

Foreign coins entered deep into the interior during the daoguang period [1821-1851]. They circulated everywhere from Guangdong and Fujian right up to the south bank of the Yellow River.

There were a number of labels for the various kinds of foreign coins then, such as "Large Topknot" [*daji*], "Small Topknot" [*xiaoji*], "Tanglehead" [*pengtou*], the Bat [*bianfu*], Doubloon, and Horse Sword.[17] Except for the Doubloon and the Horse Sword, none of the others is easy to identify.

The labels Large Topknot and Small Topknot appeared during the last half of the jiaqing period [teens or twenties of the nineteenth century] or just after. At that time the coin (minted on the American continent) depicting the head of the Spanish monarch Ferdinand VII [Plate xcv] already existed in several variants having large and small hairknots. Charles III and IV both had large hairknots.

The label "Tanglehead" probably referred to an early American silver dollar. In 1794, the United States issued its first silver dollar. The Goddess of Liberty on it was indeed tangleheaded.[18] European vessels could not come to China during the French Revolution, but American merchant vessels were active in China, and carried no small number of these coins.

The term "the Bat" probably referred to the Mexican Eagle coins [Plate xcvi,1]. The Chinese mistook the eagle for a bat, perhaps because of the good luck associated with the bat, whose name in Chinese is homonymous with the word for good fortune. Later, the Chinese themselves used pictures of bats on some play or test-mintings of gold and silver coins. The bat seems never to have been used on foreign coins.

There were also what were called the Three-*gong*, Four-*gong* and *Gong*-half labels.[19] These

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[15] *Yongtan Notes* has a list of the items confiscated from Heshen's house and garden.

[16] *Chronicles of East India Company*, chapter LXVIII, p. 230.

[17] *Qing Emperor - Xuanzong Veritable Record*, 163, daoguang 9, 12th month, yihai.

[18] The records of the British East India Company treat the Goddess of Liberty on the United States' first silver dollar as a portrait of Washington. This error has even fooled people in the United States itself. The American numismatic world calls this silver dollar the "flowing hair,"

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which it would not have been implausible to translate into the Chinese word for "tanglehead."

[19] Zhu Lian, *Bright Studio Small Knowledge*, 12, "Foreign Coins": "I have heard elders say that at the beginning of qian-

refer to the Spanish silver coins of the several Kings Charles. The label Three-*gong* refers to the silver coins of Charles III [Plate xcv,1-2], because the Roman numeral three (III) resembles three characters *gong* [meaning "labor"] written next to each other. Four-*gong* and *Gong*-half refer to the silver coins of Charles IV, because the Roman numeral for four is sometimes written IIII and sometimes as IV.

Altogether several dozen different foreign silver dollars have circulated in China, but during the several decades around the time of the Opium War, none was more common than the Spanish silver dollar, commonly called the *benyang*. This label embraced the Doubloon, the silver dollars of the two Kings Charles and of Ferdinand VII, most of which were minted in Mexico. Silver coins bearing human portrits were called by the Cantonese *fotou* -- "Frankish Heads."

Purchases of tea from China by the British East India Company were for the most part paid for with Spanish silver dollars, because the English government prohibited the export of their own nation's silver coins. During the 153 years from kangxi 20 (1681) to daoguang 13 (1833), the equivalent of over 70 million ounces of silver dollars and pieces of silver was imported into China. This was equal to $100 million in silver dollars. Most of this was brought in by the East India Company. Chinese imports of opium were also paid for with Spanish silver dollars. During the 27 years from jiaqing 12 (1807) to

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daoguang 13, the East India Company alone shipped over $70 million to India.[20]

After Mexico attained its independence, it halted minting of the Spanish silver dollar. A number of places in China had long since adopted the Spanish silver dollar as their main currency. Now, with the source cut off, the phenomenon of paying a surcharge above face value for coins of inferior quality arose. Later, Shanghai adopted the standard dollar silver ounce standard, even though what was actually being circulated was treasure silver, and Mexico's new Eagle coins and various South American silver dollars were also in circulation. In the end, the Eagle took the place of the Spanish silver dollar, but the strength of the latter coin was maintained in the Yangtze Valley right down to the end of the nineteenth century. Particularly in Anhui, one of these coins was still valued at 0.9 or more ounce of silver right down to 1900.

The Eagle was first minted in 1823 [Plate xcvi, 1]. It bore an eagle holding a snake in its beak, and it stood on the arm of a magus. This was the national symbol of Mexico. Though there were frequent changes in the details, this national symbol was always retained on Mexican silver coins. Consequently it was universally known in China as the *yingyang* --"Eagle Foreign." Sometimes the homonym character *ying*, meaning brave or England was mistakenly substituted for the *ying* meaning eagle.[21]

The Eagle was of relatively good fineness, and did not change for many years. Eventually, therefore, it became more powerful than the earlier Spanish silver dollar, becoming the standard money in various Chinese cities. A number of early contracts stipulated payment in Eagles. From 1877 to 1910, Mexico exported a total of over $468 million, a large proportion of which flowed into China.

Because England banned export of its own coins, there were no English coins within China's borders. In tongzhi 5 (1866), a mint was set up in Hong Kong to produce silver dollars. The obverse of this coin bore the head of Queen Victoria. At the center of the reverse were the four Chinese characters for "Hong Kong Silver Dollar." Because, however, its silver content was lower than that of the Eagle, and the Chinese of Hong Kong had grown used to employing the Eagle, minting of this coin was halted in tongzhi 7, and the machinery was sold to the government of Japan.[22]

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long, the market used nothing but silver. After twenty years, silver was scarce and coins numerous. If a person encountered a foreign coin, he did not use it for exchange. Later on, foreign coins circulated abundantly. They weigh 0.735 ounce apiece. There are names like Small Cleans [*xiaojie*], Guang Boards, Jian Boards, Min Boards, Zhe Boards, Xi Boards, and Su Boards. Distinctions were made between Three-*gong*, Four-*gong*, *Gong*-half, positive low and inside out variants."

[20]For the silver import figures, cf. subsection 8.2.4, "Qing Dynasty Silver Import Table (1)." These figures are conservative. From jiaqing 12 to daoguang 13, the verifiable figure for silver exported from China by the East India Company is $72,439,969. The amount exported by other countries was $4,073,816 (according to *Chronicles of East India Company*). This shows that from kangxi 20 to daoguang 13 the total quantity of silver imported into China must have been more than $170 million.

[21]Zou Tao, *Three Borrowed Hut Notes* (of the beginning of the guangxu period), 5, "Eagle Foreign": "The coins used by England and France each had their own style, and could not be used interchangeably. The coins now used by China have an eagle on them. This Eagle Foreign was then mistaken for an English Foreign, and was supposed to be a coin minted by the English. They did not realize their mistake. All of these coins were minted by Mexico, and then transported to China. In fact they had no connection with England. Nor could they be used in England."

Later on this Hong Kong silver dollar was put into circulation again. The English issued another silver dollar in the Far East in 1895. Its obverse bears a standing figure of the goddess Brittania holding a trident, and the English inscription "one dollar." The reverse bears the inscription one dollar in Chinese and Malay. Most of these silver dollars were minted in Bombay, but some were also minted in Calcutta and London. They were issued by English banks in Shanghai, Hong Kong, Singapore and Penang. The Chinese called this coin the Standing Man Foreign or Stick Foreign.

Japan had used Chinese coins since the Song Dynasty. In the time of Toyotomi Hideyoshi [late sixteenth century] they went back to making their own coins. During the Tokugawa Bakufu [1600-1868] they were on a bimetallic gold-silver standard. After the Meiji Restoration (tongzhi 7,
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1868), they adopted a silver standard, and used machinery bought from Hong Kong to mint silver dollars. Later, though they changed over to a gold standard, they continued to mint the silver dollar for use in commercial seaports where they hoped it would drive out the Eagle, which also circulated abundantly in the Japanese market then. The Japanese silver dollar was also called the Japanese Dragon Foreign [Plate xcvi,3], because of the coiled dragon on its reverse.

The American Trade Silver Dollar or Trade Dollar [Plate xcvi,2] was especially designed for use in the Far Eastern trade. In this respect it differed from the Spanish silver dollar and the Mexican Eagle, which were also circulated in their home countries, as well as being widely circulated in North and South America. The earliest trade of the United States with China employed the Spanish silver dollar. Because production of silver increased during the last half of the nineteenth century, the Americans began to mint the Trade Silver Dollar in tongzhi 12 (1873). The obverse bears the image of a seated goddess holding a flower in her hand. There is an eagle on the reverse.

The United States hoped this coin would displace the Eagle, but because its fineness was lower than the Eagle's, this hope was disappointed. It circulated for only fourteen years before it was withdrawn. This resembled what had happened with the 1866 Hong Kong silver dollar. The principle of bad money driving out good could not come into effect. In these cases the habits or desires of the people at large had a decisive effect. [And no single state could enforce use of its own overvalued coin in a market where no single state's power was dominant. Gresham's Law only comes into play when a state can get away with artificially overvaluing one currency and undervaluing another. EHK]

At first, the foreign silver coins coming into China merely circulated as pieces of silver, but from the beginning of the nineteenth century, they came to circulate by number, and without undergoing repeated weighings. As a consequence, the Venetian silver dollar, which was especially pure, and the especially heavy Dutch Horse Sword very quickly came to be hidden away. Other foreign coins continued to circulate even more abundantly, so that China, both officially and unofficially, could no longer completely ignore this situation.

After the White Metal of Western Han, the only formal use of silver as money in China had been the Jin's Cheng'an Treasure Money. Over the course of history, gold and silver coins had been minted, and such coins had been minted and used by the Qing Dynasty,[23] but these cannot be considered to have been formal money. Tibet was the earliest to formally mint silver coins [Plate xcvii].

Prior to qianlong 56 [1793], in addition to broken pieces of silver used by the Tibetans, silver coins minted by the Gurkhas and Bajinbu peoples were brought to Tibet in the course of carrying on trade. These weighed around 0.15 treasury ounce apiece, and were probably Tamka coins. The Qing Dynasty's military administrative authorities minted such a silver coin in Shangshang beginning in qianlong 56, but the Gurkha silver coin was of superior fineness, and the coins minted in Bajinbu and Shangshang were not up to that level. As a consequence, the Gurkhas tried to raise the face value of their silver coin.

The Qing government determined to reform its coinage, and established a mint in Tibet.[24] Their

22 W. F. Spalding, *Eastern Exchange, Currency & Finance*, p. 368.

23 *East China Continued Record*, Qianlong, 112, qianlong 55, 12th month, yichou: "The Emperor wrote the character for long life as a gift to be used for New Year's congratulations. Also added as gifts were a gold brocade bottle-gourd, a large lotus pouch, and four small ones. Inside there were placed two gold coins and eight gold 0.01 ounce Treasure." *Qing Emperor Gaozong Veritable Record*, 149, number 3, qianlong 60, 12th month, a proclamation states: ". . . especially reward Fukang'anhelin . . . with two gold and two silver coins."

24 *Qing Emperor Gaozong Veritable Record*, 141, number 4, qianlong 57, 12th month. *East China Continued Record*, Qianlong, 116, qianlong 57, 12th month, proclamation: "The reglations fixed again within Tibet for minting of silver coins provide that matters are to be managed only as follows. Since copper is not produced in Tibet, the catties of copper required for minting

coinage had three denominations. The large coin weighs 0.15 ounce. Six of these add up to 1 ounce of pure silver. The middle-sized
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coin weighs 0.1 ounce. Nine of these add up to 1 ounce of pure silver. The small one weighs 0.05 ounce, and it takes 18 of these to equal 1 ounce of pure silver. There was a 10 percent coinage fee for all three of these coins. That is, the people had to pay a supplementary fee of 10 percent to use these coins. This was called "water, fire and labor cash." The silver coins minted by the Gurkhas circulated at par with pure silver. The coins minted by Bajinbu and Shangshang were worth 8 to the ounce of pure silver. The new coins bore the four Chinese characters for Qinglong Treasure Tibet on their obverses. Tangut script was employed on their reverses to repeat the same four words.

Of these three silver coins, only the two smaller ones, the 0.1 and 0.05 ounce ones, circulated smoothly. The 0.15 ounce coin ran into obstacles because 8 of the old coins could exchange for an ounce of silver, whereas only 6 of the newly minted ones could do so. As a consequence merchants proved unwilling to accept the latter, the authorities had no choice but to halt minting of the 0.15 ounce coin, and thereafter 9 of the original 0.15 ounce coins were valued at an ounce of silver.[25] Of those actually surviving, the 0.1 ounce type are the most numerous. Few of the 0.05 ounce coin were minted, probably because the seignorage was lower. The actual weights of these coins were, however, generally not up to standard, but corresponded to their price.

In addition to Qianlong Treasure Tibet, Tibetan silver coins also include Jiaqing and Daoguang Treasure Tibet [Plate xcvii,5-9]. The purity of these silver coins is very good, but the coins are very thin, and were popularly called "thin slips." Their obverses not only bore Chinese inscriptions, but a square box in their centers which resembled the square hole, except that it had not been punched through. The inscription not only included the year-period, but the year. For example, the earliest ones to be minted bore the four Chinese characters for "58th Year" near the edge, arranged from top to bottom and left to right. Later there were also 59th year and 60th year types, but these coins seem not to have been minted by the year after the qianlong year-period, or at least this was not reflected on the coins themselves.

It is said that during the qianlong period the Guangdong Civil and Financial Commissioner had given permission to the silversmiths to mint imitations of foreign coins.[26] During the jiaqing period (at the end of the eighteenth century), the silver trade provided imitations of the new-style silver dollars, modeled on the Spanish silver dollar. Later, because of lack of uniformity in the purity of the silver, these tended to depreciate, and in the end they were banned.

During the daoguang period [1821-1851], the Spanish silver dollar was imitated in various places. There were what were called the *Guangban* (Guang Board), Fu Board, Hang Board, Su Board, Xi Board, Tuban (Native Board, minted in Jiangxi), Wuzhuang and Xingzhuang, all of very low purity.[27] These were all imitations, and had no great importance in the Chinese monetary system.

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coins must be bought from Dian province [Yunnan. EHK]. A single road leads through high mountains from Dian to Tibet. Purchase and transport of copper are difficult. As a consequence, it would be better to continue minting silver coins for the convenience of the province. However, upon examination of the coin designs presented, the four characters for Qianlong Circulating Treasure on the obverse, and the two characters for Treasure Tibet on the reverse are all written in Tangut script. No Chinese characters are employed in the design. This will be no help in promoting the language regulations. On the obverse of the coins minted should appear the Chinese characters for Qianlong Treasure Tibet, and the same words, written in Tangut script, should appear on the reverse. . . ." *Great Qing Collected Statutes*, 21, "Board of Revenue," records the same information.

[25] *Weizang Gazetteer*, 10, "Coinage."

[26] C. F. Remer, *Readings in Economics for China*, p. 327.

[27] *Qing History Draft*, "Treatise on Food and Money, 5: Coinage," daoguang 13, Huang Jueci, "Memorial Petition on Necessity to Ban Export of Pure Silver and Foreign Coins." *Ibid.*, 172, "Biography of Qi Guicao": "In daoguang 19 . . . there was a ban on handling barbarian coins in the prefectures of Zhang and Quan, and on private coiners of them." Lin Zexu, "Memorial On Not Having Foreign Coins Exported in Su Province" (of daoguang 15): "In the interior, lead is alloyed with silver to mint imitation foreign silver coins. As the original memorial states [referring to Huang Jueci's memorial], they have names like Su Board, Wuzhuang and Xi Board. Hitherto, such abuses have indeed occurred, but such counterfeiting was basically to seek profit. It is necessary to adulterate the metal with copper and lead before profit can be obtained. Recently, however, the people have learned to be discriminating about foreign coins, and objects like the Su Boards are easily discriminated from foreign coins in terms of the purity of their metal, and so when they are exchanged for silver, their price is much lower. Indeed they are culled out and not used by the visiting merchants."

Accomplished Emperor Xuanzong Veritable Record, 241, daoguang 13, 7th month, gengshen, proclamation: "According to what is stated in that Censor (Huang Jueci)'s memorial, export of pure silver is banned, but export of foreign silver is not banned.

It is said that when Lin Zexu served as Governor of Jiangsu, he himself minted 0.71 or 0.72 ounce silver cakes, because the people of the province liked to use foreign coins. At first, these circulated, but within a year the proliferation of counterfeits finally obliged their abolition.[28]

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They were broken up into pieces of silver on the market. We do not know what form these silver cakes took. According to various business's records, they seem not to have imitated the Spanish silver dollar.

In a memorial of daoguang 13 [1833], Lin Zexu mentions that someone had advocated minting 0.5 ounce Taoguang Circulating Treasure silver coins. Two such coins would equal 1 ounce of pure silver.[29] This was probably not carried out, since the weights proposed did not correspond to the 0.71 or 0.72 ounce silver cakes. One source says that his silver cakes "were shaped like chess stones" and weighed 0.73 ounce. They were bound up in the market and did not circulate.[30] This coin seems to have been a thick but small silver cake. In xianfeng 5 [1855], Zhou Tenghu said that Lin Zexu's silver cakes "were made indistinctly and small, completely without any system."[31] I do not know what he meant by this statement.

Of China's early new-style silver dollars, the most important surviving examples are the several types minted in the Zhang-Tai region of Fujian [Plate xcviii]. They may be divided into two categories: One category bears images; the other just inscriptions. The first category bears such images as the God of Longevity, a *ruyi* sceptre or a brush-pen treasure. The other category does not have illustrations, but rather has flowery signatures.

The God of Longevity Silver Cake was the earliest of the first category coins. An image of a God of Longevity appears on the obverse, holding a staff in his hand. On the left in seal script are the four characters for "Daoguang Years Minted," and on the right the four characters for "Full Pure Silver Cake." Across the belly of the God are the four characters for "Treasury Weight Seven Two." At the center of the reverse is a solid-leg *ding* tripod, and from top to bottom and right to left are the four Manchu words meaning Taiwan Prefecture Minted.[a] The rim is decarated with large and small swastikas.

All of these coins weigh 0.72 treasury ounce, except for those minted after a later weight reduction. The dates of minting and the historical background of this silver cake do not appear in the written sources, but because most coins of this category were made to pay for army supplies, people might very easily link them to military exigencies, particularly popular uprisings. In daoguang 12 [1832], Zhang Bing and Chen Ban rebelled in Taiwan's Jiayixian, and others rose in their support at Fengshan, but this rebellion only lasted for a couple of months.

In daoguang 17 [1837], Taiwan banned the export of pure silver.[32] This ban may be explained two ways. First, it may show that silver coins were not yet being minted, but it may perhaps be evidence that the ban on export of pure silver was put on because they were minting silver coins. Others say that these coins date from daoguang 17-18 [1837-1838], and were occasioned by Zhang Wen's uprising in Xindangjun, Tainan.

Some even say that their weight was gradually reduced after daoguang 22 [1842], and that by daoguang 25 they were 5 percent lighter.[33] I do not

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Counterfeiters of foreign silver in the interior are numerous, and it is sincerely feared that it will prove impossible to entirely break off the leakage."

Sheng Zilü, *History of the Springs* (written during the jiaqing and daoguang periods), 14, "Foreign

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Coins": "Particularly after foreign coins circulated abundantly, counterfeiters arose in the interior. Foreign coins circulated generally. When foreigners mint coins, they do not use absolutely pure good silver. The counterfeiters' silver is even lower in quality. They even mix in copper and tin in their counterfeits. Low quality silver to the amount of 0.72 ounce can be exchanged for over 1,000 standard coins. This unreasonably raises the prices of commodities being traded. Thereupon evil people along the coast come to look upon this as a source of profit. They adulterate pure and good silver with lead and copper to mint foreign style coins."

[28]Guangxu 3, 3rd month, 7th day, *Shenbao* [the Shanghai newspaper. EHK], "On the Convenience of Minting Our Own Silver Coins." Feng Guifen, "Recommendation on Abolition of the Tariff": "The Marquis-official, Lord Lin Wenzhong, made silver cakes. At first they were used. Before long, they were being alloyed, and in the market they were being broken down into pieces of silver. The silver cakes were subsequently abolished." (*Xiaobin Hut Remonstrances*, latter part.)

[29]*Administrative Documents of Lord Lin Wenzhong*, "Kiangsu Draft Memorials," 1, "Memorial Investigating a Recommendation That There Be a Rise in Silver and a Fall in Coins to Remove Abuses and Convenience the People."

[30]*Pacifying Bandits Record.*

[31]Zhou Tenghu, "On Minting Silver Coins." Cf. *Imperial Dynasty Texts Through the Generations Continued Compilation*, 58, "Fiscal Policy: Coins, first part."

[32]Lian Yatang, *General History of Taiwan* (written in 1920), p. 89.

[33]S. Wells Williams, *The Chinese Commercial Guide*

know what basis there is for this statement. It is a fact that the weight of the silver cakes was reduced, but it could have been the result of bad money driving out good. Because the God of Longevity Silver Cake's purity was very good, and the foreign silver dollars circulating then were only 9 parts fine, each of them containing less than 0.7 ounce of silver, eventually the weight of the God of Longevity Silver Cake had to be reduced to 0.7 ounce or less.

Surviving examples of this type of silver cake are all pitted over their entire
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surface. Very few are intact. The reverse bears two small seal marks, the characters of which cannot be read. Probably they are the trade marks of the silver shops through which the coins were put into circulation. The pits were cut into them in the course of their circulation so as to test their genuineness. This was a practice of the time.

The God of Longevity Silver Cake is China's earliest extant silver dollar, and is also among the earlier ones to have been made in East Asia. The Vietnamese Mingming Circulating Treasure was minted in daoguang 13 [1834]. The Siamese Zhengming Circulating Treasure was probably also minted at that time, or possibly a few years later. The Burmese rupee was first minted in xianfeng 2 [1852]. The Cambodian silver dollar came out in xianfeng 10 [1860]. Japan's Dragon Foreign was first minted in guangxu 14 [1888].

The God of Longevity Silver Cake not only comes in various weights, but also in variant forms. For example, there are variations in the lines of the portrait of the God of Longevity, in the folds of his clothing, the strokes of the inscription, and in the decorative elements. There is also a distinction between hollow-line and solid-line versions of the solid-legged tripod on the reverse. Because, however, there are so many pits, it is very inconvenient to study these variants.

The obverse of the Ruyi Sceptre Silver Cake [Plate xcviii,2] bears a pair of crossed *ruyi* scepters, to the left and right of which are arranged the four characters for "Full Pure General Circulation." A treasure pot is on the reverse, and inside the pot are such things as spirit plants and immortality greens. On the side of the pot is the simplified version of the character for "treasure." To the left and right of it are the four characters for "Prefectural Treasury Army Supply." Around the circumference on both sides are decorative designs resembling those on the Spanish silver dollar.

The coin weighs 0.68 ounce. On the obverse, above the two *ruyi* are stamped the two charcters meaning "High Weight" [*shengping*], and below is stamped the numeral "6." These marks were not stamped on the coin at the time of minting, nor were they stamped on the coin by mercantile establishments in the course of circulation. Rather they were stamped on the coins at the time of their issue by the silver firm issuing them. Therefore they have a definite meaning. "Shengping" was probably the name of the firm issuing them. This type of silver coin bears neither a year nor year-period of issue. Judging from its weight, it must have come after the God of Longevity Silver Cake, since it matches the post-weight-reduction versions of that coin. Some say that it was minted during xianfeng 3 (1853) by the district government at the time of Lin Gong's uprising in Fengshan District, Taiwan.[34]

There are a pair of crossed writing brushes on the obverse of the Brush Treasure Silver Cake [Plate xcviii,3]. In the center is a horizontal *ruyi*. On the right and left respectively are the two characters for "Prefectural Treasury." Below are the four characters for "6 8 Full Weight. The other side also bears a treasure pot, on the belly of which are the two characters for "treasure pot" [*baopan*]. Outside the pot on the left and right respectively are the two characters for "Army Supply." Below are the four characters for "Full Pure General Circulation." Around the circumference on both faces is an interlocking chain pattern decoration which resembles that on the Spanish silver dollar.

(1863), p. 270.

[34]Lian Yatang, *General History of Taiwan*, "Treatise on Finances": "In xianfeng 3, Lin Gong's uprising led to the siege of the local government, and to the temporary cutting of the dyke. Frontier provisions money did not arrive, but the prefectural treasury held several hundred thousand ounces of Original Treasure. The stoppage was severe, and it was not easily circulated. As a strategy for temporarily meeting requirements, artisans were ordered to mint it into silver of three kinds, called God of Longevity, Flower Basket and Sword Weight, each named after its form. They weighed 0.68 ounce, and on the silver coin's face was an inscription giving its weight. Also present were the two characters for 'Prefectural Treasury,'to distinguish them from foreign silver coins. These were silver dollars minted by Taiwan itself."

The "Flower Basket" he refers to must mean the treasure pot on the reverse of the Ruyi Sceptre Silver Cake's reverse. His "Sword Weight" must be the Brush Treasure Silver Cake, since the writing brushes might be said to resemble swords. The God of Longevity silver cakes were first minted during the daoguang period, and perhaps they were still being minted during the xianfeng period, but the Ruyi and Brush Treasure must not have been minted simultaneously and in the same location. If they embodied the same monetary unit, then the two must have been

It too weighs 0.68 ounce, but some specimens are lighter than that. The face with the crossed brushes has stamped on it such characters as "generally noted" [*tongji*], "provisions" [*liang*] and "treasury" [*ku*], which were also put on by the unit issuing them.

These coins share a number of similarities with the Ruyi Sceptre Silver Cakes. Not only are they both found on Taiwan, but their dates are close. Some say these were minted in tongzhi 1 (1862), 3rd month, at the time of the rising of Dai Chaochun in Zhanghuaxian,

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but the coin clearly bears the two characters for "prefectural treasury," and the immortality greens, read *wannian qing* in the treasure pot represent an allusion to the near homonym expression meaning "long live the Qing Dynasty." so it must have been minted by officials.

It was probably another type of God of Longevity Silver Cake that was linked to the Dai Chaochun rebellion. Its obverse also bears an image of the God of Longevity which was clearly patterned after the daoguang period original. On the right side are the four characters meaning "Jiayixian Minted." On the left side are the four characters meaning "Tongzhi 1st Year." At the center of the reverse, written vertically, are two large characters meaning "Army Supply," and distributed on both sides are the four characters meaning "Full Pure General Circulation." The coin weighs 0.68 ounce. Dai Chaochun's siege of Jiayixian had lasted two or three years. Hence this silver cake was minted by the officials. However, only one specimen has been found.

There are three kinds of silver coins without images [Plate xcix]. The first has the two characters for "Army Supply" written horizontally on its obverse. Below this is a decorative signature which very much resembles the two characters *jinshen*, meaning "careful, cautious," written atop one another. The reverse bears the four characters "Full Pure General Circulation." Though this coin bears no image apart from its inscription, there are rosette-like symbols on both sides. The number of these marks varies. Some coins have two on each side, others four or six, and sometimes a swastika is also present. Those with two such marks are more common. There are two forms of border decoration resembling those of Spanish silver dollars, or are slight variations on it. They all weigh 0.72 ounce.

They are made two ways. One is small and thick. The other is large and thin. The small type has an irregularly raised inscription. The large one is more nearly flat. The inscriptions, signatures, rosettes and border decorations differ on the two forms of the coin. For example the character *tong* for "General" has its top right hand side written as []b on the small version, and this is commonly known as the hook-head *tong*. The large one has this portion of the character written as [],c and is known as the square-head *tong*. The swastika appears only on the small version of the coin. The small version has rosettes resembling flowerbuds. The large one lacks these. In other words, the rosette on the small coin has five strokes; the one on the small coin has four strokes. Both coins have the two characters *xie* and *chang* stamped on their obverses in small characters.

The two other kinds are not much different from the first kind. They are simpler and lack rosettes. The two characters for "Army Supply" are changed into the four characters for "Zhangzhou Army Supply," and the signature and rim decoration are also different. One type has a slanted line edge. The other has an interlocking chain edge. The signatures on both are hard to read.

In the past some have said that the one on the slanted line type is the character *zeng*, and that it was minted after Zeng Guoquan had defeated the Taiping army at Zhangzhou in tongzhi 3. The one with the interlocking chain motif on its rim is supposed to have been the character *zuo*, and to have been minted after Zuo Zongtang took Zhangzhou in tongzhi 4.[35] There are others who read this sup-

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somewhat separated chronologically.

[35]The Zeng-Zuo theory is in Jiang Zhongchuan and Wang Shoulian's 1939 *Illustrated Discussion of Chinese Gold, Silver and Nickel Coins* (some editions using Jiang's name; others Wang's name). The original text concerning Zeng Guoquan's Zhangzhou Army Supply is: "In tongzhi 3 (1864), the Taipings carried out a military uprising in Zhangzhou. The Qing court sent Zeng Guoquan to chastise them. When he had pacified them, he minted a Zhangzhou Army Supply coin in Zhangzhou. It bore Zeng Guoquan's signature on its obverse, and recorded its weight of 0.7 treasury ounce." It also states that the Zuo signature coin was made "in tongzhi 2, when the Qing court sent Zuo Zongtang to be Governor-General of Min-Zhe. In tongzhi 4 (1865), 5th month, Zuo's army victoriously occupied Zhangzhou, and he minted the Zuo Zongtang signature Zhangzhou Army Supply, with a recorded weight of 0.7 treasury ounce."

Jiang Zhongchuan was Yuan Shikai's maternal grandchild, and was himself a military man. He probably picked up these stories in the world of the army. Nevertheless, these stories about supposed Zeng and Zuo signatures are completely unsubstantiated. Even if the historical background is taken as credible, the signatures could not have actually been written by Zeng or Zuo. They would probably have come from the hands of subordinates supervising the minting process.

posed "*zeng*" as "made 74" or as "make 7 *qian* 4" [i.e. 0.74 ounce] written in overlapping form. It is said that the people of Zhangzhou called these silver coins Zheng Chenggong's large dollars.[36]

These are all forced interpretations. Not only are the signatures on these two kinds of silver coins different, there are also discrepancies in their construction. The slanted

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line edge type is small and thick. The interlocking line type is large and thin. The character *tong* on the small type has the "hook" head. The large one has the "square" head. Hence, judged on the basis of this characteristic, the two Zhangzhou Army Supply coins and the "*Jinshen*" Army Supply must have been from two different furnaces in the same place. It would seem that one furnace minted the small and thick "*Jinshen*" Army Supply and the slanted line edge Zhangzhou Army Supply in chronological sequence, anda that another furnace minted in succession the two large and thin coins. However, the *Jinshen* Army Supply has only been found in Taiwan, and seems not to have been present in Zhangzhou.[37]

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[36]Guo Moruo, "Discussion of the Zheng Family's Economic Policies In the Light of the Discovery of the Zheng Chenggong Silver Coins," *Historical Studies*, 1 (1963), and "Coming Back to Some Problems Concerning Zheng Chenggong Silver Coins," *Historical Studies*, 2 (1963). In the first article he considered the alleged Zeng signature to be the National Surname and Damu. The national surname Zhu was given Zheng Chenggong by the Ming Dynasty, and he was originally given the personal name Damu. The supposed signature Zuo was the three characters Zhu Chenggong written in overlapping fashion. The two of them were minted between 1649 and 1652.

I raised two points of disagreement. The general drift of these was:

1) Prior to the qianlong period, foreign silver coins did not circulate in China by number, and so China could not have minted foreign style silver dollars.

2) The Zhangzhou Army Supply has an edge decoration, and this imitates the one on the Spanish silver dollar. The Spanish silver dollar was, however, minted during the eighteenth century.

Guo's second article offered a reply to these two points of disagreement. In reply to my first question

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he quotes a passage from Lian Yatang's *General History of Taiwan*, "Treatise on Finances":

> In yongli 28 (kangxi 13, or 1674) . . . at this time, sea-going ships carrying on trade from the Western and Southern Seas came one after the other, and hence much in the way of coins came in along with the commodities they carried. The silver of Luzon was especially plentiful. This was minted by the government of Spain. On its face was depicted the image of a king. This is what the Taiwanese called the Frankish silver. It weighed 0.68 ounce. It was used for trade in the market at a commensurate value.

What this paragraph discusses are events in Taiwan. It does not necessarily pertain to Zhangzhou. Taiwan had been invaded and occupied by the Dutch. Its situation could have been somewhat unusual. The words of this paragraph do, however, show that what I said applied to Taiwan. No matter what date was used in the first sentence, it was only after the Frankish silver coins bearing the heads of the Spanish kings had come in from Luzon that these could have been used in trade. This Frankish silver was also called Frankish Head silver, and refers to a silver dollar bearing the head of King Charles III of Spain. Charles III assumed the throne in qianlong 37 (1772). Prior to that time Spain's American colonies only minted the old Doubloon, the torn coins and the new Doubloon. They had never minted a silver dollar "depicting the image of a king." Hence such a coin could not have been in circulation during the yongli period.

The reply to my second question was:

> I have requested enlightenment from the specialists who say that the decorative edge did not first appear with the Spanish silver dollar minted in Mexico. Prior to the Mexican Spanish silver dollar, there were coins like the Dutch and German in the first half of the seventeenth century and even earlier which had decorative edges. At first there were interlocking edges (with the border design leaping from the obverse to the reverse, as in the Western-style seat cushion's stitching). Later, cut edges appeared. There are actual objects to testify to all this.

To begin with, what I was discussing was the history of the silver dollar cut edges which were from the Spanish colonies in America, and not the history of the silver dollar cut edges of Western Europe.

Second, even if we take into account the latter, the English and the French must be taken as the earliest. They had already begun in the seventeenth century. What was minted onto their edges were words, and I have not heard that any English coins came into China. A small number of French silver dollars reached Canton. They did not weigh the same as the Spanish silver dollar.

Third, during the first half of the seventeenth century, both the Dutch and German silver dollars had blank edges. I even have a 1742 Dutch Horse Sword which has a blank edge. Later, the silver dollar's edge bore slanted line decoration, and its weight was more than 0.8 treasury ounce. If it was imitating the Dutch silver dollar, it would be dated later and not earlier. The "make 7 *qian* 4" coin has such a slanted line edge.

[37]I have investigated on the Shanghai coin market the discovery of several kinds of Taiwan silver coins. According to Dai Baoting, it was in around 1925 that he obtained a dozen Zhangzhou Army Supply in Zhangzhou. Both types of signature were present among them. At the same time he obtained a number of Mingming Circulating Treasure. He did not get any Jinshen sig-

It is very hard to fix the period of minting of these simple Army Supply silver coins, but they cannot be earlier than the qianlong period.

To begin with, in terms of the circulation of money, there was no great possibility of minting a coin weighing 0.72 treasury ounce prior to the qianlong period, since this was the weight of the Spanish silver dollar, and so this coin must date to after the time the Spanish silver dollar began to circulate in China by the coin rather than by weight. Only at that point would the Chinese have imitated it.

However, right down to the beginning of the qianlong period, foreign silver dollars still circulated by weight, and so silver coins of various weights circulated alongside each other. The Horse Sword weighed upwards of 0.8 treasury ounce. The Portuguese Cross coin was only something over 0.5 ounce. In fact a number of foreign silver coins were recast into silver ingots.

Taiwan had been occupied by the Dutch, and so its situation could have been somewhat unusual, but according to the documentary sources, it was not until after the Spanish royal portrait silver dollar had been put into circulation that this coin could have served as the basis for trade.[38] By royal portrait silver dollar I mean Charles III or later silver dollars, and those were first minted in qianlong 37 (1772). Prior to this time, no silver coins bearing a portrait bust were minted on the American continent.

Second, if we consider the coins' construction, we note that these Army Supply coins all have decorated edges. The edge decorations on the Jinshen Army Supply were obviously imitating those on the Charles III silver dollar, except for some minuscule differences. Though the edge decoration on the two Zhangzhou Army Supply were not imitating the Spanish silver dollar, the slanted line edge does imitate the Dutch Horse Sword, and the interlocking line edge could have had its initial issue and and design stimulated by the edge decoration of the Spanish silver dollar.

To sum up, minting coins with edge decorations was not originally a Chinese procedure, but rather a borrowed one. Some English and French coins had added edge decorations during the seventeenth century, but these were inscriptions, and have no relationship to those on the Army Supply coin edges. The foreign silver coins circulated in the Zhang-Tai region of Fujian had since the end of Ming been silver coins minted by Spanish colonists on the American continent which had come by way of the Philippines. For this we have both documentary and archeological evidence.

Documentary sources include *Eastern and Western Oceans Investigation* and the reports to the Spanish king by the Spanish colonial authorities in the Philippines. Such early period silver coins have also been excavated on Taiwan. Silver coins minted during the early period on the American continent were the old Doubloon and the Cob Dollar. Both had blank

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edges. It was not until yongzheng 10 (1732) that screw turning machines were used to make new style doubloons with decorated edges. This was the wheat head pattern. At that time the Dutch Horse Sword still had blank edges, and so when the new style Doubloon reached China it picked up the name "flower edge." This happened at the beginning of the qianlong period [1736]. At that point the

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nature Army Supply. Apparently at that time the numismatic world was still unaware of these coins. Hence Jiang Zhongchuan's *Illustrated Discussion of Chinese Gold, Silver and Nickel Coins* does not record them.

The discovery in Zhangzhou of an Annamese Mingming Circulating Treasure is of interest. This is a new-style silver dollar minted in daoguang 13, 14 and 15 [1833-5]. It weighs 0.72 treasury ounce, and has a slanted line edge. This has raised suspcions that the slanted line edge version of the Zhangzhou Army Supply was perhaps not a direct imitation of the Horse Sword, but rather of this Mingming Circulating Treasure.

Another interesting point is that Annamese token coins minted during the qianlong period (such as the Jingxing Circulating Treasure and the Jingsheng Circulating Treasure) have the interlocking line decoration. Interlocking lines are found on China's ancient bronze utensils, but Chinese coins had never employed this motif.

Annamese coins were circulated on a large scale along the coast of Fujian (cf. subsection 8.2.6 below), and so the interlocking line edge Zhangzhou Army Supply was perhaps influenced by the Annamese token coins. After the victorious conclusion of the Anti-Japanese War [World War II], Wang Shouyi twice went to Taiwan to purchase coins. In addition to 7 Zhangzhou Army Supply, he obtained 16 Jinshen signature coins, as well as several dozen Ruyi Sceptre and Brush Treasure Silver Cakes and upwards of a thousand God of Longevity Silver Cakes, but no tongzhi 1 God of Longevity Silver Cakes. An example of the latter has been found recently by a foreign collector in Hankou. For an illustration, cf. Shi Jiahan, *China's Modern Minted Coins*. The illustration is not clear, however, and the date is very hard to make out.

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In the second edition of this book I mistakenly supposed it was minted during the daoguang period. Evidently the Zhangzhou Army Supply also circulated in Taiwan, but in small numbers. They were not, however, all that rare. I have calculated that Shanghai collectors alone possess more than 30 of them.

[38] *General History of Taiwan*. Cf. note 36.

Doubloon was just one of a number of different foreign silver coins. Various sizes of foreign silver dollars circulated all mixed together, and were measured by weight in ounces of silver. The edge decoration on the Army Supply does not imitate this Doubloon, but rather that on the Charles III silver dollar first minted in qianlong 37 [1772].

Therefore, if we set the date of these Army Supply silver coins somewhat early, they may be linked with the uprising by Lin Shuangwen in qianlong 50 [1785], since Lin Shuangwen's rebellion was one of the largest-scale and long-lasting of the rebellions after the defeat of Zheng Chenggong by the Qing. That uprising was suppressed by Fu Kang'an. Several years later, this same Fu Kang'an minted the Qianlong Treasure Tibet in Tibet. Nevertheless, this is only a casual hypothesis, and there is no other basis for it.

We cannot assume that just because these Army Supply were simply made that they had to have been minted before the God of Longevity Silver Cakes. A coin's construction is linked to the specific circumstances at the time of its minting, such as the materials available, the technical level, and the degree of stability of the times. Actually, the tongzhi 1 God of Longevity Silver Cake is more primitive than the one minted during the earlier daoguang period.

There were a number of anti-Qing incidents on Taiwan after Lin Shuangwen's. The Zhang-Tai region must have undergone frequent military occupations, and so there were a number of occasions during which Army Supply silver coins could have been minted. It is said that in daoguang 24 [1844] a test minting of a silver dollar was made in Zhangzhou. The coin first minted weighed 0.74 ounce. This was later reduced by 5 percent, and the coins were very quickly let out into circulation.[39] This sounds very much like a reference to the Zhangzhou Army Supply. The Hong Xie rebellion took place on Taiwan in that year.

The two types of Zhangzhou Army Supply would have been minted at the same time and in the same place. Even one of the Jinshen signature coin types could have been minted at the same location, though at a different furnace, or at a slightly different time. The seal or signature it bore could just have been the hallmark of the person supervising the minting, and be of no great importance.

It would only be possible to draw a definitive conclusion after carrying out an exhaustive study of the history of the Zhang-Tai region.

In xianfeng 4 [1854], 10th month, the Governor of Zhejiang, Huang Zonghan, said he wanted to investigate making three sorts of foreign-style silver coins patterned on those of Fujian province. These would be issued by the post office. These Fujian foreign silver coins may or may not have been the above Army Supply silver coins. Perhaps we can look upon them as commercial supports of the Taiping movement.

Though the Taiwan region had undergone rebellions all through its history, such occurrences were especially numerous during the xianfeng and tongzhi periods [1851-1862], and all of these rebellions were run by popular secret societies

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like the Eight Trigrams Society, so they could have been stimulated by the Taiping movement. As, however, these silver coins either bear Manchu language inscriptions or Qing Dynasty year-period names, or immortality greens, they must have been minted by officials, rather than by the rebels. Zhang Wen called himself the Revive Ming Generalissimo, so why would he have been willing to employ the Manchu language and the daoguang year-period name on coins? Immortality greens were a visual metaphor for the motto "long live Qing," something still more contrary to the hopes of the rebels.

At the end of xianfeng 6 [1856], there were several silver establishments in Shanghai which issued silver cakes [Plate c]. These cakes only bore inscriptions, and not images. There were four lines of writing on their obverses and reverses. The obverse reads "Xianfeng 6th year/ Shanghai District branch/ Merchant so-and-so/ Full pure silver cake." The one on the reverse reads "Zhu Yuangu overseer/ Transport actual/ Weight one ounce silver/ Artisan so-and-so manufactured." Face values were 1-ounce and 0.5-ounce.

The three firms issuing 1-ounce silver cakes were Wang Yongsheng, Jing Zhengji and Yu Sengshen, but Yu Sengshen issued two types. On one of them the silversmith was Feng Nian, and on the other it was Ping Zheng. The 0.5-ounce cake was only issued by Jing Zhengji and Yu Sensheng.

I do not know how these silver cakes were minted. It is said they were cast from steel molds, and that they circulated for half a year. They were mainly used to obtain army supplies. Later, because they were widely imitated, and their fineness fell to a low level, their minting was very quickly halted.[40] There is no supporting evidence for the statements

[39] S. Wells Williams, *The Chinese Commercial Guide* (1863), p. 270.

[40] The Englishman Wylie mentions the silver cakes of Wang Yongsheng in xianfeng 7. Cf. *Coins of the Ta-tsing, or Present Dynasty of China*.

that they were used to obtain army supplies and that they were imitated, since these silver cakes are not found among surviving imitations of that period. Those imitations of them I have seen were all made later on, and they are easy to spot.

Right down to the beginning of xianfeng, the Spanish silver dollar remained the main form of money on the Shanghai market. It was not until the supply of Spanish silver dollars was cut off in xianfeng 1 [1851] that Shanghai changed over to the southern market bean guild's standard dollar silver ounce unit of account. For actual silver they used the transport weight ounce. The xianfeng period silver cake's weight is close to that of the transport ounce, which was 36.65 grams.[41]

This silver cake may have been minted because of the shortage of Spanish silver dollars. The lack of uniformity of weight and fineness of silver among the other foreign silver dollars, and the insufficient number of them, had led to the adoption of the standard dollar silver ounce unit of account. These three silver firms might have made a test minting of silver cakes to serve for making actual payments. Of course they could also have been used to pay for army supplies.

The situation in Shanghai then was that after the Small Sword society had occupied Shanghai, some capitalist nations formed an alliance with the Daotai of Su-Song-Tai, Wu Jianzhang, to take authority over the Shanghai Maritime Customs, and to establish a Shanghai Board of Works office. They jointly put down the Small Sword Society, and made its army retreat from Shanghai in xianfeng 5 [1855], 2nd month. This was the year before the minting of the silver cakes.

After the Small Sword Society had been driven out, the Taiping army remained in the neighborhood of Shanghai, and remained capable of attacking the city at any time. Naturally the Qing court would have made preparations to respond to such an attack. Under such circumstances the minting of silver cakes can be explained.

All of these several types of silver cakes were, however, all issued in xianfeng 6. There are no other dates, and the quantity of xianfeng 6 silver cakes

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is not large. This shows that their circulation would not have been very smooth. Perhaps the foreigners in the leased concession put obstructions in their way, since they preferred foreign silver dollars. Later, the Mexican Eagle took over the place of the Spanish silver dollar, but the standard dollar unit of account was preserved for several more decades.

In xianfeng 7 [1857], the Treasure *su* Office used steel molds to mint Xianfeng Circulating Treasure silver coins. The reverse bore the Manchu words for Treasure *su*, with the sexagenary cycle characters dingsi placed above and below. It weighed 7 grams. There had been a Tongzhi Circulating Treasure [Plate ci,3] during the tongzhi year-period [1862-1875] which was more finely made, and could not be distinguished from a machine-made coin. Above the hole on the reverse is the earthly branch character *yin*, apparently standing for the year tongzhi 5. On the left and right respectively are the two characters for "felicity" [*fu*] and "longevity" [*shou*], probably indicating it was for congratulatory purposes. Still, it is of interest in the study of Chinese coinage systems.

Since its own attempt to mint a silver dollar had failed, in tongzhi 6 [1867] Hong Kong attempted to expand the business of its mint by attempting to mint a silver coin for Shanghai. It worked out a design for a Shanghai 1 ounce silver coin on the face of which would appear the national emblem of England. It was not accepted by the Qing court.

Silver firms in several locations in Zhejiang minted 7 2 silver cakes. Their construction was very primitive, perhaps not far removed from the shape of ancient silver cakes. They bear only stamp marks abbreviating the name of the place, the name of the silver shop and the weight of 0.72 treasury ounce. The date of minting is not clear. They were proba-

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[41]The Englishman Woodward has weighed various sizes, thicknesses and weights of xianfeng period silver cakes, but included imitations in his sample. I have here separated out the weights of the genuine coins, and then transformed the English measures into grams. Cf. A. M. Tracey Woodward, "The Coins of Shanghai," *The China Journal*, Vol. XXVII, No. 2 (August 1937). I have appended the weights of several coins in my collection.

	Woodward's Collection	Author's Collection
Wang Yongsheng 1-oz	36.67 grams	36.84gs
Yu Sensheng 1-oz	36.64	36.47
Jing Zhengji 1-oz	36.56	36.75
Yu Sensheng 0.5-oz	18.16	18.4
Jing Zhengji 0.5-oz	18.06	18.35

Evidently both collections contain light and heavy coins. I have another Wang Yongsheng 1-ounce cake which weighs 36.64 grams. Based on Woodward's collection, an ounce averages 36.5225 grams. The average for my five coins is 36.678 grams. For all ten coins the average is 36.604 grams. The standard weight then must have been a bit higher than this average figure.

bly used locally to replace foreign coins at times when the foreign coins were in short supply. Places issuing such silver cakes included Yinxian, Xiaoshan and Qiantang.

Changsha, Hunan [Plate ci,4-7] minted a number of different silver cakes during the guangxu period [1875-1908]. They greatly differed in shape from those of Fujian and Taiwan. Nor did they resemble the silver cakes of Zhejiang. They are characterized by their small size and thickness. They bear only inscriptions surrounded by a circle of dots. They were issued by four entities: the Funan Official Mint, the Hunan Official Coin Office, the Great Qing Bank and the Changsha Heavenly Increase establishment.

The Funan Official Mint was established in guangxu 22 [1899], 2nd month, and so we know these silver cakes were products of the end of the guangxu period. The Heavenly Increase establishment was a private silver house. Its silver cakes, along with those of the Funan Official Mint, are the most numerous. In guangxu 29, after the establishment of the Hunan Official Coin Office, the province relied mainly on issue of paper money, and circulation of silver cakes gradually diminished. As a consequence not many were minted. The face values of these silver cakes probably ranged from 0.1 to 1 ounce. Only the 1-ounce cakes are at all common. The rest are rarely encountered.

In addition, Guizhou and Shandong also minted silver coins. The Guizhou Mint full silver 1-ounce and Guizhou Official Coin Office 1-ounce were both shaped like small *kezi* ingots. The Liping Mint also turned out some. In guangxu 14 [1888], the Guizhou official furnace minted Qian Treasure weighing 0.72 ounce, and resembling the new style silver dollar, except that the surface design was Chinese style. **[793]**
In guangxu 16 there was a new minting with a different design. That same year, the Shandong Manufacturing Office minted a pure silver 1 ounce silver cake. It is smaller and thicker than the new style silver dollar, but larger and thinner than the Hunan silver cake.

I have heard there is a Taiwan One-ounce silver cake.[42] At the center of its obverse are the two characters for "One Ounce," arranged vertically and surrounded by a circle, outside of which arranged from top to bottom and right to left are the four characters meaning "Full Pure Provincial Silver." Between the four characters is a decorative design, and near the rim is another circle. The reverse also bears a double ring in the center of which is a tiger seated amidst a tail feather motif. Below on the left and right are the Manchu words for Treasure *tai*. This design was the same as that on contemporary cash certificates. I have only seen a rubbing of it. It is said that its weight is less than 0.7 ounce.

Use of machinery for silver coins seems to have occurred earliest in Jilin. At the beginning of the guangxu era there was a shortage of standard coins in Jilin, and various sorts of cash certificates circulated on the market. The prices of silver and commodities rose. The authorities planned to mint silver coins by machine to replace the paper money of the time. They used what was called 10 or full purity silver to mint 0.1, 0.3, 0.5, 0.7 and 1 ounce face value coins. On one face was engraved in both Manchu and Chinese script the inspectorate name and year-period. On the other was engraved the weight of silver, and that it was weighed in the Jilin factory.[43]

Of these silver coins with square holes in their centers, only the 0.5 ounce type has survived. On its obverse are the four characters for "Guangxu Original Treasure." On the reverse set out horizontally above the hole are the two characters for "Factory Weight" [*changping*], which was the name used for the Jilin silver ounce. Arranged horizontally below the hole are the two characters for "5 *Qian*." To the right of the hole is the Chinese character *ji*, for Jilin, and to the left of the hole is the Manchu word []^{d} for *ji*. The outer rim has a patterned design.

There was also a Western style silver coin minted. Of this there were two variant styles: One was the guangxu 8 variant. In addition to a decorative pattern it bore on its obverse the four characters for "Changping One Ounce." On the reverse, inside a square enclosure are 12 seal script characters reading "Guangxu 8th year Jilin Machinery Mint Inspectorate Manufactured." For this coin only the model survives.[44] There were both silver and copper coins, the copper ones being washed with silver.

The other was a guangxu 10 variant, which came in five denominations: 1-ounce, 0.7 ounce, 0.5-ounce, half-ounce, 0.3-ounce, and 0.1 ounce. The inscriptions were the same as on the guangxu 8 coin, except that the character *zao* was replaced by *zhi* in the part of the inscription reading "Inspectorate Manufactured" [*jianzao*]. The decorative design is

[42]Wang Xiamin found one in Tainan in 1946. There are also imitations, with coarse images.

[43]Guangxu 10, 11th month, 24th day, Xiyuan addendum slip, *Jilin Gazetteer*, 40, no. 8, p. 9. What the slip refers to is evidently a square holed silver coin.

[44]Dr. Guiseppe Ros, "Jilin's Two Coins," *Kahei*, no. 39, only mentions copper coins, but there were also ones made of silver.

also not the same. The guangxu 10 coin has Manchu script on the obverse, whereas the guangxu 8 coin does not. Though the guangxu 10 coin is not much seen, complete sets have survived.

Of these Jilin silver coins, only the guangxu 10 type seems to have been put into circulation. The guangxu 8 coin was of the nature of a test minting.

In guangxu 13 (1887), the Governor-General of Liang-Guang, Zhang Zhidong, saw that the Chinese market was entirely dominated by foreign silver coins, and so memorialized a request for China to mint its own silver dollars to prepare for a boycott of the foreign coins. In 1888-89 the Guangdong Silver Dollar Office made a test minting of silver coins [Plate cii,1]. Their obverse bore the four characters for Guangxu Original Treasure, and in the center were four small Manchu words with the same meaning. The reverse bears

[794]

a coiled dragon design. These coins weigh 0.73 treasury ounce apiece. This was 0.01 ounce heavier than the Eagles in circulation then, since they were intended for use in a boycott of the Eagle. The coin has inscriptions in three languages, Chinese, English and Manchu. The words for "Guangxu Original Treasure" in the center appear in Chinese and Manchu. The province name and coin weight are in English around the circumference. The government issued an order making this coin legal tender for payment of taxes and all other uses.

This was China's earliest formal style new silver dollar. In numismatics it is called the 7 3 Foreign Board (or reverse board *fanban*). This is because it was the reverse of the silver dollars circulated later in that it had English on the obverse. Because it was heavier than the Eagle, it was finally driven out of circulation by the Eagle, and eventually had its weight changed to 0.72 ounce. This was the 7 2 Foreign Board.

When the model coin was sent to Beijing, the Board of Revenue felt that the presence of English on the obverse was inappropriate, and called for the English text to be moved to the reverse, and the Chinese to be moved from the reverse to the obverse. This then became the broadly circulated Guangdong Dragon Foreign. According to Zhang Zhidong's memorial, the 7 3 Dragon Foreign was apparently never issued. Nevertheless, some surviving examples of this coin bear chop marks, which shows that they had been circulated.

Once the Guangdong Dragon Foreign had appeared and shown that it might be profitable, other provinces imitated it one after the other. In guangxu 19 [1893], after Zhang Zhidong had become Governor-General of Hu-Guang, he set up a Silver Dollar Office in Wuchang, Hubei [Plate cii,2]. Following the example of Guangdong, the next year he minted Dragon Foreigns, merely changing "Guangdong Province Manufactured" to "Hubei Province Manufactured." He also added the two characters for "This Province" [*bensheng*] on either side of the dragon on the coin's reverse. He may have at first intended to limit circulation to "this province," and likely came to feel that would be inappropriate after the coin had been minted, and so did not issue them. In guangxu 22, coins without these two characters were minted.

In guangxu 22 [1896], Zhili also test minted silver dollars at the Tianjin Beiyang Machinery Office. At the center of the obverse are the two long form characters meaning "One Dollar," arranged vertically, and surrounded by a ring of dots. Running circumferentially outside this ring are 13 Manchu words. These are surrounded by another ring of dots. Outside of this are 14 Chinese characters, punctuated by two stars, and meaning "Great Qing * Guangxu 22nd Year * Beiyang Machinery Office Manufactured." The coiled dragon on the reverse is surrounded by an English text.

Minting only formally began in guangxu 23 [1897]. There are also coins dated guangxu 24. The silver purity of both is poor. In guangxu 25 they changed over to the non-reversed Dragon Foreign. This was the Guangxu Original Treasure with the three characters "Beiyang Manufactured" on the top. It is otherwise the same as the Guangdong and Hubei Dragon Foreigns, but the English inscription on the reverse includes one of the five years of minting: guangxu 25, 26, 29, 33 and 34. The quality of the silver on these was better than before. Tianjin's Manufacture of Coins General Factory also minted Dragon Foreigns in guangxu 33. Their reverses bear the Chinese language year-period and the phrase Great Qing National Silver Coin in English.

In the south, Nanjing began minting Dragon Foreigns in guangxu 23 [1897], 12th month. There were two edge designs. One type imitated

[795]

the Spanish silver dollar. The other type, like the rest of the Dragon Foreigns, had a serrated edge. Beginning with guangxu 24, they added the sexagenary cycle characters for the dates at the edge of the obverse. These run from wuxu (1898) to yisi (1905). There are also variant form coins for each date. Generally speaking, those without dates are old Jiangnan coins; those with dates are new ones [Plate cii,3].

Anhui also began to mint Dragon Foreigns in guangxu 22-23 [Plate cii,4]. On the guangxu 24 coin, they added the inscriptions "24th Year" and "wuxu" next to the provincial name at the top of the obverse.

Sichuan minted Dragon Foreigns in guangxu 24 [Plate ciii,1].

Jilin [Plate ciii,3] had the most kinds of Dragon Foreign. After minting the Changping coin in guangxu 8 and 10, for over a decade Jilin seems not to have minted any other silver coins. It was not until guangxu 24 that they began to mint Dragon Foreigns. This Dragon Foreign is notable for the absence of a Manchu inscription from the center of the obverse, and the use in its place of a pot of immortality greens. The reverse bears two Manchu texts. Beginning with guangxu 25, they added a sexagenary cycle couplet for the year. These run from yihai to wushen. The year gengzi coin's center comes with either immortality greens or a diagram of the Supreme Ultimate. From year xinchou on, only the latter is employed. Years bingwu and dingwei use the immortality greens. The year wushen coins come in three variations: immortality greens, two Manchu words, or the Arabic numeral 11, the latter standing for the coin's value of 11 *jiao* or dimes. Evidently by that time the small denomination coins of Jilin had depreciated. The 2-dime coin's center bears the numeral 2; and the 1-dime the numeral 1.

The situation in Fengtian was almost the same as in Zhili. In guangxu 24, the Fengtian Machinery Office minted silver dollars [Plate ciii,2]. The arrangement of the elements on the face of the coin resembled that on the Beiyang Machinery Office's silver dollar, except that the outermost ring held 13 Manchu words, the next ring in had the English words Fengtian Province, and the center bore the two characters for "1 Dollar." The reverse bore 14 Chinese characters meaning "Great Qing Guangxu 24th Year Fengtian Machinery Office Manufactured" surrounding the dragon. There is also a coin dated guangxu 25. The small denomination silver coins lack English inscriptions. In guangxu 29 they switched over to minting the unreversed Dragon Foreign, the obverse of which bears the year designation guimao. The Manchu words for Treasure *feng* are in the center. Sometimes these two Manchu words go from left to right. In guangxu 33, they changed over to minting the "Eastern Three Provinces [Manchurian]" Dragon Foreign [Plate ciii,4]. For a time this enlarged their sphere of circulation.

Zhejiang mainly turned out small denomination silver coins, but in guangxu 28 it minted a 1-dollar Dragon Foreign. Not many survive.

In guangxu 28, the Fujian official mint also put out a 1 dollar Dragon Foreign, of which hardly any survive. They were probably never circulated.

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Yunnan minted Dragon Foreigns in guangxu 33 [Plate ciii,5]. These are generally called Old Yunnan. Later, they minted a small character version without English on the reverse, which is generally called the New Yunnan.

One dollar Dragon Foreigns have also appeared from Xinjiang and Shaanxi. Both are model coins minted for them by other provinces. The reverse of the Xinjiang coin bears the English word Sungaria, a transliteration of [Zhun]ke'er.

Hunan only turned out 1-dime and 2-dime coins [Plate cv]. Taiwan also has 2-dime and 1-dime, and a 5-cent piece. Shanxi has only a 2-dime, and that looks like it was privately coined. Heilongjiang has only a half-dollar model coin. In guangxu 26, Beijing's Capital Mint made a test minting of a 2-dime and 1-dime. These were minted for it in Tianjin. They cast dies for five denominations from 1 dollar to 5 cents, but only test minted two of these. This set of dies later fell into private hands, and several sets were minted, as well as a gold version.

Though the Dragon Foreigns of the provinces were nearly identical in form, they were not altogether uniform in weight and fineness. Since the administration of the coinage was not unified then, the provincial mints were virtually independent. Circulation of silver coins was also localized.

Attempts at unification were made. For example, in guangxu 28 [1902], the Tianjin and Beiyang Machinery Offices were reorganized into the Beiyang Coin Manufacturing Silver Dollar General Office. In guangxu 31 [1905], a Minting Silver Coin General Factory was set up. This was the Board of Revenue's unified minting establishment.

At that point there were 20 silver and copper dollar mints in the country. The following year the provincial mints were consolidated into 9 factories. In xuantong 2 [1909], 5th month, regulations for coin-making factories were promulgated. A Consolidated factory was established in Tianjin, with branches in Wuchang, Chengdu, Yunnan and Guangzhou. A temporary branch plant was set up in Fengtian. These four branches then began to turn out Xuantong Original Treasure. Only the main plant continued to mint Guangxu Original Treasure, but the reverse was changed to read "Xuantong Period Made."

The attempt at unification was also displayed in the minting of the Great Qing Silver Coin, which was a kind of Dragon Foreign [Plate civ]. The label Great Qing Silver Coin did not originate during the xuantong period. In guangxu 29 the Board of Revenue test minted a 1-ounce Great Qing Silver Coin at the Tianjing Manufacture of Coins Factory, but did not put it into circulation. In guangxu 30 [1904] Hubei also minted a 1 treasury ounce Great Qing Silver Coin [Plate cvi,2], and this coin was put into circulation, but with the provincial name on it,

and hence obviously it was not minted to serve as a nationally used coin. The Tianjin Manufacture of Coins Factory also minted a Beiyang 1-ounce Great Qing Silver Coin in guangxu 33. Its construction and inscription were completely identical to the Board of Revenue 1-ounce coin of guangxu 29, but some were not up to standard in weight and fineness of metal. Perhaps even the formal model coins could not have been up to the standard. That same year, Kashgar in Xinjiang also minted a Great Qing Silver
[797]
Coin set divided into three denominations: Xiang-weight 1-ounce, 0.5 ounce and 0.2 ounce [Plate cvii,1-2]. The two characters "Ke shi," for Kashgar, are sometimes expanded to the three characters "Ke shi made." The numeral for the weight is sometimes written large, and sometimes small. In guangxu 34, Jilin also minted a 1 treasury ounce Great Qing Silver Coin, with the character *ji* at its center. These were localized coins, and were probably model coins minted for these localities by Tianjin.

The Great Qing Silver Coin which we referred to above as symbolizing unification constituted one of a three-coin set of gold, silver and copper coins minted after the establishment of the Tianjin Manufacture of Coins General Factory. These were the Great Qing Gold Coin, Great Qing Silver Coin and Great Qing Copper Coin. The Gold Coin was minted in guangxu 32 and 33, both years in treasury ounce units, and in very small quantities. The Silver Coin also has these two dates, but the guangxu 32 uses the ounce as its unit, and has three lower denominations: 0.5, 0.2 and 0.1 ounce. The center of the obverse bears the character for "middle." The characters *hubu*, for Board of Revenue are on either side of the center character. Around the perimeter of the reverse are the four characters meaning "Guangxu Years Manufactured," and the English inscription Great Qing Empire Silver Coin.

In guangxu 33 they changed the unit to the dollar, and the lower denominations were 5, 2 and 1-*jiao*. The sexagenary couplet bingwu was changed to dingwei, and the characters for "middle" and "Board of Revenue" were omitted from the obverse. The reverse was unchanged. However, none of these coins were put into circulation.

The xuantong 3 Great Qing silver coin [Plate cic,5-7] comes in several designs, popularly calledd the long dragon beard, short dragon beard, reversed dragon, large-tailed dragon, and curly bearded dragon. Only the last of these was put in circulation.

These Dragon Foreigns, whether Guangxu Original Treasure, Xuantong Original Treasure or Great Qing Silver Coins, all formed sets from 1-dollar on down, including 5, 2 and 1-*jiao* and 5-*fen*, but not all the sets are complete. Some are missing the 5-*fen*. Others lack the 1-dollar. As pointed out previously, the Heilongjiang set only had a half-dollar model coin. The small silver coins below 1-dollar were called dimes [*jiaozi*] or Small Foreign. These were originally minted as supplementary coins, and so their fineness was lower than that of the dollars, generally running to 820 parts per thousand, but the supervisors of the provinces then came to regard minting of coins as a source of wealth, and carried out repeated depreciations. Nor did they place limits on the quantities minted. People holding these Small Foreigns could not exchange them at par for large silver dollars, and so they finally lost their value as secondary coins, and circulated at their intrinsic values. One type of Jilin silver dollar officially exchanged for 11 dimes for just this reason.

It was precisely at the time that the provinces were minting silver dollars on a large scale that the debate inside and outside of the court on monetary problems turned very heated. Some advocated adoption of a gold standard. Others favored a silver standard. There were different positions even regarding the minting of silver dollars. The most important of these were the 0.72 ounce and 1 ounce proposals.[45] In fact, in guangxu

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[45] *Qing History Draft*, "Treatise on Food and Money." There was a very hot dispute then on the proper weight for the standard unit coin, with quite a few proposals put forward. The most important of these were the 1 ounce and 0.72 ounce ones. The ounce was China's firmly held standard unit of weight. At the end of Qing there were instances of its use as a unit of account, such as with the Shanghai standard dollar. A weight of 0.72 ounce was in imitation of the weight of the Eagle Foreign coin. The Dragon Foreigns being minted then by the provinces of China were approximately 0.72 ounce. One such dollar was then equal to 1,000 standard copper cash.

In addition to these two positions, there were advocates of 5-*qian* (a half-ounce, since 1 ounce was too heavy and its value too high), 1/3 ounce (advocated by Wei Silin. By using this as the unit, minting of 1/1,000 small units could be avoided, since the cost of production of small denomination coins was high), 18 grams (silver coins generally weighed 20 grams, and contained 18 grams of pure silver, equal to 1,000 standard copper cash), 0.666 ounce (one and a half new coins would be equal to 1 ounce of silver), 0.648 ounce (the silver content of the Eagle Foreign).

Foolish Studio Drafts, 14, "Appended Collection of Memorials of the Governors of Provinces Concerning the Coinage":
[806]
(Liang-Jiang) Liu Shenyi: "It would seem that it would be best to continue with the old." (He supposed that changing over to mint 1-ounce as well as 0.5, 0.2 and 0.1 ounce test silver dollars would not be certain to circulate.)

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29 [1903] the Board of Revenue had minted a 1-ounce silver coin. In guangxu 30, a 1-ounce silver coin minted by Hubei was circulated. Several other provinces also minted 1-ounce silver coins.

(Hu-Guang) Zhang Zhidong: "The Capital Silver Dollar Office absolutely must mint four denominations from 1-ounce on down. . . . The provinces should for the time being continue minting the 0.72 ounce coin they are presently turning out."

(Min-Zhe) Xu Yingkui: "If we change to minting such dollar coins as 1-ounce and 0.2 ounce, that would be no different from using pure silver. . . . The trade of Min province has hitherto been in terms of dollars and not ounces, and so this would be especially unsuitable for it."

(Yun-Gui) Xiliang: "In Dian [Yunnan], it would seem we should continue to mint the reduced weight 0.72 ounce, as well as the various small silver coins, so as to accommodate the people's convenience."

(Hu-Guang) Zhao Erxun: "If we use a 1-ounce silver dollar, we cannot tell if the confidence of the other nations can be obtained."

(Liang-Guang) Zhang Renjun: "If we change over to using 100 percent pure 1-ounce and 0.5 ounce main coin silver dollars and 9 parts pure 0.1 and 0.05 ounce silver dollars . . . then no matter how much the main coin is alloyed, the expense of making them will be too great."

(Jilin) Zhu Jiabao: "If we mint a 1-ounce pure silver coin, then there will be no difference from the old days when raw silver was used. I fear that if the price is low, then crafty merchants will hoard them all, and if the price is high, then they will be melted down and exported."

(Heilongjiang) Cheng Dequan: "If we now use the 1-ounce silver dollar as the main coin, then I fear that foreign dollars will flood in, and the competition will raise their price. If we use the 0.72 ounce silver dollar, there will be times when it will circulate at par with 1 ounce of our silver."

(Henan) Lin Shaonian: "If we change the rules for silver coins . . . people will look upon this state's coins as like so much uncoined silver. Each will be valued individually, and the situation will have to be as of old. If this would be the case, then what advantage would there be from making this change."

(Jiangxi) Ruiliang: "To dispel accumulated abuses, and to unify the coinage, we must change to use of dollar coins. If we use dollar coins, and yet continue to reckon them by the ounce, in the minds of everyone the word ounce would continue to be seen, and there would be a period when use of uncoined silver would not be abolished."

(Zhejiang) Feng Rukui: "The ounce is a system of weight. The coin is a system for counting by individual dollars. If you are going to mint coins, you ought to reckon them by the coin, and not by the ounce."

(Guizhou) Pang Hongshu: "If we change to use of a 1-ounce silver dollar coin as the main coin, I fear the sentiments of the merchants will not easy to change."

In guangxu 33 [1907], the governors-general of the provinces were polled for their opinions on the question of the size of the silver coin unit. Eleven provinces called for use of the ounce as the unit. Eight provinces approved of using the 0.72 ounce coin as the standard unit. Zhang Zhidong strenuously advocated the 1-ounce position. He said that the 0.72 ounce silver dollars previously minted were originally circulated in the ports, and had been used to compete with foreign silver dollars. This had been a temporary expedient.

Finally, in the 9th month of the following year, after consultations between the political and financial authorities, the Great Qing Coin system was instituted, with 1 ounce as its standard and a 98 percent pure silver content. The Ministry of Finance judged 98 percent purity not very suitable. Later, in xuantong 1 (1908), a Coinage Investigation Office was established, and the following year it published the "Coinage Regulations,"[46] under which a silver standard was formally adopted, with the dollar [*yuan*] as the monetary unit, using a weight of 0.72 treasury ounce and a fineness of 900 parts per thousand.

The coin was to be called the Great Qing Silver Coin. Several kinds were minted in xuantong 2 and 3. Originally there was to be a time limit within which other types of large and small silver coins were to be turned in, but before this coin was issued the 1911 Revolution had broken out.

The xuantong 2 [1909] Great Qing Silver Coin [Plate civ,1-4] was patterned after the Spanish silver dollar. It came in 1 dollar, 5-dime, 2-dime-5-cents and 1-dime denominations. The ones minted in xuantong 3 [Plate civ,5-7] were 1 dollar, 5-dime, 2-dime and 1-dime. After the 1911 Revolution, this type of silver coin was put out in the form of Army Supply coins, and later circulated widely. The 5-dime coin, however, used the xuantong 2 form. All the rest took on the xuantong 3 form. The one mainly used was the 1 dollar piece.

The Dragon Silver had not driven out the foreign silver dollars, but rather it had circulated alongside

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[46]The xuantong 2 "Coinage Regulations" fixed the following types of coins:

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Silver Coins:
$1 (std unit coin) wt 0.72 treasury oz 90 % pure
  5 jiao              0.36              80
  2 jiao 5 fen        0.18              80
  1 jiao              0.0884            60

Nickel coins } Separate rules.
Copper coins }
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them.[47] The Qing government's incompetence kept it from taking any effective measures to deal with this chaotic situation.

The most widely circulated of the secondary coins was the 2-dime silver coin, which was called the Double Dime [Plate cv]. This was because it was of a suitably intermediate size. There were a number of countries in Europe whose monetary units were silver coins of this size, including the standard coins of all the Latin Monetary Union nations. The German mark and the English shilling were also this size. This also demonstrates the superiority of China's ancient Five-grainer, since the Double Dime was almost the same size as the Five-grainer. The Chinese Double Dime comes in three categories: Guangxu Original Treasure, Xuantong Original Treasure and Great Qing Silver Coin. The Guangxu Original Treasure comes in the greatest number of types. All the provinces minted it.

Silver coins circulated in the border regions often differed from those of the interior [Plates cvi, cvii]. This was true, for example, of Xinjiang and Tibet. Xinjiang had a longer history of using silver than the interior, but lumps of silver were the preferred form. During the tongzhi period, Yaqub Beq

[799]

had minted Tiangang ("Big Dipper") silver coins in Kashgar. These weighed less than 2 grams. Both faces had Uighur inscriptions. They were round, but not symmetrical. There were similar coins then in Bukhara and Jiwa. The term *tiangang* probably evolved from the word *shengge* and had the same meaning. This small silver coin was still in circulation during the republican era. The Dragon Foreign of the guangxu years was probably minted for Xinjiang outside the province. It was not put into circulation.

Later silver coins were denominated in ounces, and used the Xiang-weight standard, since Yaqub Beq was put down by Zuo Zongtang, and Zuo was a Hunanese. [Xiang is the abbreviation for Hunan. EHK] In guangxu 33, they minted a few Xiang-weight 1-ounce and 0.5-ounce Great Qing Silver Coins. Those actually circulated were 0.5 ounce silver coins in an extraordinarily large number of variant forms. There were also a small number of 0.4, 0.2 and 0.1-ounce coins, which were also called Guangxu Silver Dollars, or Guangxu Original Treasure, or Great Qing Silver Coins, or Supply Silver. Sometimes they were capped with place names like Keshi and Dihua, or labeled "Ke made." For the most part they bore Uighur inscriptions.

During the xuantong period, Tibet minted two kinds of Xuantong Treasure Tibet which differed in construction from the thin slips of the old days. These coins were relatively thick-bodied, and came in 0.1 and 0.2 ounce weights. Indian silver coins had circulated in Sichuan, and during the guangxu period the province minted a kind of rupee [Plate cvi,1] to compete with these, which was popularly called the Sichuan rupee. The Indian rupee's obverse

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[47]When the Japanese reformed the Taiwanese coinage, the Bank of Taiwan analyzed the various silver dollars found within China's borders. The results of that survey are the following (Cf. Kang Youwei, "Recommendation of a Gold Main Coin to Save the State," and Liang Qichao, "After Reading the Coinage Regulations and Various Memorials of the Ministry of Finance on Calculation Menthods."):

Name	Wt. (English thousandths)	Fineness
Guangdong Dragon Dollar	420.88	900
American Silver Dollar	412.5	900
American Trade Dollar	420	900
[807]		
Spanish Silver Dollar	416.5	898
Type B Sp. Silver Dollar	414.98	896
Type C Sp. Silver Dollar	414	894
Old HK Silver Dollar	419.052	900
Type A HK Silver Dollar	416	900
Type B HK Silver Dollar	416	900
Japanese Silver Dollar	416	900
Japanese Trade Dollar	420	900
Type A Mex. Silver Dollar	417	902 or 903
Type B Mexican Silver	417.74	902.7
Type C Mexican Silver	416.5	898
Type A New Mex. Silver	416.16	not clear
Type B New Mex. Silver	416	900

bore the profile of the English Queen Victoria, and so China used the profile of the Guangxu Emperor, but the obverse bore no inscription. The reverse bore only the four characters for "Sichuan Province Made" arranged from top to bottom and right to left in the center of the decorative pattern. This coin is of historical significance. It symbolizes the monetary struggle between China and England. It is also China's first human portrait coin, and is the only coin to bear the portrait of a Chinese monarch.

At the end of Qing, a very large number of people debated the gold standard, but China minted very few gold coins. At the end of tongzhi, Yaqub Beq minted the Tiela gold coin in Kashgar, Xinjiang.[48] Each Tiela weighed 3.8 grams, which was equal to 20 Tiangang silver coins. The Tiangang in turn was equal to 50 Pu'er [*pul*] copper coins. None of these coins bore any Chinese writing. Tibet minted gold coins during the xuantong period. These weighed 11.3 grams, and bear a Tibetan style design: In the center is a lion surrounded by eight lucky flowers. The reverse bears a Tibetan inscription. There are two types of construction: One thin, the other somewhat smaller and thicker.

The Tianjin Manufacture of Coins Factory minted two kinds of 1 treasury ounce Great Qing Gold Coins in guangxu 32 and 33, but this was not intended for circulation, and in fact were not circulated. The only late Qing gold coins which were actually used and had a Chinese inscription were two kinds of Supply Gold coins minted by the Xinjiang Machinery Office during guangxu 33. One was a Supply Gold 0.1-ounce, and one was a Supply Gold 0.2-ounce. Their reverses bear a dragon design surrounded by an Uighur inscription.

[800]

These form a set with the Supply Silver coins. The Supply Gold 0.1 ounce was equal to 3 ounces of Supply Silver. The gold-silver exchange price was 1:20 in guangxu 32. The following year it had become 1:30, and the year after that it went to 1:38. Naturally, these Supply Gold coins would have been hidden away by people or been melted down.

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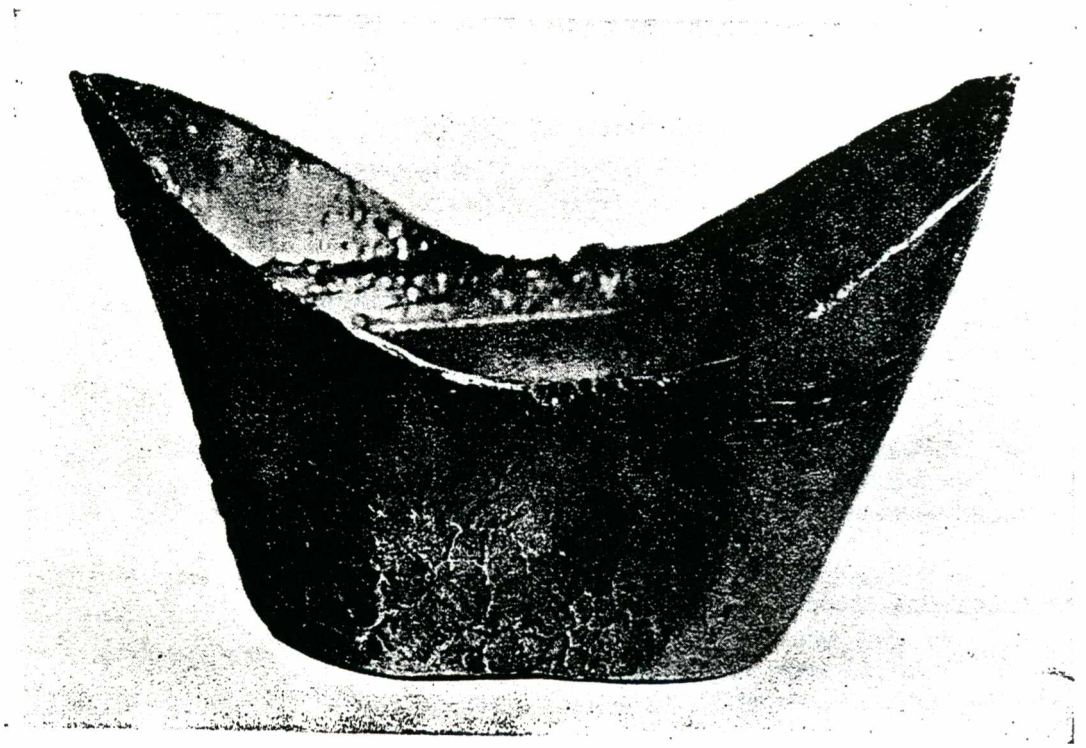
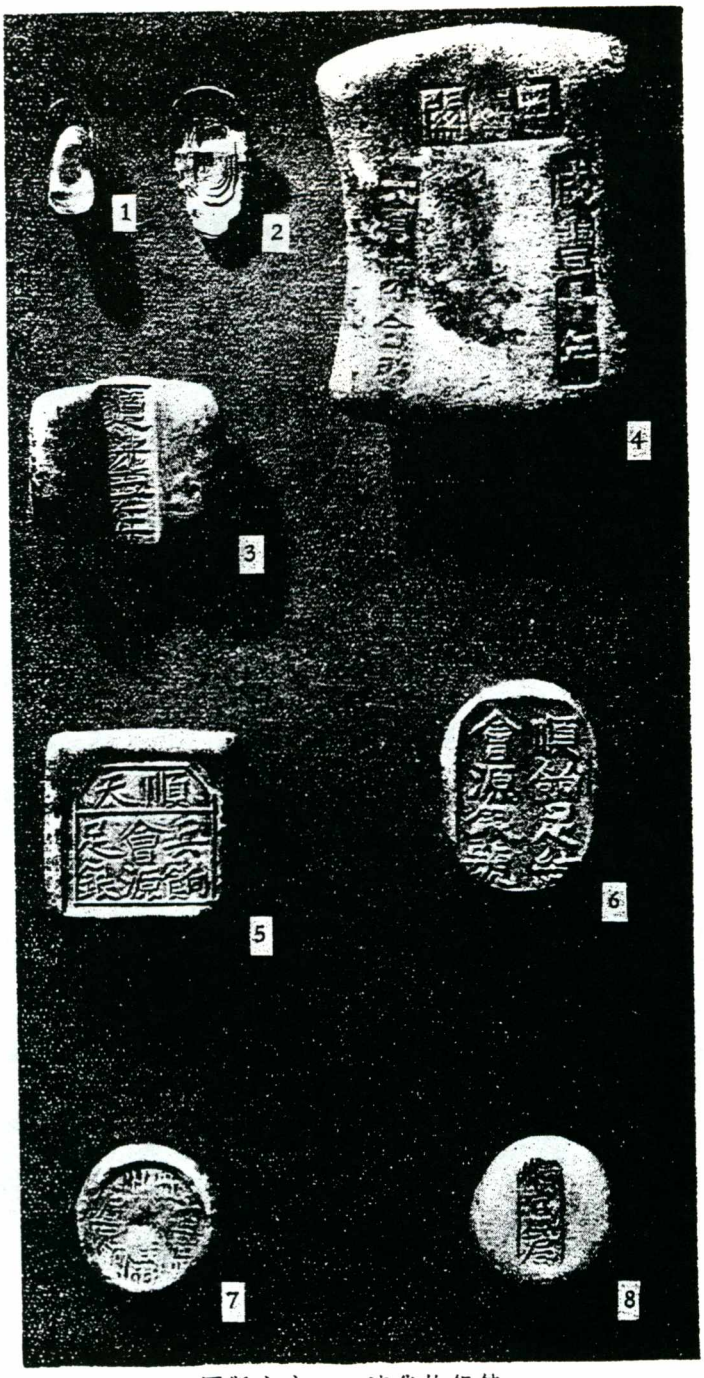
[48] E. Kann says that this gold coin was extremely thin. Cf. his *The Coinage of Gold in China* (1941). There are also several Chinese numismatic works which way it was a thin slip. This is because their authors had never seen the coin itself. This gold coin was not at all thin. In construction it resembles the gold coins of the Europe during the eighteenth century. It is not at all like the thin slip gold coins of Medieval Europe or the thin silver coins of Tibet in the past.



圖版九十一　清代的元寶(沐園藏品)
上有"山東運司咸豐三年月日張盡堂"等字樣，重五十兩。

PLATE XCI. QING DYNASTY ORIGINAL TREASURE
(MU GARDEN COLLECTION)

It bears the inscription "Shandong Transport Office Xianfeng 3, month, day, Zhang [?] Hall." Its weight is 50 ounces.



圖版九十二　清代的銀錠

1.康熙一錢小元寶。2.雍正小銀錠。3.道光年間的銀錠。4.咸豐十年粵海關的十兩銀錠。5.順天兵餉方寶。6.順天兵餉銀錠。7.貴州官局估平足紋壹兩銀子。8.貴州官錢局銀子。

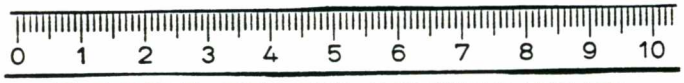


PLATE XCII. QING DYNASTY SILVER INGOTS

1. Kangxi 0.1 ounce small Original Treasure. 2. Yongzheng small silver ingot. 3. Daoguang period silver ingot. 4. Xianfeng 10 Ao Maritime Customs 10 ounce silver ingot. 5. Shuntian Soldier Provisions Square Treasure. 6. Shuntian Soldier Provisions silver ingot. 7. Guizhou Official Bureau Calculated Weight Full Fine One Ounce *kezi* ingot.

圖版九十三　清初流入的外國銀幣(一)

1.日耳曼帝國的塔勒(公元1692年)。 2.荷蘭的銀元(公元 1704 年)。 3.法國的埃居(公元 1734 年)。 4.奧國的雙鷹銀元(公元 1780 年)。 5.美國銀元(公元 1795 年)。

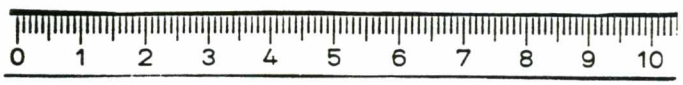
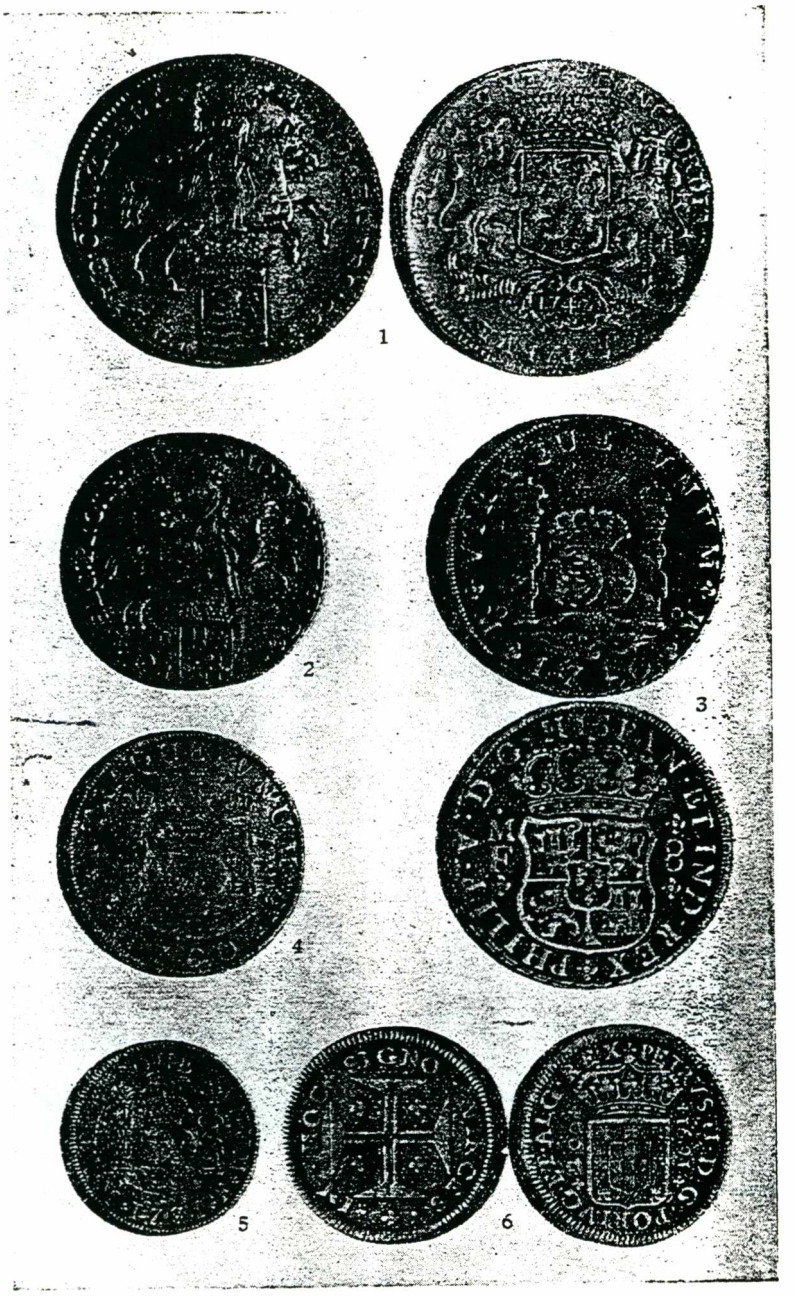


PLATE XCIII. FOREIGN SILVER COINS WHICH CAME IN DURING EARLY QING (1)

1. German Empire thaler (1692). 2. Dutch silver dollar (1704). 3. French *écu* (1734). 4. Austrian Double Eagle silver dollar (1780). 5. American silver dollar (1795).



圖版九十四　清初流入的外國銀幣(二)

1.荷蘭的馬劍。2.小馬劍。 3—5.美洲雙柱。6.葡萄牙的十字錢。

PLATE XCIV. FOREIGN SILVER COINS WHICH CAME IN DURING EARLY QING (2)

1. Holland's Horse Sword. 2. Small Horse Sword. 3-5. American Doubloon. 6. Portugal's Cross coin.

圖版九十五　西班牙的本洋

1.查理第三銀元。 2.查理第三半元。 3.西班牙十字銀元。 4.查理第四銀元。 5.費迪南第七銀元。

PLATE XCV. SPANISH DOLLARS [*BENYANG*]

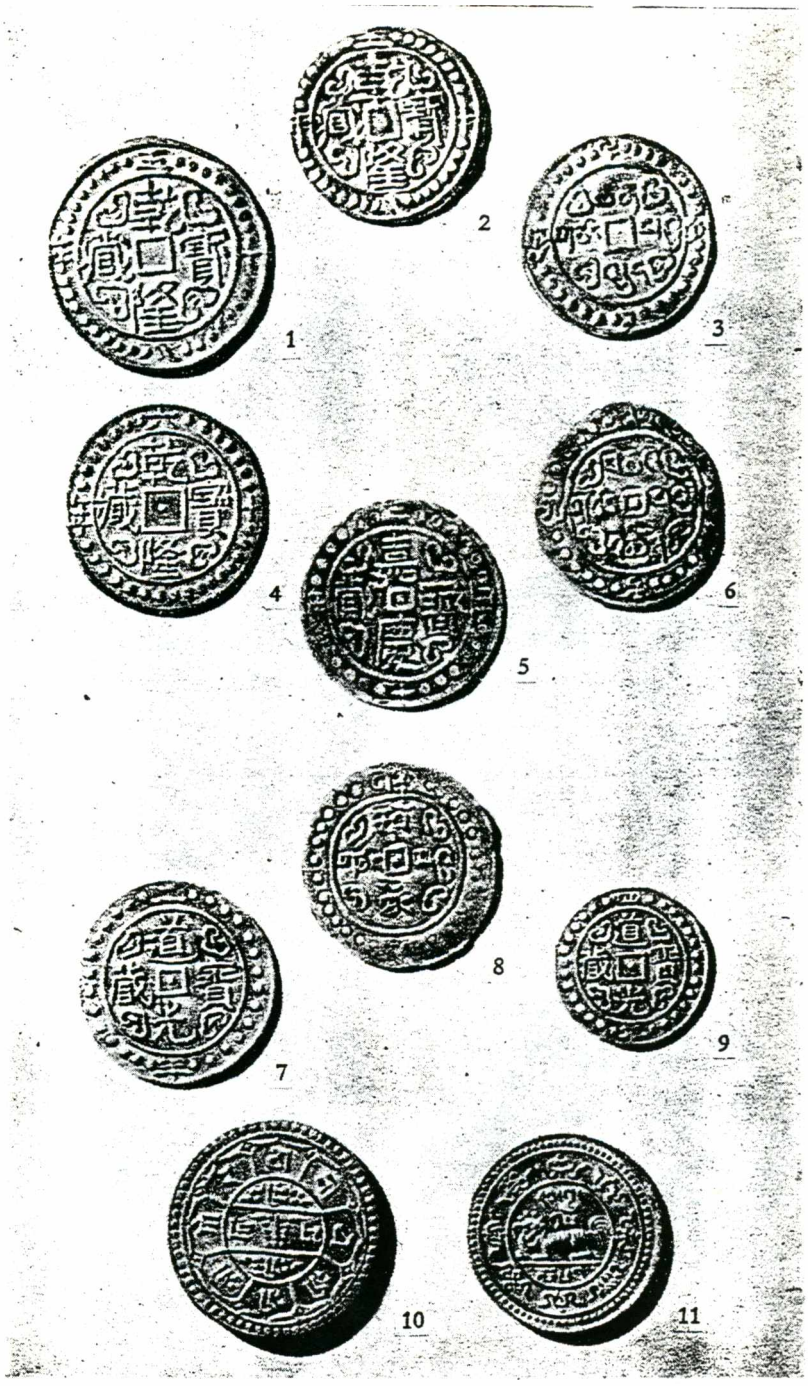
1. Charles III silver dollar. 2. Charles III half-dollar. 3. Spanish cross silver dollar. 4. Charles IV silver dollar. 5. Ferdinand VII silver dollar.

圖版九十六　清末流入的外國銀元

1.墨西哥的鷹洋。 2.美國的貿易銀元。 3.日本龍洋。4.英國的貿易銀元。

PLATE XCVI. FOREIGN SILVER DOLLARS WHICH CAME IN DURING LATE QING

1. Mexican Eagle. 2. American Trade Silver Dollar. 3. Japanese Dragon Foreign. 4. English Trade Silver Dollar.



圖版九十七　西藏的金銀幣

1.大樣乾隆寶藏。 2.中樣乾隆寶藏。 3.乾隆寶藏之背。 4.乾隆六十年的乾隆寶藏。 5.嘉慶寶藏。 6.嘉慶寶藏之背。 7.道光寶藏。 8.道光寶藏之背。 9.小樣道光寶藏。 10.西藏金幣。 11.章嘎銀幣。

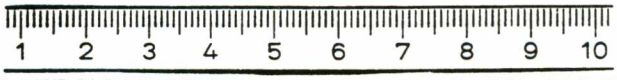


PLATE XCVII. TIBETAN GOLD AND SILVER COINS

1. Large Qianlong Treasure Tibet. 2. Middle size Qianlong Treasure Tibet. 3. Qianlong Treasure Tibet reverse. 4. Qianlong 60 Qianlong Treasure Tibet. 5. Jiaqing Treasure Tibet. 6. Jiaqing Treasure Tibet reverse. 7. Daoguang Treasure Tibet. 8. Daoguang Treasure Tibet reverse. 9. Small Daoguang Treasure Tibet. 10. Tibetan gold coin. 11. Tamka silver coin.

圖版九十八　台灣的銀餅

1.道光年造的壽星銀餅。 2.如意軍餉。 3.筆寶軍餉。

PLATE XCVIII. TAIWANESE SILVER CAKES

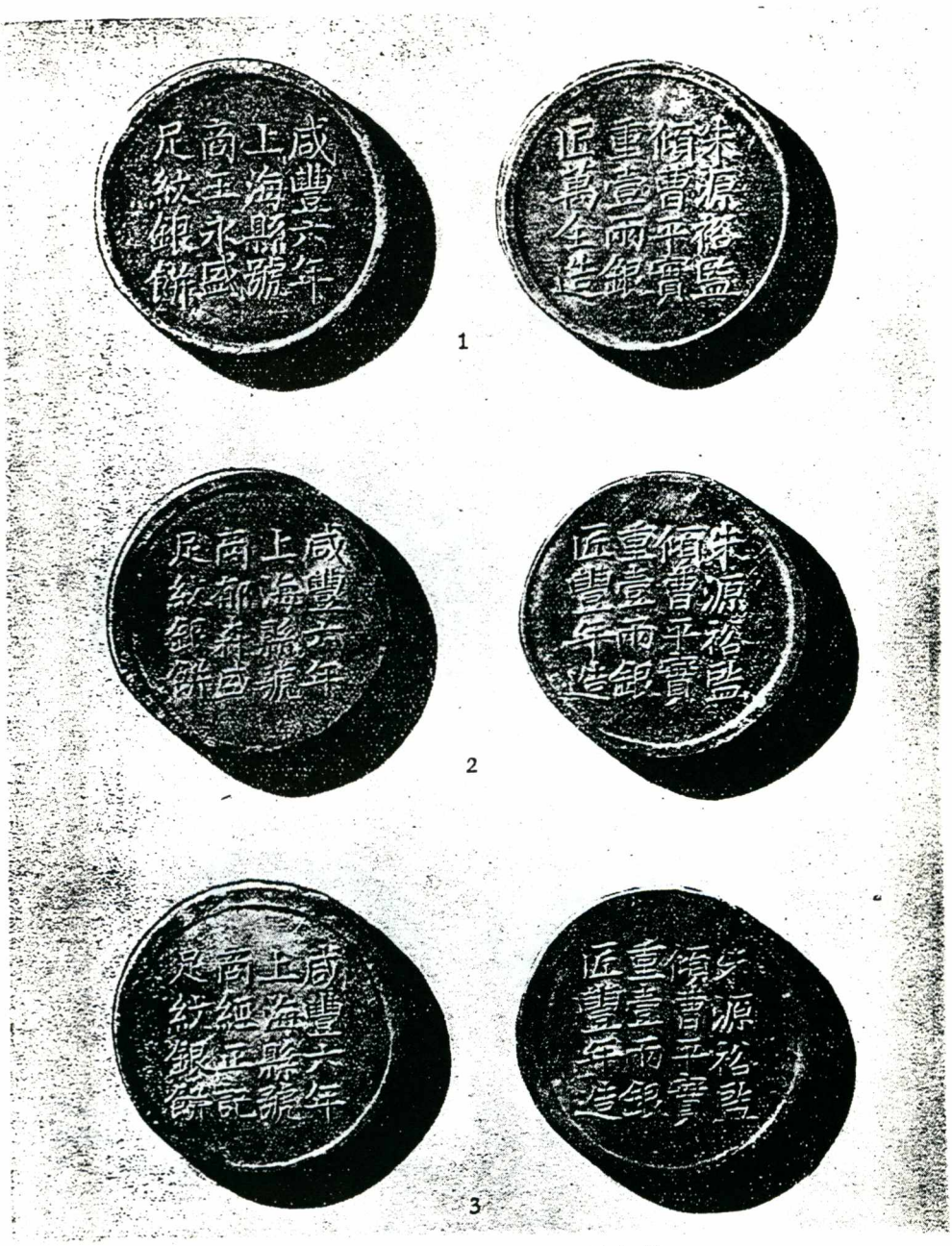
1. Daoguang period God of Longevity Silver Cake. 2. Ruyi Sceptre Army Supply. 3. Brush Treasure Army Supply.

圖版九十九 "謹慎"簽押的軍餉銀幣

1.方頭通(即コ通)。2.三角頭通(即マ通)。第1品通字頭作方形,俗稱方頭通,或コ通。第2品通字頭作三角形,俗稱三角頭通,或マ通。前者大而薄,邊文完全仿本洋;後者小而厚,邊文稍有變化。兩品似乎是兩爐同時鑄的。重量都是庫平七錢二分。但第2品更少。

PLATE XCIX. "JINSHEN" SIGNATURE ARMY SUPPLY SILVER COINS

1. Square-head *tong*. 2. Triangular-head *tong*. The top of the first coin's character *tong* is square shaped, and so it popularly called the square-head *tong*. The top of the *tong* on the second coin is triangular, and so is called the triangular head *tong*. The former is large and thin. Its rim decoration is a complete imitation of the Spanish silver dollar. The latter is small and thick, with a somewhat different edge. The two coins appear to have been minted at the same time by different furnaces. The weight of both is 0.72 treasury ounce. The second is, however, scarcer.

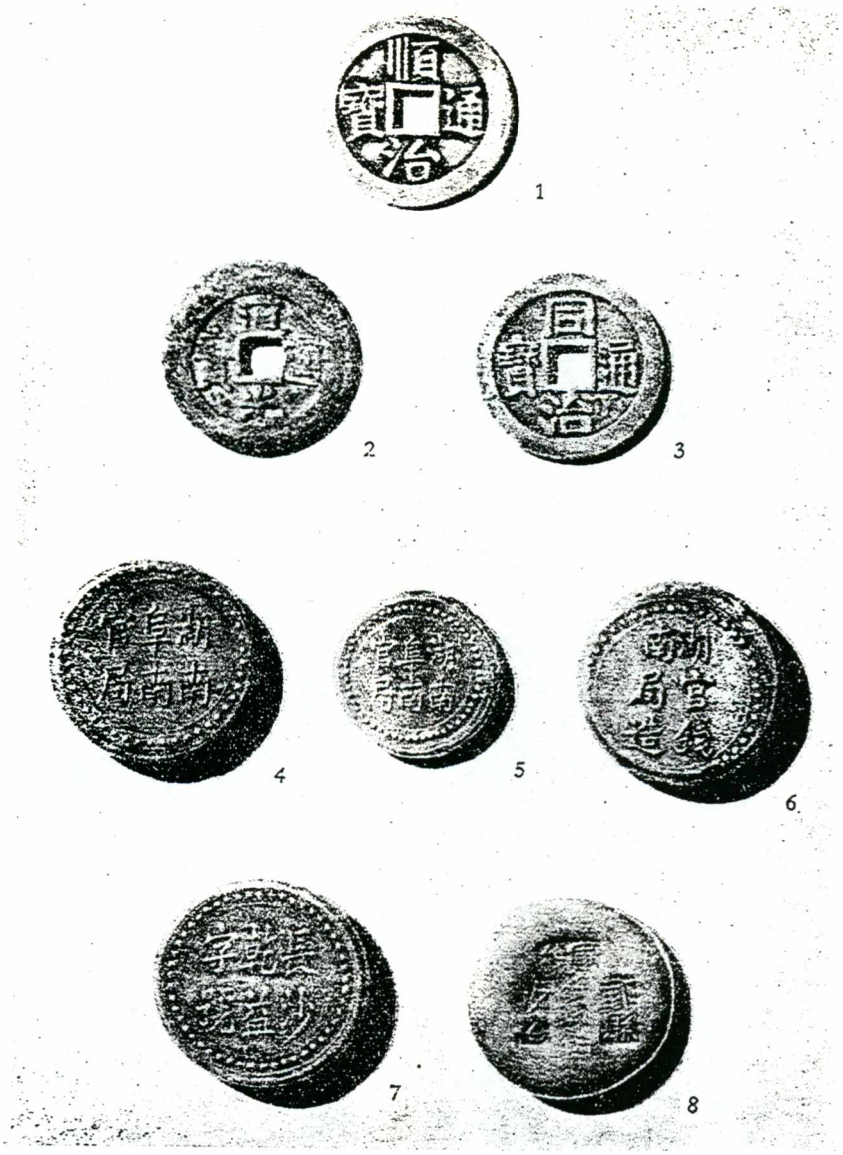


圖版一百　咸豐六年上海的銀餅

1.王永盛一兩銀餅。 2.郁森盛一兩銀餅。 3.經正記一兩銀餅。

PLATE C. XIENFENG 6 SHANGHAI SILVER CAKES

1. Wang Yongsheng 1 ounce silver cake. 2. Yu Sensheng 1 ounce silver cake. 3. Jing Zhengji 1 ounce silver cake.



圖版一百零一　清代的銀錢和銀餅

1.順治通寶銀錢。 2.新疆阿克蘇鑄的道光通寶銀錢。 3.同治通寶銀錢。 4.湖南阜南官局的一兩銀餅。 5.阜南官局的四錢銀餅。 6.湖南官錢局造一兩銀餅。 7.長沙乾益字號的一兩銀餅。 8.浙江鄞縣的七二銀餅。第1品背面穿左有滿文東字，穿右有漢文河字，穿上下似乎有字，已被刻去。第2品同普通普爾錢一樣，係官爐所鑄。第3品背面穿上有一寅字，穿右福字，穿左壽字。這三種銀錢中只有第2品是正品。

PLATE CI. QING DYNASTY SILVER COINS AND SILVER CAKES

1. Shunzhi Circulating Treasure silver coin. 2. Daoguang Circulating Treasure silver coin minted in Aqsu, Xinjiang. 3. Tongzhi Circulating Treasure silver coin. 4. Hunan Funan Mint 1 ounce silver cake. 5. Fuhan Mint 0.4 ounce silver cake. 6. Hunan Official Coin Office 1 ounce silver cake. 7. Changsha Heavenly Increase establishment 1 ounce silver cake. 8. Zhejiang, Yinxian 7 2 silver cake. Item 1 has the Manchu word for east to the left of the hole on its reverse. On the right side of the hole is the Chinese character *he*, meaning river. There appear to have been characters above and below the hole, but they have been effaced. Item 2 is like ordinary Pu'er coins, and was made at an official furnace. Above the hole on the reverse of item 3 is the earthly branch character *yin*. To the right of the hole is the character *fu*, meaning felicity, and to the left of the hole is the character *shou*, meaning long life. Of these three coins, only item 2 was in formal use.

圖版一百零二　各省龍洋(一)

1.廣東龍洋。 2.湖北龍洋。 3.老江南龍洋。 4.安徽龍洋。 5.老雲南龍洋。

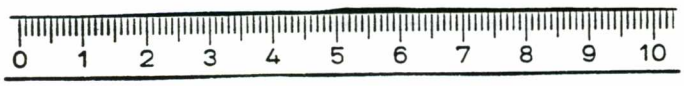


PLATE CII. PROVINCIAL DRAGON FOREIGNS (1)

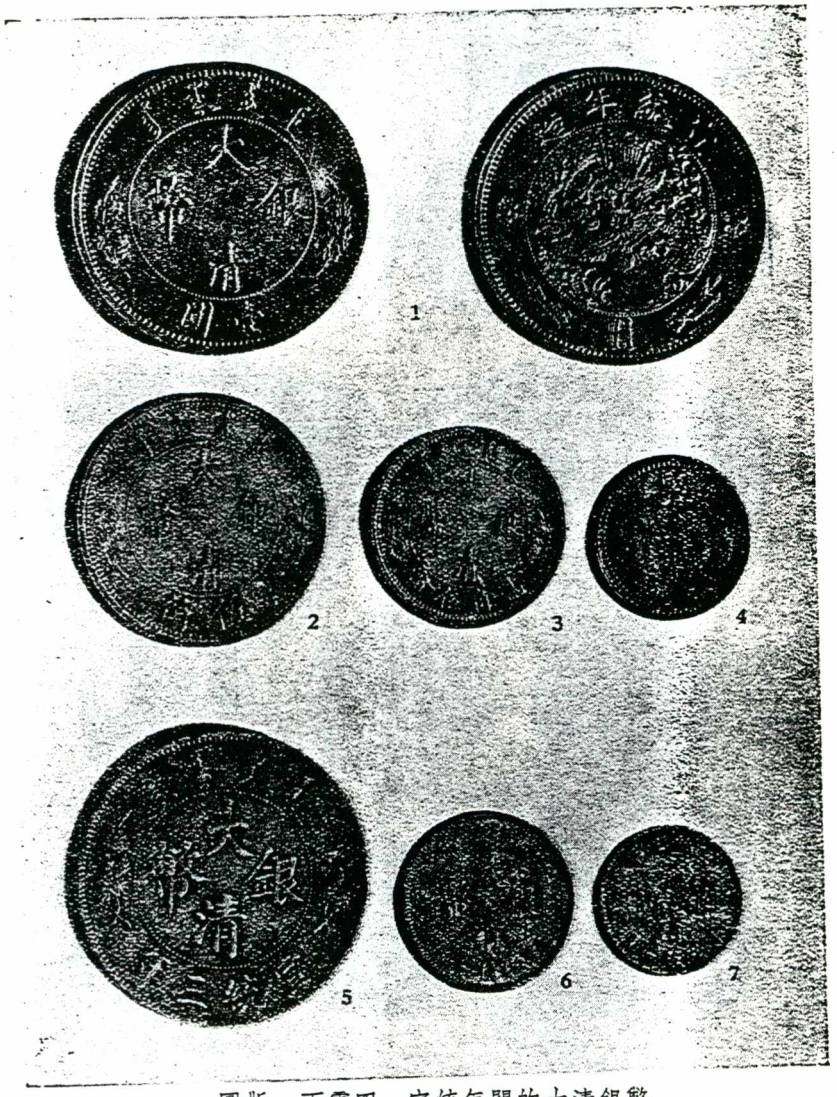
1. Guangdong Dragon Foreign. 2. Hubei Dragon Foreign. 3. Old Jiangnan Dragon Foreign. 4. Anhui Dragon Foreign. 5. Old Yunnan Dragon Foreign.

圖版一百零三　各省龍洋(二)

1.四川龍洋。2.奉天龍洋。3.吉林龍洋。4.東三省龍洋。5.造幣總廠龍洋。6.北洋龍洋。

PLATE CIII. PROVINCIAL DRAGON FOREIGNS (2)

1. Sichuan Dragon Foreign. 2. Fengtian Dragon Foreign. 3. Jilin Dragon Foreign. 4. Eastern Three Provinces [Manchurian] Dragon Foreign. 5. Manufacture of Coins General Factory Dragon Foreign. 6. Beiyang Dragon Foreign.



圖版一百零四　宣統年間的大清銀幣

1—4.宣統二年的大清銀幣。 5—7.宣統三年的大清銀幣。

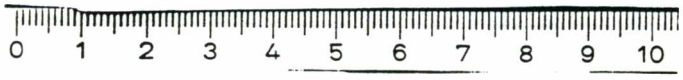


PLATE CIV. THE XUANTONG PERIOD GREAT QING SILVER COIN

1-4. Xuantong 2 Great Qing Silver Coins. 5-7. Xuantong 3 Great Qing Silver Coins.

圖版一百零五　清末各省的雙毫

1.廣東雙毫。 2.湖北雙毫。 3.湖南雙毫。 4.北洋雙毫。 5.安徽雙毫。 6.四川雙毫。 7.福建雙毫。 8.浙江雙毫。 9.雲南雙毫。 10.東三省雙毫。 11.奉天雙毫。 12.吉林雙毫。 13.北洋機器局雙毫。 14.造幣總廠雙毫。 15.山西宣統元寶雙毫。 16.奉天機器局雙毫。 17.東三省宣統元寶雙毫。

PLATE CV. LATE QING PROVINCIAL DOUBLE-DIMES

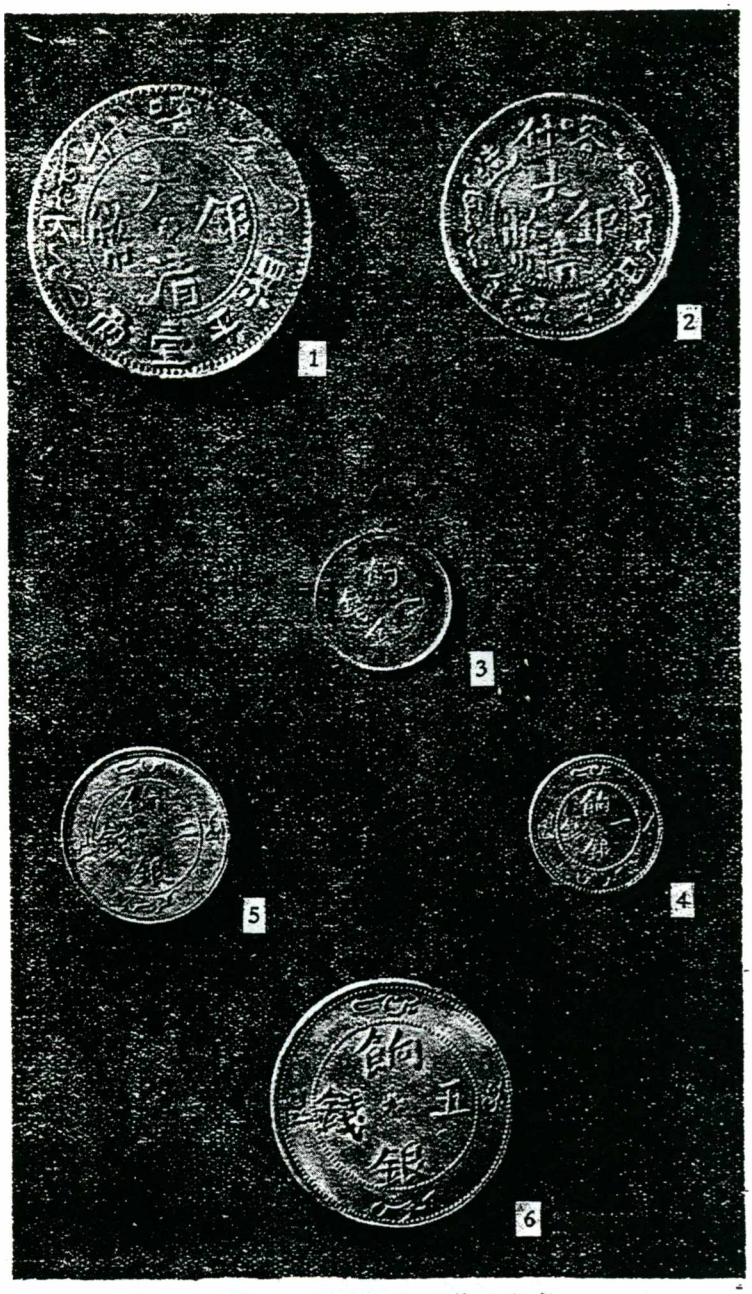
1. Guangdong Double-dime. 2. Hubei Double-dime. 3. Hunan Double-dime. 4. Beiyang Double-dime. 5. Anhui Double-dime. 6. Sichuan Double-dime. 7. Fujian Double-dime. 8. Zhejiang Double-dime. 9. Yunnan Double-dime. 10. Three Eastern Provinces [Manchuria] Double-dime. 11. Fengtian Double-dime. 12. Jilin Double-dime. 13. Beiyang Machinery Office Double-dime. 14. Manufacture of coins General Factory Double-dime. 15. Shanxi Xuantong Original Treasure Double-dime. 16. Fengtian Machinery Office Double-dime. 17. Eastern Three Provinces Xuantong Original Treasure Double-dime.

圖版一百零六　清末各種地方銀幣

1.四川盧比。2.湖北的一兩銀幣。 3.新疆的餉銀一兩。

PLATE CVI. LATE QING LOCAL SILVER COINS

1. Sichuan Rupee. 2. Hubei's 1-ounce silver coin. 3. Xinjiang's Supply Silver 1-ounce.



圖版一百零七　新疆的金銀幣

1.喀什的大清銀幣湘平一兩。 2.喀什造大清銀幣湘平五錢。 3.餉金一錢。 4.餉銀一錢。5.餉銀二錢。6.餉銀五錢。

PLATE CVII. XINJIANG GOLD AND SILVER COINS

1. Keshi Great Qing Silver Coin Xiang-weight 1 ounce. 2. Keshi made Great Qing Silver Coin Xiang-weight 0.5 ounce. 3. Supply Gold 0.1 ounce. 4. Supply Silver 0.1 ounce. 5. Supply Silver 0.2 ounce. 6. Supply Silver 0.5 ounce.

5. Paper Notes

The history of Qing Dynasty paper money may also be divided into three very clearly defined stages. The first was the stage of the Certificate Strings of the shunzhi period in the mid-seventeenth century. The second was the stage of the Government Bills and Treasure Certificates of the xianfeng years of the mid-nineteenth century. The third was the stage of the Exchange Ticket from guangxu times on after the third quarter of the nineteenth century.

The Manchus were descendants of the Ruzhen-Jin, and had probably been deeply impressed by the history of the monetary inflation of their ancestors. Hence they were extraordinarily cautious about issuing paper money. They made it a principle not to employ paper money, and only circulated it when they had no choice but to do so. Once the difficulty was past, they would halt its use.

The first time they used paper money was in shunzhi 8 (1651). Although the "Rushing Prince," Li Zicheng, had by then been defeated militarily, and the Ming Prince of Fu had long since been captured, a number of places remained under the banners of the Prince of Lu and the Prince of Yongming, and were still offering strong

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resistance. The Qing armies were engaged in the advance against Siming and Zhoushan in shunzhi 8, and government expenditures were very large. Dorgon, the Prince of Rui, had died, and the Shunzhi Emperor had taken personal charge of the government. Wei Xiangshu had just taken over the fiscal administration, and income did not match budgeted expenditures. This was the background for the issue of Certificate Strings. However, only 128,172 strings and 470 cash worth of notes were issued annually, and after Prince Yongming was killed during shunzhi 18, and general peace established, issue of paper money was halted. From first to last it had only been used for a decade, and a total of 1,281,724 strings 700 cash worth had been issued.

Material on the Certificate Strings of this period is extraordinarily scarce. We have no idea what they looked like. The histories say they were patterned on the old Ming issues, so they must have been not too different from the Great Ming Treasure Certificates. From the figures for the amount of their issue, we may surmise that their face values probably ran from 10-cash to 1-string, just as was the case with the Great Ming Treasure Certificates. Since not many were issued, and they did not circulate for long, they were of no great importance.

From the time that issue of Certificate Strings was halted, the Qing government did not issue paper money for more than another 190 years. Wu Sangui's rebellion extended over ten provinces, and lasted eight years, but never led to the issue of paper money. Thereafter, people sometimes proposed using paper money, but the authorities never accepted such advice, and even reproached those who offered it.

For example, in jiaqing 19 (1814), the Expectant Discussing Academician Cai Zhiding proposed using mulberry paper certificates. Not only was this advice not accepted, he was punished for having disordered the administration through thoughtless speech.[1]

During the daoguang period [1821-51] Wang Liu wrote *Simple Words on Coins*, in which he advocated adoption of a system of paper money, with copper cash as a secondary money, and abolition of the use of silver.[2] This proposal seems to have evoked

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[1] *Qing Dynasty Investigation of Literary Remains Continued*, jiaqing 19, proclamation: "The Expectant Discussing Academician, Cai Zhiding, offered a memorial requesting employment of mulberry paper notes. Use of paper money by previous dynasties brought abuses by the hundred. The little people chased after profit like ducks. Compared to metal coins, mulberry paper money is especially easy to counterfeit. As a consequence, criminal prosecutions are bound to proliferate. Pettifoggers will mass together, and will keep us from distinguishing the route which inconveniences the people from that which profits and conveniences them. Moreover, the expenditures of the state should match income with outgo so that there are no delays in payments or shortfalls. Why should we lightly change the old rules when there is no profit from doing so, and the harm will be great? Cai Zhiding's writing was transmitted to the Ministry for discussion, and he was reproved for thoughtless words which would disorder administration."

[2] Wang Liu's proposal in "Coin Certificates Itemized" was as follows:

Item: Certificates to be divided into seven denominations: 1,000-strings and 500-strings would be large Certificates; 100-strings to 50-strings would be medium Certificates; 10-strings, 3-strings and 1-string would be small Certificates. Coins would come in three denominations: 100-cash, 10-cash and 1-cash.

Item: The Certificates must be made of selected beautiful paper, lacquer-white glossy, thick and long-lasting. Since it will be used to make Certificates, buying and selling of this paper among the people must be prohibited.

Item: The large Certificates must be elegant, and so we must select the ten best calligraphers in the Empire to write the text which will appear on the note. . . . For a 1,000-string Certificate, the cost would be 50 Thousands; for a 1-string Certificate, the cost would be 100 cash.

Item: Gold, jade, water crystal, silver and copper will be used to engrave the jade printing plates.

no notice from the authorities. In xianfeng 2 (1852), the Governor of Fujian, Wang Yide, also memorialized a request for use of paper money. The authorities still assumed paper money would be obstructed and hard to circulate.[3] Actually, by that time the fiscal administration of the Qing government was already in difficulties, and it soon had no choice but to use paper money.

Though the government did not issue paper money, paper notes had long since been circulating on the market. We cannot tell either the forms or the circumstances of origin of these notes. In addition to drafts,[4] since the beginning of Qing, the Silver Bills issued by the pawnbrokers [Plcxiii] and those in the coin trade could also have found their way into circulation.[5] Silver Bills were a kind of promissory note which could be redeemed for cash at the end of a fixed period.[6]

By the jiaqing and daoguang periods during the first half of the nineteenth century, in addition to Silver Bills and drafts, there were also Cash Bills.[7]

Item: The large coin will employ copper-nickel alloy. The middle and small coins will employ brass and red copper.

Item: Certificates and large coins will be issued to money shops, and they will be prohibited from issuing private drafts and Cash Bills. If they are ordered to take Certificates and large coins up to 10,000 strings worth, and are pressed to exchange them for silver after half a year, a profit of 10 percent will be allowed the money shops, since they will only have to turn in 9,000 strings worth of silver. Another 10 percent profit will be given to the people, since they will only have to pay in 8,000 strings worth.

Item: Once the Certificates are in circulation, all taxes in kind and cash will be taken in Certificates. Amounts of less than 1 string will be collected entirely in coin.

Item: When enough Certificates have been made to meet the needs of the Empire, then their production should be halted, and after two or three decades additional ones should be made along the old lines. There would be no need to change the system.

Item: After five or ten years, when the Certificates are circulating in abundance, the silver held by the people will no longer get to serve as money.

Item: Merchants engaged in foreign trade may only exchange goods for goods. They may not use silver. If people from other countries come carrying silver, they must be ordered to first exchange it for Chinese Certificates, and only then be permitted to engage in business.

[3]*Qing History Draft*, "Treatise on Food and Money": "Certificates had been circulated in shunzhi 8. Over 128,000 were made annually, but this was stopped after a decade. During the jiaqing period, the Expectant Discussing Academician, Cai Zhiding, requested the circulation of Certificates. In xianfeng 2, the Governor of Fujian, Wang Yide, also made such a request. The court discussed it, but because these notes would be obstructed and hard to circulate, turned down the request."

Qing Emperor Wenzong Veritable Record, 64, xianfeng 2, 6th month, dingwei: "Prior to this, the Fujian Governor, Wang Yide, memorialized calculations on the circulation of paper money to aid in meeting emergency demands. The major army officials were ordered to meet with the Board of Revenue to discuss this memorial. This memorial called for having the silver, coins and notes circulating among the people and held by the shops to be collected. Certificates would be used in place of silver. Certificates would be used in place of coins. If the silver and coins are taken from the shops unequally, the faith of the people would be undermined, there will be obstructions, and the paper money will be difficult to circulate. It was recommended that such proposals to circulate notes not be adopted, and this recommendation was accepted."

[4]*Dessicated Words of the Old Man of the Wilderness*, chapter 77: "But although Father Wen has put out the go-between's transport, the money has not been issued. In serving as go-between between Tiansheng and Rubao, I have cashed into silver 10,000 in drafts."

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[5]*Ibid.*, chapter 12: "On the wall was pasted an oath not to pay in silver drafts, and not to borrow via pawn tickets."

[6]*Ibid.*, chapter 27: "The accountant said 'If I now give him [ready cash], I fear he will change his mind. I will go with him to the release shop, and have a Silver Bill issued to him. If we wait until the funeral is over to give him the silver, it will only cost us one percent."

[7]*Qing Emperor Xuanzong Veritable Record*, 312, daoguang 18, 7th month, the Shanxi Governor, Shen Qixian, memorialized: "I have investigated the trade in goods among the people. Few places use silver. Most places use coin. In Jiang, Zhe, Min and Guang provinces, foreign coins are circulated. In Zhili, Henan, Shandong and Shanxi, Cash Bills are used. If we suddenly ban Cash Bills, the situation will require use of foreign coins. . . I have now investigated Jin [Shanxi] province, and found that Cash Bills have such names as check, exchange check and upper check. All of these are bills which can be presented for payment in place of coin, and are no different from ready cash. There is no merit to banning them. In addition to these, there are also such labels as upper check, bottle check and time period check, none of which are exchanged for ready cash. I must request their prohibition."

Liang Gongchen, *North East Garden Pen Record*, first compendium (daoguang 22), 5, "Poor Family Gift of Rice": "Liao Yiqing was an Inspector, and spoke of his ancestor Lord Guanglu. He had been an official in Baifuchang. His family was poor and he was in his old age. He was alone, and had nothing to manage with. As the afternoon lengthened, he sat alone. There was a student who sent an envelope in honor of the new year. When he opened it, he saw it was a Cash Bill for 1,000. . . . Holding the Bill, he led his horse out the gate, and went to the grain hulling shop to buy more than 5 *dou* of rice."

Ibid., "Picking Up What Has Been Lost, and Not Returning

There is no way to determine the origins of Cash Bills. They might have begun as a kind of dated bill, with the due date written in when they were issued.[8]

The difference between these and Silver Bills was probably the same as the difference between silver and cash coins. Perhaps the face values of Silver Bills were a bit higher, and of Cash Bills
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a bit lower, so that the circulation of Cash Bills was a bit greater. According to the accounts in the unofficial histories [i.e. works of fiction], the face values of Cash Bills were 500-cash, 1-string, 2-strings, 2-strings 500 cash and up to 5-strings or more.[9] However, circumstances varied by province. There were also many different names for Bills, as for example the Reliance Checks, Exchange Checks, Upper Checks, Bottle Checks and Dated Checks of Shanxi. The first three of these were dated Bills, and may be said to have been genuine paper notes. The latter two somewhat resemble the later fixed period cashiers' bills.[10]

During the daoguang and xianfeng periods, not only were Silver and Cash Bills from Chinese money shops and silver houses circulating on the market, but foreign bills had already appeared. Wang Yide's memorial had mentioned foreign bills.[11] These were probably limited to places like Fujian and Guangdong. By then, five treaty ports had been opened, and the English had set up banks in China.

The second time the Qing court issued paper money was in xianfeng 3 [1853]. Wang Yide's memorial had undoubtedly had a very large influence, but the advance of the Taiping armies also caused advocates of issuing paper money to become very numerous.[12] As a consequence, two kinds of paper money were issued.

It": "Liao Yiqing also said that of old his family was in a shop on a narrow street in the north of the city. . . . One day . . . on the counter was left a small cloth bag. When they opened and examined it, they found two pawn shop tickets, and over 500 strings in Cash Bills."

Xu Mei, *On Certificate Money* (daoguang 26, 7th month): "The advisers said that many among the people used Cash Bills and Drafts. Whenever a money shop closes its doors, all its notes become useless." *Ibid.*, "The masses suffer from the weight of silver causing obstructions. Hence they are happy to use Bills. Exchanging silver for Certificates will give people what their hearts desire."

[8]*North East Garden Pen Record*, 3rd compendium (daoguang 25), 3, "Birthday Good Deed": "In Wuxi there was a man named Xu Changsheng . . . who at this time was sixty years of age. His relatives and friends exhorted him, saying 'On every birthday you must do a good deed.' . . . Xu asked how much it should cost. His relatives and friends replied that it should be over 300 strings of cash. Xu agreed, and a few days before his birthday wrote a number of Cash Bills for the amount indicated, and went to his impoverished friends' and relatives' houses to distribute them. . . ."

[9]*High Grade Treasure Inspection*, chapter 3: "'How can we believe that seller of jade utensils? He says, "Milord, if you have no silver, then use Bills." Pincai said, "I don't even have any Bills."'" *Ibid.*, chapter 9: "The next day came. They could only borrow 10 strings worth of Cash Bills from Xu Shun, divided among two Bills. They wrote a letter, and had Fourth Son deliver it to Ye Maolin." *Ibid.*, chapter 13: "He looked fixedly at him for a long time, then drew out from his trousers a leather purse containing a wad of Cash Bills, 10-string and 8-string ones mixed together. He put together 200 strings worth of Capital Cash, gave them to Huifang, and said, 'There's your 200 strings.'" *Ibid.*, chapter 23: "Then tell him to take 5 strings of large coins from his little messenger Wang Bao, and deposit them in the coin shop at the mouth of the lane in exchange for 10 Bills."

[10]Cf. note 7.

[11]*Qing History Draft*, 214, "Biography of Wang Yide," xianfeng 2 memorial states: "Among the many matters involving maritime defense, the expenses of smelting down metal are gradually increasing. Guangxi army requirements, the issue of funds for river labor, come to more than 10 million. The present situation has become difficult. What can be done for the future? . . . To expend more silver will not be as good as changing over to the circulation of certificates and vouchers. Historically, the capital region, Shandong and the region east of the passes have mainly used Cash Bills. In Fujian, Silver, Cash and Foreign Bills all circulate together. They are convenient to carry, and are treated like ready cash. The merchants also have faith in paper money.

"How much more would it be so if the Ruler of the Empire, with the weight of the state's treasury should make Treasure Certificates, that these would be especially easy to circulate. It is only necessary for the style of the Certificate to be simple, basing itself on the ounce, promulgated to the foreign treasuries, communicated to the peoples of the four quarters of the globe, and permitted to be used fully for commuted taxes in kind, for there to be no blockage of its use. . . . The communication was transmitted to the high army and civil officials to join with the Board of Revenue for discussion."

[12]*Qing Dynasty Investigation of Literary Remains Continued*, xianfeng 3: "The Board of Revenue memorialized that in xianfeng 2, 9th month, the memorial of Huasha requesting circulation of paper notes had been received. . . . It set out 32 articles on making, issuing and exchanging certificates, and gave 14 advantages of using them. . . . It requested that merchants inside and outside the capital be requested to establish three official silver and coin establishments, each to be given a sum of silver from the treasury for its capital. The Boards of Revenue and Works were to each month transmit to the treasury one *mao* of

One was the Great Qing Treasure Certificate [Cf. Plate cix at end of this subsection], with the standard coin as its unit. These were also called Cash Bills or Cash Certificates. They were first divided into 250-cash, 500-cash, 1,000-cash, 1,500-cash and 2,000-cash denominations. Later they were inflated to 5,000-cash, 10,000-cash, 50,000-cash and 100,000-cash face values.

The other kind was the Board of Revenue Official Bill [Plate cviii], with the silver ounce as its unit, and also called Silver Bills. These were divided into 1-ounce, 3-ounces, 5-ounces, 10-ounces and 50-ounce denominations, which was quite a few.

The designs of these two paper notes were rather similar to that of the Great Ming Treasure Certificate, except that they were smaller. They were made of white hide paper. The Treasure Certificates were smaller than the Official Bills, but both of them came in various sizes proportioned to their face values, large denominations appearing on large notes.

The four characters for Board of Revenue Official Bills appeared on the Official Bills, on the left side in Manchu, and on the right side in Chinese, both in double columns. In the middle of the note appears the statement Two Ounces Weight Pure Silver such-and-such-amount-of Ounces. The reference to two ounces weight meant that each 100 ounces would be two ounces short of the Beijing market weight, and 6 ounces short of the treasury weight. Below was the statement: "Board of Revenue memorial to issue Official Bills. All wishing to take Official Bills to exchange for silver and coin will be given silver uniformly. They may also, in accord with regulations fixed by the Board, have official articles handed over. Counterfeiters will be punished in accord with the law, without pardon." All this was surrounded by a decorative border of dragons.

On the top of the Cash Certificate are the four characters for Great Qing Treasure Certificate, written horizontally. In the center is the statement of the number of standard coins with which the note is equated, and on either side is the statement that they are to circulate all through the Empire, and are to be accepted and paid out at equal value. Below is written "This Certificate is issued for use as substitute for standard coins. It may also be paid in to meet local head tax, taxes in kind, and all excise taxes. Both at and outside the capital all treasuries will accept and release it. Each Cash Certificate of 2,000 cash may exchange for a 1 silver ounce Official Bill."

The term Certificate-Bill originated from this, as a collective term for both Treasure Certificate and Official Bill. At first the label Certificate-Bill solely referred to the government-issued paper money, and the Cash Bills circulating among the people were not included.[13] Later, however, when they were no longer issued, the Silver and Cash Bills issued by merchants also came to be called Certificate-Bills.

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They made no connection then between these and the private bills on the market.[14] Official Bills and Treasure Certificates were not, however, full legal tender money. They could only constitute 30 or 50 percent of tax payments.[15] Because of the monetary

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coin.

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There would be an equal distribution of Cash Bills from the silver treasury to these official establishments for making payments and collections. This is so that coins and Cash Bills would support each other's circulation. The exchange of one for the other in circulation would benefit both soldiers and civilians. As for the salary silver received by princes, dukes and officials in the capital . . . it was proposed that hereditary positions from imperial clan prince on down, and from earls on up, civil ranks from the fourth rank up, and military ranks from the second rank up should all be given half their salaries in Dated Bills, with an expiration date of the 1st of the 8th month, when they can take the Bills to the treasury to be paid their Autumn salary silver."

Ibid., "For the last two years, army requirements and river supplies . . . have been allocated with difficulty. At the center and outside of court, the officials have been devoting their attention to affairs of state. All have given exhaustive attention to the matter. Each has given expression to what he has seen, and those requesting the issue of paper money have become numerous."

[13]Bao Kang, *Large Coin Illustrated Record*, which appends the "Letters to Yan Dan First Discussing Certificates" (the xianfeng 4 proposal), calls both Treasure Certificates and Official Bills by the name Certificate-Bills, to distinguish them from private Cash Bills.

[14]*Qing Dynasty Investigation of Literary Remains Continued*, xianfeng 3: "It was also proclaimed . . . that as requested, the label Official Bill was determined upon. They would first circulate in the capital, and as they gradually circulated more broadly, their circulation would then be proclaimed in the provinces, so that they would be uniformly honored. . . . Private Silver and Cash Bills would continue to circulate at the convenience of the people."

[15]*Qing History Draft*, "Treatise on Food and Money": "It was recommended that a 1-ounce Silver Bill be commuted to 2,000 standard cash, and that a 2,000-cash Certificate be commuted to 1 ounce of silver. Bills and Certificates were to be interchangeable. In paying capitation, commuted taxes and excises, as well as all official funds, these notes could constitute half the payment. This was to be the case outside the capital as well." *Ibid.*, "In the 7th year it was ordered that in all cash and kind payments in Shuntian and Zhili, from this year on, 40 per-

inflation that resulted, there was no choice but to liquidate these notes by the end of the xianfeng period (1861).[16] Hence this second issue of paper money, like the first one, was short-lived. Private bills continued, however, to circulate among the people.

Foreign commercial banks were established in Chinese cities after the Opium War. Most of these banks issued bank notes in China. This had begun at the very latest during the xianfeng period. Their bank notes may be divided into two kinds. One kind employed Chinese monetary units. The second kind used foreign units.

Of the former, firms like the Chartered Bank of India, Australia & China, the Hong Kong & Shanghai Banking Corporation, the Deutsch-Asiatische Bank, and the International Banking Corporation all issued silver dollar and silver ounce bank notes [Plates cx-cxii], which were the monetary units then circulating in China. Silver Dollar Notes came in five denomination $1, $5, $10, $50 and $100. Silver Ounce Notes came in 1-ounce, 5-ounce, 10-ounce, 50-ounce and 100-ounce denominations. These bank notes were very strong in the Yangtze Valley. Foreign monetary units used included the ruble notes issued in Manchuria by the Imperial Bank of Russia. Japan issued notes for army use in Manchuria at the time of the Russo-Japanese War. Later, the Japanese Yokohama Specie Bank issued gold notes and there was *Gangbi*, or Hong Kong Money circulated in South China. The *Gangbi* of that period was issued by the English commercial banks.

Though some people at the time criticized these foreign bank notes,[17] the Qing government not only did not suppress them, I do not know that they even looked into their management, and they certainly never inquired into the quantity issued or their backing. Some people advocated having China establish banks to issue paper bills,[18] but the Qing court passively observed the situation for a number of years before it learned how to imitate this practice.

At that time, Chinese private bills were mainly issued by silver houses, coin shops and pawn shops [Plate cxiii], and took either the cash coin or the silver ounce as their units, as either Cash Bills or Silver Bills. None took the silver dollar as their unit. The earliest Silver Dollar Bills, so far as we can now tell, were issued by the Beiyang Iron Track Official Road General Office and by Taiwan. Both were issued in guangxu 21 [1895], but the Beiyang Railroad Office one was two or three months earlier. Its note was printed in London.

This may have been China's earliest new style paper money. It differed in format from old style paper notes. The old ones had a vertical format. The

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cent might be made in actual silver, 30 percent in Treasure Certificates, and 30 percent in 10-cash copper and iron large coins. All items used should be paid in accord with these proportions."

[16] *Qing Dynasty Investigation of Literary Remains Continued*: "Tongzhi 1 proclamation . . . According to what is said in the capital, since the liquidation of the Official and Cash Bills last year, prices in coin have gradually levelled."

[17] Zheng Guanying, *Words of Warning to a Flourishing Generation* (daoguang 18), 4, "Banks," first part: "The Silver Bills now used by foreign merchants have not had their worth evaluated either by Chinese or foreign officials. As many as are desired are issued. I have heard that over a million in Hong Kong & Shanghai Banking Corporation Silver Bills are in use in Guangdong. That bank has already obtained a profit of over 2 million. Although there are Chinese merchants holding shares in it, they do not do business with Chinese merchants."

[18] Guangxu 20, the Left and Right Flourishing Capital Army General, Yike Tangke, "Memorial Itemizing a Request to Issue Certificates and Establish Banks": "Now the situation has become extremely pressing. The granaries have unexpectedly accumulated hundreds of millions, and are collecting hundreds of millions in profit. The private certificates have no good aims. Should we wish to circulate certificates, the private banks will have no way to keep their credibility. . . .

The wealth of the Western nations is obtained through the aid of their certificates. From this we can see the profit to be obtained from their issue. If we investigate Japan before its Restoration, we see that it was oppressed and weak. It issued bank notes, and was transformed into a strong nation. Russia in former times had a broad territory and an impoverished people. After issuing bank notes for several decades, its state requirements have been met, and to this moment it depends on them for its needs. These are all instances of imitating Western methods with notable results.

When I, at the beginning of the guangxu period, served as Deputy Governor-General in Heilongjiang, I personally observed that Aijun merchants circulated nothing but Russian Checks, and when Chinese merchants purchased goods, they insisted on exchanging their silver for Checks before they would do business for their goods. Within several hundred *li* of the border Russian Checks were a flood, and numbered no less than several million. Later, when I was shifted to Hunchun, I saw Chinese and Russians in the market still using Russian Checks predominantly. When I now ponder on this, I conclude that if China had issued notes early on, then these could have replaced the Russian paper money. If those Russian notes could have been resisted, then leakage of wealth across the frontiers could have been blocked."

Qing History Draft, 23, "Basic Annals of Emperor Dezong," guangxu 21, 5th month, proclamation: "Recently, there have been Chinese and foreign official works proposals, such as building railroads, turning out paper money, building machinery and opening mines."

new style notes had a horizontal format. The old ones were large. The new ones were small, and they employed inscriptions in both Chinese and English. The obverse bore a picture of a railroad train crossing a bridge, around which was arranged the motto "Guangxu Year Number Yiwei 3rd Month Auspicious Day Manufactured."

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I have not been able to learn if there are any dated earlier than this. However, the guangxu 24 bill [Plate cxiv] bears the name Shanhaiguan Within and Outside the Border Railroad Office, and its date is changed to read "Great Qing Guangxu 20 and 4 Year Made." The rest of the design is the same. The reverse is entirely in English, and employs the name "Imperial Chinese Railways." Therefore, this may be treated as official money.

After the first Sino-Japanese War, Taiwan established the Tainan Official Silver and Cash Bill General Office and issued Official Silver Bills, in One-large-dollar, Five-large-dollar and Ten-large-dollar denominations.[19] Their format is entirely of the old style. They are vertically oriented and made of two materials, bamboo paper and animal fiber paper. They are virtually identical to the Treasure Certificates and Silver Bills of the xianfeng period.

The characters []^{a} and []^{b}, which we translate as "dollar," did not begin with the issue of bank notes by the foreign banks. They were already in use as early as the qianlong period. For example, in qianlong 54 [1789], the Governor-General of Min-Zhe memorialized that during Ming boat merchants going from Amoy to Luermen were reckoning in terms of the *yuan*^{a}.[20] In the official documents of the time, the silver coins of Tibet were also called *yuan*, written in either of these two forms.[21]

It was not until guangxu 23 (1897) that the Qing court accepted the proposal of Sheng Xuanhuai, and established the *Zhongguo tongshang yinhang*. The following year that bank issued silver ounce and silver dollar denominated bank notes [Plate cxv]. These were China's earliest exchange tickets. They were new style notes, using both Chinese and English inscriptions. The English name of this bank was The Imperial Bank of China. After the 1911 Revolution, this was changed to The Commercial Bank of China.

Of the provincial official silver and coin offices, the first to issue new style silver dollar bills was probably the one in Hubei, with Guangdong next. Hubei's official coin office had already issued a Cash Bill with a face value of 1,000 cash. This was an old style cash bill. It was in guangxu 25, when Zhang Zhidong was serving as Governor-General of Hu-Guang, that he first issued new style Silver Dollar Bills. These were printed by the Japanese Treasury Department, and both their paper and printing were fine and handsome, but they retained the vertical format [Plate cxvi]. The reverse bore the proclamation signed by Zhang Zhidong and the Governor of Hubei, Yu Yinlin. Hu-Guang went over to printing of new style notes in guangxu 30. The reverse proclamation now was in the names of Zhang Zhidong and Duanfang.

Guangdong's Silver Dollar Bill was also issued in guangxu 30. The Huang Heshun uprising occurred at that time in Guangxi, and was causing a great uproar. The Qing court transferred Cen Chunxuan to the post of acting Governor-General of Liang-Guang, and was counting on the funds these bills would raise to put down the rebellion. The Guangdong Coin Office finally issued three denominations of Silver Dollar Bills, One-dollar, Five-dollar and Ten-dollar. These too were printed by the Japanese Treasury Department, but employed a horizontal format. Depictions of the Guangdong Dragon Foreign appear on either side of the double dragon motif on the obverse. The reverse contains an official notice signed by Cen Chunxuan and the Governor of Guangdong, Li Xingrui.

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It was not until guangxu 30 (1904) that the Board of Revenue began to prepare for the establishment of a government bank which would issue paper money. In guangxu 31, the Reviewing Policy Adviser Peng Shu proposed that at first there should be full backing in ready cash for such a money, but that after its credibility had been firmly established, the quantity issued might be increased to twice or three times the amount of the backing. A stamp tax could be used to limit private note issues.[22] The

[19] These notes were found by the coin dealer Wang Shouyi in Taiwan. He found 20 of the One-large-dollar, 10 of the Five-large-dollar and 6 of the Ten-large-dollar.

[20] *Qing Emperor Gaozong Veritable Record*, 1345.

[21] *Weizang Gazetteer*.

[22] Peng Shu's memorial stated: "So as to go a long time without abuses appearing, when issuing the notes, we must set limits. Western statisticians consider a reserve of silver equal to 20 percent of the bills issued as sufficient for those who might wish to cash them in. In China, however, at a time when the people's faith has not yet been secured, we cannot suddenly let them float empty of backing. When they are first issued, we must calculate how much is actually in the treasury, and limit the quantity of bills to that amount. We will wait until the bills are widely circulating, and then in measured steps gradually increase their quantity until they are twice or three times the ready cash backing, and then stop.

Board of Revenue also memorialized on the advantages of setting up banks to issue paper money, and requested that the Beiyang Newspaper Office print the first Board of Revenue bank notes.[23]

The Board of Revenue Bank was set up by the end of the year. The following year, the Board of Revenue memorialized to request the despatch of officials to Japan to investigate the requirements for printing paper money. The Commercial Press printed the Great Qing Board of Revenue Bank Exchange Ticket [Plate cxvii]. The obverse was in Manchu and Chinese. The reverse was entirely in English. Printed on the note was the place name, limiting the note's circulation to that place.

The Great Qing Board of Revenue Bank's bills were, according to the regulations, divided into two types. The first was a silver ounce bill, in five denominations: 1-ounce, 5-ounce, 10-ounce, 50-ounce and 100-ounce. The second was a silver dollar bill, also in five denominations: $1, $5, $10, $50 and $100. However, the face values of the silver ounce bills were not necessarily in accord with these rules, since I have seen a 2-ounce bill, and I have heard there are denominations higher than 100-ounce. As for the silver dollar bills, only denominations up to $10 were ever issued.

After the Board of Revenue was changed into the Board of Revenue and Finance, the bank's name was changed to Great Qing Bank. The label of the guangxu 33 note reflected this change, but the design was otherwise unchanged [Plates cxix, cxx]. The authorities had proposed creating a printing plant and a paper mill, but this was never carried out. In xuantong 1 [1908], the printing was entrusted to the American Bank Note Company.

There were five denominations, from $1 to $100, and there was a change to a new design, on which was a picture of the head of Li Hongzhang. There is one surviving note which bears a portrait of the Minister of Revenue and Finance then, Dai Ze, and of a dragon in the sea. The design is extraordinarily handsome, and it was printed by the Chinese themselves. However, most of those I have seen are model notes. Apparently they never went into circulation.

The quantity issued by the Great Qing Bank increased over the years. The silver dollar bills in particular multiplied rapidly. By the end of the intercalary 6th month of xuantong 3, the total issue of silver ounce bills was 5,438,910.759 ounces worth. The total issue of silver dollars issued was $12,459,907.898.

Even after the new style bank notes had been issued, some people still preserved the old style ones. For the most part, Cash Bills, Copper Dollar Bills and Silver Ounce Bills preserved the old format. Whether issued by such privately managed entities as money shops, silver houses and pawn shops, or by the various provincial official silver

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We should check into the varying supply of silver on the market from time to time as the basis for this increase. Private bills in use among the people need not be banned. When the official bills are in general circulation, there will be no private bills, since the public bills will be sufficient to supply the requirements, and they will be self-regulated to limit their number. We may imitate the stamp tax method [Used in the American National Banking Act of 1863 to eliminate competition for national "greenback" notes from the private notes of state banks by taxing the private notes. EHK] All merchants who issue private bills would have to affix stamps to them. The tax would be set at a certain percentage. Bills would only be made by artisans carefully selected by the Board of Revenue, and these would be strictly supervised. I have heard that various provinces have had bills and stamps manufactured abroad, and that there has been some counterfeiting. We must guard against this." (*Ministry of Finance Coinage Compilation.*)

[23]The Board of Revenue memorial stated: "We find that banks are the key to financial administration, and paper money is the key to banks. When banks are established in different countries, they normally issue paper money, and collect deposits in gold and silver. . . .

"In general, the amount circulated by banks is in proportion to the quantity of paper money. At the very least, it is necessary to have a reserve of 30 percent. The remainder can be made up of instruments of public debt which have been purchased, and discounted commercial notes. The treasury can profit from this turnover, and there will be no place where there is a shortage of exchange. This Board in the 3rd month of last year memorialized on the determination of trial banking regulations which contained articles on the issue of paper money. The Reviewing Policy Adviser has now requested the circulation of paper money. We have investigated the methods he proposed. . . . They are for the most part identical to the proposals made by our Board. . . .

"Only the purchase of machinery and selection of artisans remain. If these are delayed for a year, the matter cannot be joined. There is an urgent need for a bank to be set up. It would make for real difficulties if there is a long delay. We have looked into the Beiyang Official Newspaper Office which is equipped with printing machinery. The paper notes it would print would be extremely fine and good. Moreover, it is a Chinese official bureau, with a different form of organization from that of foreigners. We have already instructed the general manager of the bank to visit that office to prepare an agreement with it, so that preparations for the manufacture of the notes can be made. After our Board has purchased machinery and set up a factory, we can manufacture them ourselves. . . ." (*Ministry of Finance Coinage Compilation.*)

and coin offices, these were still in the vertical format, except for the Silver Dollar Bills, among which the horizontal format was predeminant. For
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example, the standard coin and silver ounce bills issued by the Jiangxi Official Silver and Coin General Office [Plate cxxi, cxxii] were all in the vertical format, whereas its silver dollar bills employed the horizontal format, but the Hubei, Hunan and Zhejiang provincial official coin offices' silver dollar bills used the vertical format. Those issued by the new style banks, however, mostly had horizontal formats, even when they were silver ounce bills.

There were two types of vertical format notes: Those with printing on one side only, and those printed on both sides. Those printed on one side preserved the historical form of paper money, the blocks for which were sometimes carved from wood, and printed on bamboo paper or animal fiber paper produced in China.

For example, the silver dollar bill issued by the Tainan Official Silver and Cash General Office in guangxu 21 resembled the xianfeng period Board of Revenue official bills. A number of silver and cash bills of some private coin shops and silver houses were also made of bamboo pulp paper, and the inscriptions are written with black ink and writing brush. In addition, there are a number of not necessarily meaningful chop marks on them to guard against counterfeiting.

Those printed on both sides mostly employed foreign paper like glazed printing paper. Silver and cash bills issued by the provincial official silver and cash offices normally had printed on their reverses some announcement on the circumstances of their issue, and these provide excellent material for the study of the circulation of money at that time and in that place. If there is no such announcement, then the obverse usually provides some explanation of the circumstances.

For example, the Guning Official Silver and Coin Office's Cash Bills contain no announcement on their reverse, but on the obverse is printed the statement "This bill may be paid in for this province's public funds, as well as excise taxes, salt gabelle and *likin*. Any who privately carve blocks for and counterfeit these will be punished according to the rules for private coining." That office's Copper Dollar Bill has an announcement on its reverse, and also has the same inscription on its obverse as does the Cash Bill, but adds the following: "Official bill full string. Various branch offices discount the string to various degrees. In those places it will be commuted according to market practice for the convenience in use of the merchants and people."

During late Qing the hard money in circulation made a transition from use of copper cash to the copper dollar. This transition was reflected among the forms of paper money as well. For example, the paper notes issued before guangxu 33 [1907] by the Jiangnan Guning Official Silver and Coin Office took as their unit the 9 8 standard coin. The Cash Bills it issued in guangxu 29 have printed on their obverse the motto "Bill based on one string of nine-eight standard coins." Later the new style copper dollar went into circulation, and a red stamp was added to the face of the bill reading "exchanges for double ten-cash copper dollars, one hundred coins." By guangxu 33 they were formally issuing copper dollar bills which "allow the bills to be taken for 100 10-cash copper dollars."

As a consequence, the system for issue of exchange tickets at the end of Qing was in complete chaos. There were five categories of entities issuing paper notes:

The first were the old style credit institutions, including money shops, silver houses, draft banks and pawn shops. They had a history of from two or three to three or four centuries of issuing paper money. Though the quantity issued by any single establishment was not large, the total for the entire nation was no small amount. This was because not only were these institutions distributed among all the cities of national and provincial importance, they had even entered deeply into the markets at the district level.

The second category of issuing institution comprised the provincial official coin offices or official
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silver houses. These were the official financial institutions of the provinces. Therefore, each province should have had one, and some provinces had two of them. For example, Jiangnan had the Guning and Gusu offices, and Xinjiang had more than two. Their branch offices could be set up outside the province. The quantity issued by each office was larger than that of the individual establishments of the first category.

The third category of issuing institution comprised the new style banks, including the foreign banks and banks established by the Chinese themselves. The number of establishments in this category was relatively small. There were twelve or thirteen foreign banks issuing notes at the end of the Qing period. These included the English Chartered Bank of India, Australia & China, the Hong Kong & Shanghai Banking Corporation, the German Deutsch-Asiatische Bank, the Japanese Yokohama Specie Bank, the Korean and Russian Sino-Russian Daosheng Bank, the French Oriental Remittance Bank, the American Huaqi Bank, the Belgian North China Bank, and the Dutch Bank of Holland.

There were only some ten modern banks established by Chinese engaged in the note issue business by the end of Qing. These were The Imperial Bank of China, the Great Qing Bank, the Bank of Communications [Plate cxviii], the Siming Bank, the Zhejiang Xingye Bank, the Bank of Zhejiang, Shanghai's China Credit Bank, the Trust Industrial and Commercial Savings of Hankou, the Beijing Savings Bank, the Baoshan Bank, the Yangzhou Hetai Bank, and the China Mercantile Bank.

Though there were not many of these new style banks, their scale of operations was relatively large. This was particularly the case with the foreign banks, which were amply capitalized, their resources far exceeding those of any of the Chinese-established financial institutions. Added to this were the provisions of the Unequal Treaties, which allowed the foreign banks to have virtually a monopoly on the circulation of money in the places where they issued notes.

The fourth category included other institutions, including such governmental institutions as the railroad office, as well as various mercantile establishments. The exchange tickets issued by these institutions increased the degree of heterogeneity of the monetary system. In addition foreign banknotes flowed into China, as, for example the Russian ruble (popularly called the Qiang Check), Japanese military bills and yen bills.

If we turn to monetary units, we see that they too were extremely complex. Because such exchange tickets were merely symbols for hard money, all of the metal moneys then circulating in China were reflected in these exchange tickets. They mainly fall into three large categories:

The first category comprised Cash Bills. This was the exchange ticket with the longest history. It took the cash coin as its unit. Some Cash Bills issued by small money shops had no fixed face value. The amount required would be inserted when the customer used them. Cash Bills issued with somewhat larger units had the amounts printed on them, such as 500-cash, or 1-string (having 1,000 cash), but every locality had its own customs and different ways of reckoning. Fengtian used Eastern Cash, at 160 to the string. Beijing and Shandong used Capital Cash, of which 1,000 only equalled 500 standard cash. Xinjiang used Red Cash, of which 400 equalled 1 ounce of silver. Other provinces used standard coins, but with a variety of standard weights. For example, Jiangnan's Gusu Official Silver and Cash Office Cash Bills were reckoned in full cash. The Guning Official Silver and Cash Office and Hubei Official Cash Office had Cash

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Bills reckoned in 9 8 standard coins, i.e. 1,000 cash in bills corresponded to 980 actual coins.

Even Cash Bills issued by the same organization might have different standard units at different times. For example, the Jiangxi Official Coin Office issued Cash Bills in guangxu 28 which were reckoned in terms of full-fledged standard coins. The guangxu 29 and 30 Cash Bills were reckoned in terms of 9 5 standard coins. Such Cash Bills were later redeemed in copper dollars. For example, it is noted on the Anhui Guwan Official Coin Office's Cash Bills that "The Bill may be relied upon for issue of x x cash in copper dollar full coins."

The second category comprised the silver ounce bills. This also was an old unit. Some had their face values inserted only at the time of issue, but different silver ounce units were used in different places. Therefore, the silver bill had to specify the kind of silver ounce it used: Beijing sometimes used the treasury ounce, and sometimes the capital weight ounce. The Silver Bills of the Hong Kong and Shanghai Banking Corporation specified that they would be redeemed for Shanghai pure silver. The Shanghai Bank of Commerce's Silver Bills also noted that they would be redeemed for Shanghai standard silver ounces, which probably meant the standard dollar. Hunan used the provincial-weight, i.e. Xiang-weight, which Xinjiang also used. The Shaanxi Great Qing Bank's Silver Bills were denominated in Shan-yi-weight. Jiangxi's Silver Bills employed that province's market weight.

The third category comprised silver dollar bills. The use of this unit for exchange tickets was relatively recent. It was first employed by foreign banks. Face values were relatively uniform, the bills generally coming in denominations of $1, $5, $10, $50 and $100. Small money shops did not often issue large denomination notes, though some issued $2 bills. Because different localities used different silver dollars, the exchange tickets had to reflect this difference. A number of them specified that they would be redeemed in the silver dollars of that place, and a number of them were to be redeemed in Eagle Foreign or English/Brave Foreign coins. Some exchange tickets of the end of the guangxu and the xuantong periods were denominated in Dragon Foreigns. Naturally, some did not specify any coin.

The several standards mentioned above were interlocking. The same bank might issue exchange tickets expressed in several monetary units. For example, in guangxi 33, the Jiangxi Official Silver and Coin General Office was simultaneously issuing Cash Bills, Silver Ounce Bills and Silver Dollar Bills. In addition to those three kinds of bills, the Hunan Official Coin Office also issued Copper Dollar bills. The same institution might issue exchange

tickets simultaneously in different places, with the place names printed on them, and which could only circulate in the place specified. If circulated elsewhere, they might be either discounted or not be accepted at all, because the same institution's silver ounce bills would have to be redeemed in different silver ounces at various locations.

The authorities attempted to regularize and unify the the system during the xuantong period. For example, in xuantong 1 (1909), the Board of Revenue and Finance memorialized "General Use of Silver and Cash Bill Regulations." Official and merchant-run silver houses and coin shops were forbidden to issue paper notes. Those already issued were to be gradually redeemed. The following year the Board memorialized "Exchange Paper Money Rules." The Great Qing Bank

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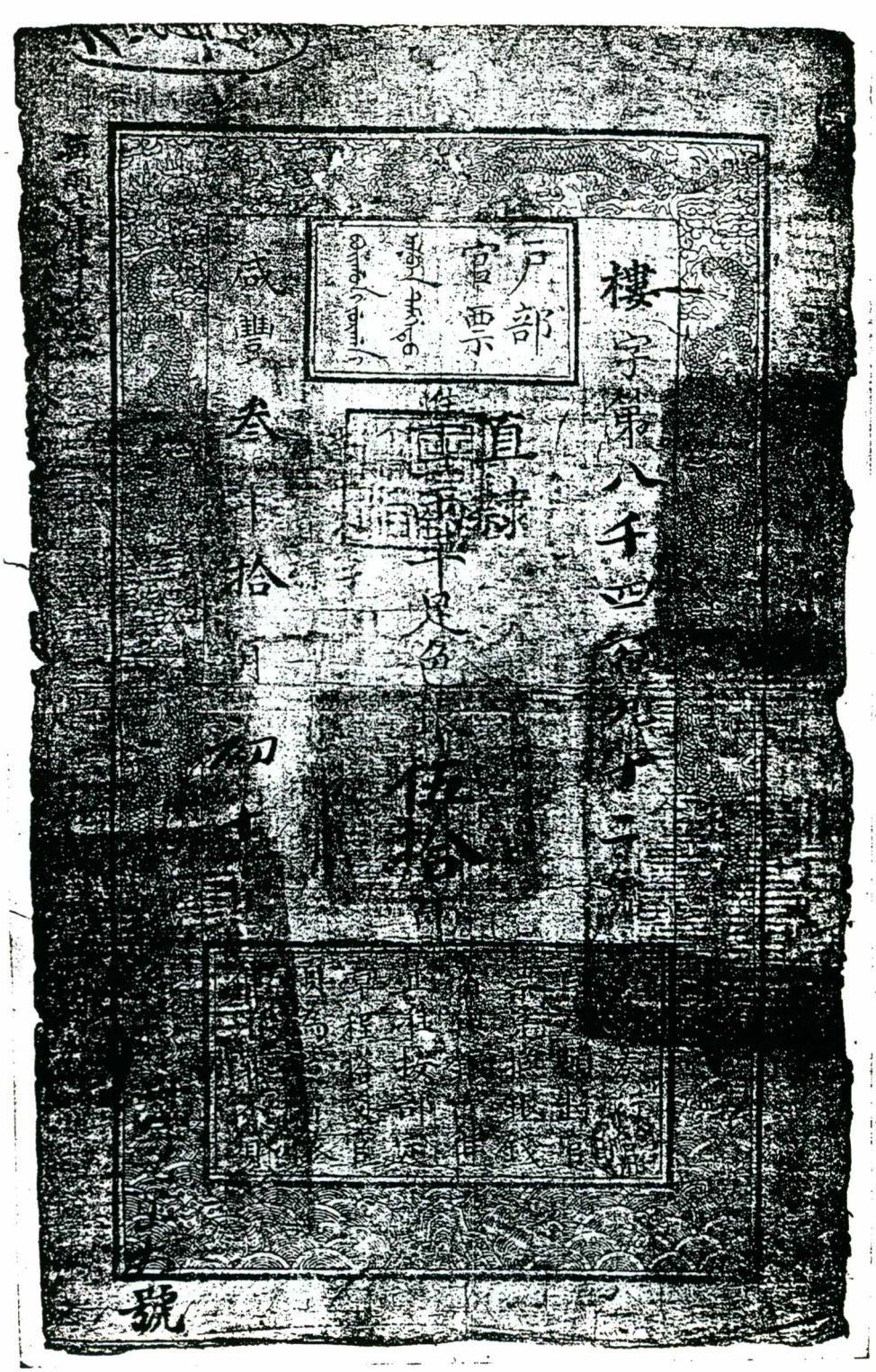
was to unify the issue of paper money on the basis of 50 percent backing. Twenty percent of the outstanding notes previously issued by provincial mercantile establishments was to be redeemed every year, so that in five years they would all have been withdrawn, but before these measures could be put into effect, the 1911 Revolution broke out.

a. 圓 b. 元

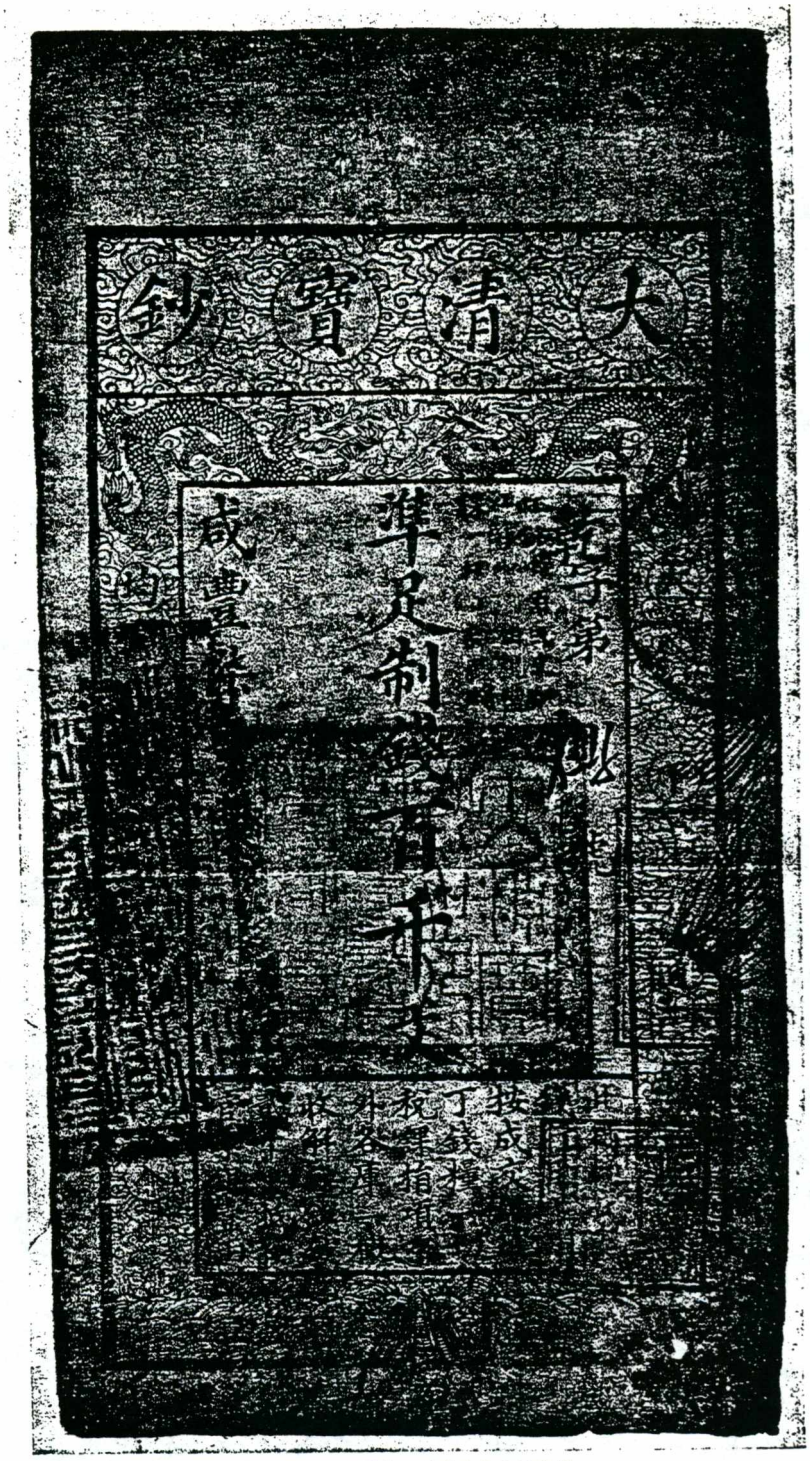


圖版一百零八　咸豐時的戶部官票

清朝政府於咸豐三年(公元1853年)爲應付太平天国革命而發行這種紙幣。以銀兩爲單位，額面分一兩、三兩、五兩、十兩、五十兩五種。

PLATE CVIII. XIANFENG PERIOD BOARD OF REVENUE OFFICIAL BILL

In xianfeng 3 (1853), in response to the Taiping Revolution the Qing government issued this form of paper money. Its unit was the silver ounce. It came in five denominations, with face values of 1-ounce, 3-ounces, 5-ounces, 10-ounces and 50-ounces.



圖版一百零九　咸豐時的大清寶鈔

大清寶鈔也是咸豐三年起發行的。以錢文爲單位，分五百文、一千文、一千五百文、二千文、五千文、十千文、五十千文、百千文八種，以二千文合官票銀一兩。

PLATE CIX. XIANFENG PERIOD GREAT QING TREASURE CERTIFICATE

The Great Qing Treasure Certificate was also issued beginning in xianfeng 3. Its unit was the cash coin, and came in eight denominations: 500-cash, 1,000-cash, 1,500-cash, 2,000-cash, 5,000-cash, 10,000-cash, 50,000-cash and 100,000 cash. The 2,000-cash was equated with the Official Bill 1-ounce.

圖版一百一十　麥加利銀行銀圓票

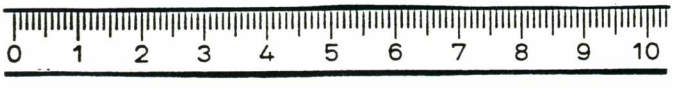
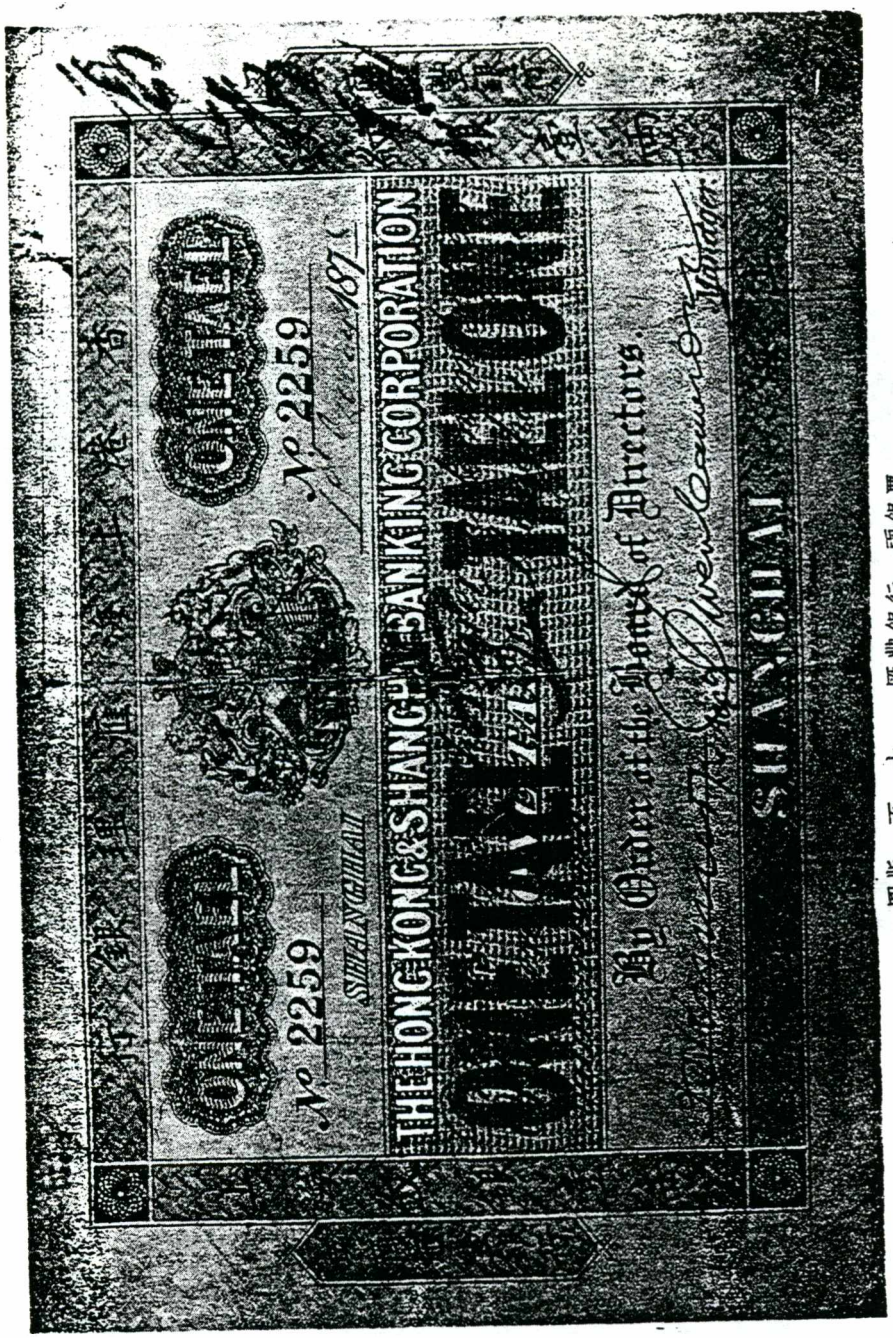


PLATE CX. THE MAIJIALI BANK SILVER DOLLAR BILL
(THE CHARTERED BANK OF INDIA, AUSTRALIA & CHINA)

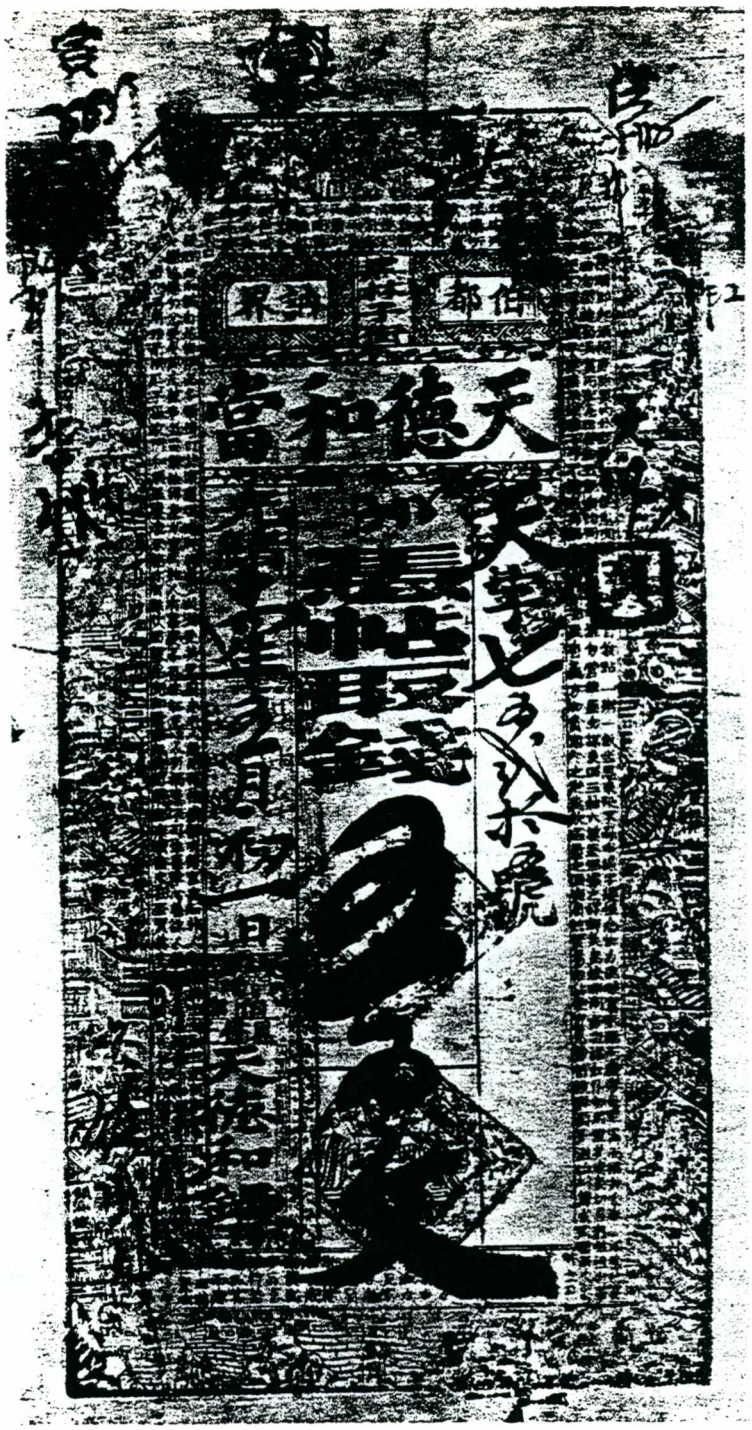


圖版一百一十一　匯豐銀行一兩銀票

PLATE CXI. THE HUIFENG BANK ONE OUNCE SILVER BILL
(THE HONG KONG & SHANGHAI BANKING CORPORATION)

圖版一百一十二　德華銀行銀圓票（公元 1907 年）

PLATE CXII. THE DEUTSCH-ASIATISCHE BANK SILVER DOLLAR NOTE (1907)



圖版一百一十三　天德和當鋪的五百文錢票(光緒十四年)

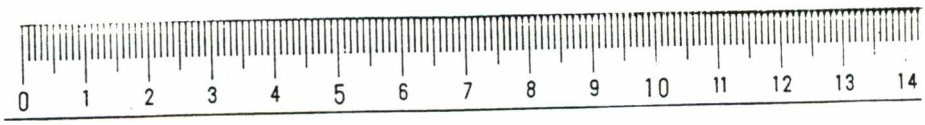
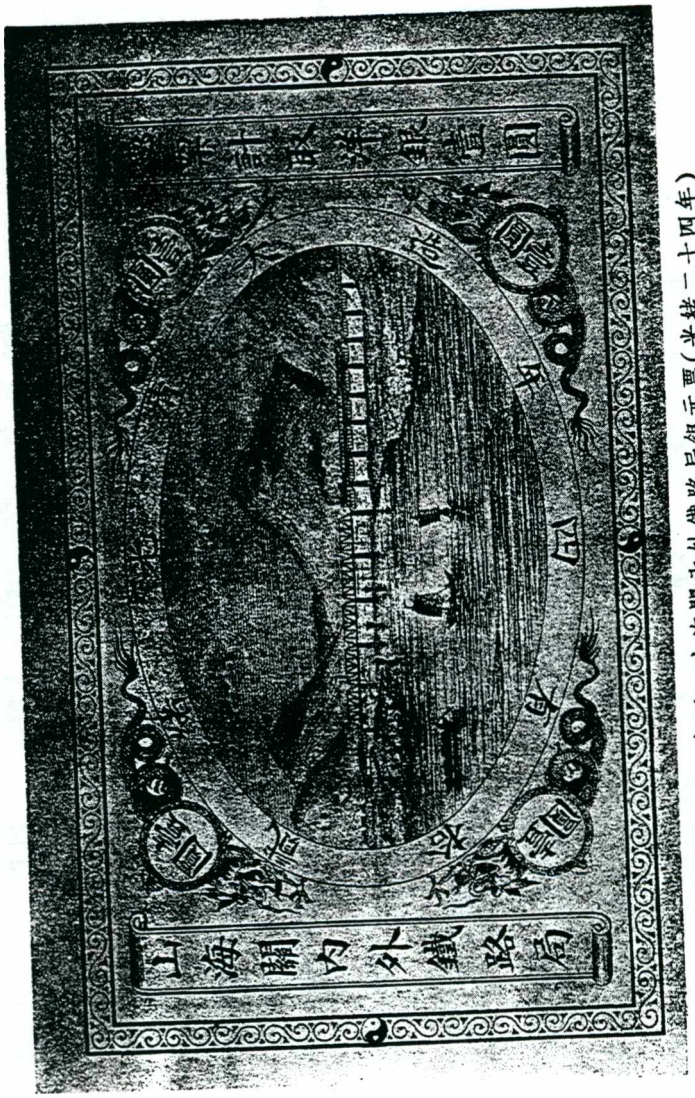
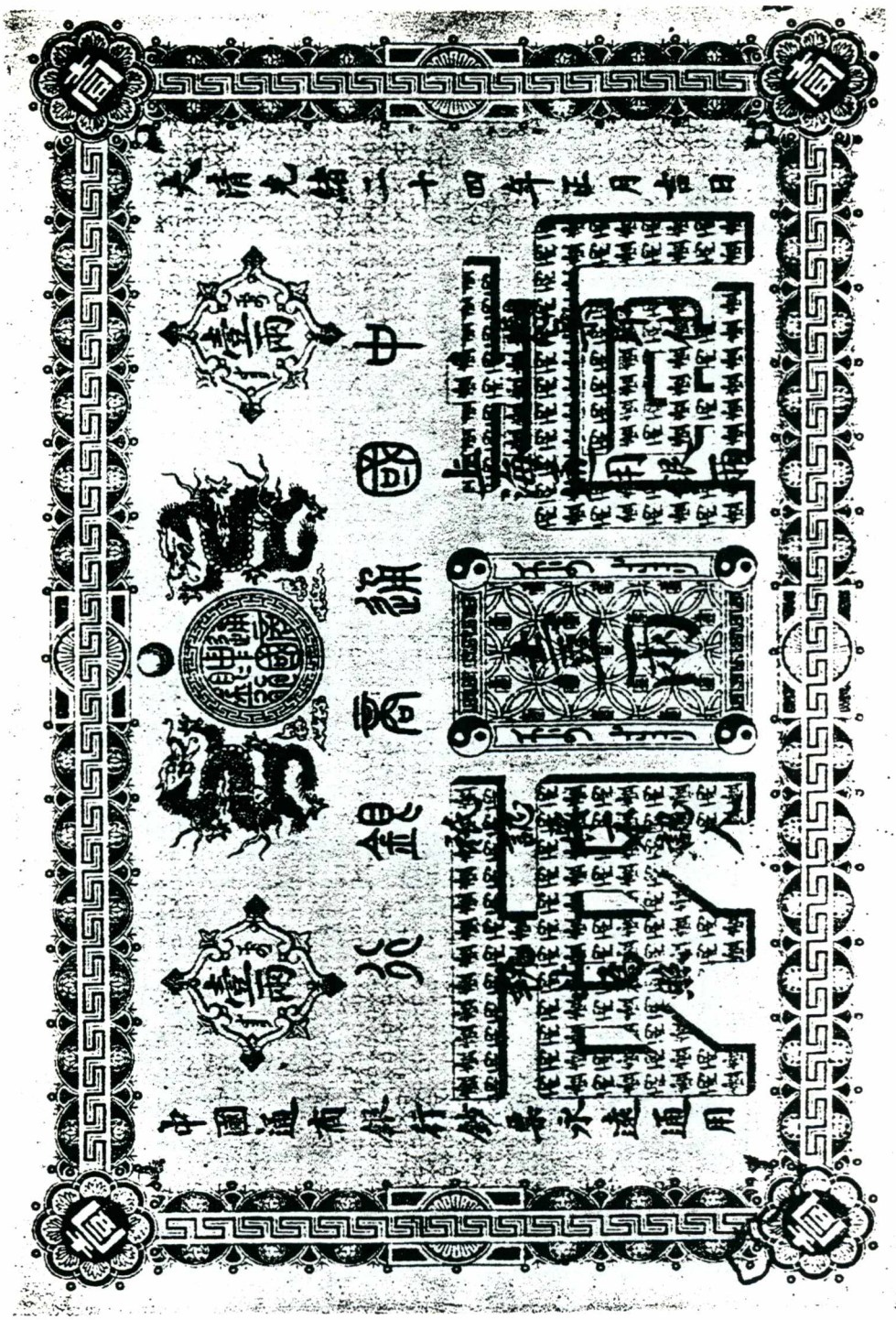


PLATE CXIII. HEAVENLY VIRTUE HARMONY PAWNSHOP
500-CASH CASH BILL (GUANGXU 14)



圖版一百一十四　山海關內外鐵路局銀元票（光緒二十四年）

PLATE CXIV. SHANHAIGUAN WITHIN AND OUTSIDE THE BORDER RAILROAD OFFICE SILVER DOLLAR BILL (GUANGXU 24)



圖版一百一十五　中國通商銀行一兩銀票（光緒二十四年）

這是中國最早的銀行券。

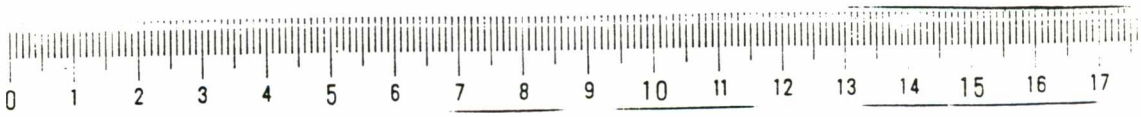
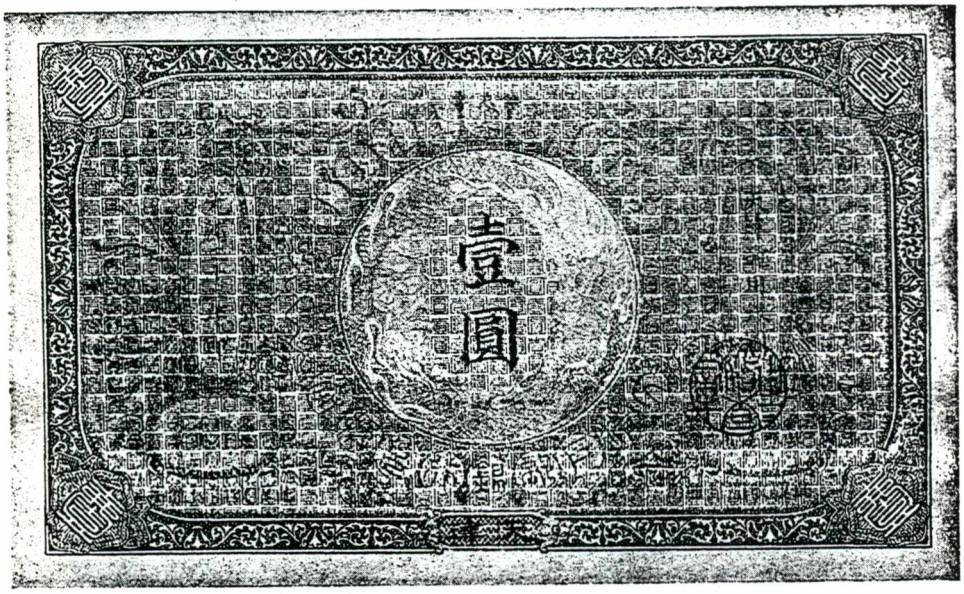


PLATE CXV. THE IMPERIAL BANK OF CHINA 1-OUNCE SILVER BILL (GUANGXU 24)

This is China's earliest modern bank note.

圖版一百一十六　湖北官錢局銀元票(光緒三十年)

PLATE CXVI. HUBEI OFFICIAL COIN OFFICE SILVER DOLLAR BILL
(GUANGXU 30)



圖版一百一十七　大清戶部銀行兌換券(光緒三十二年天津版)

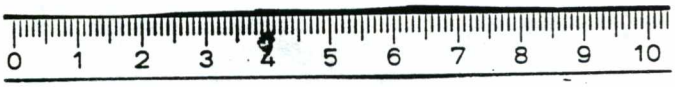
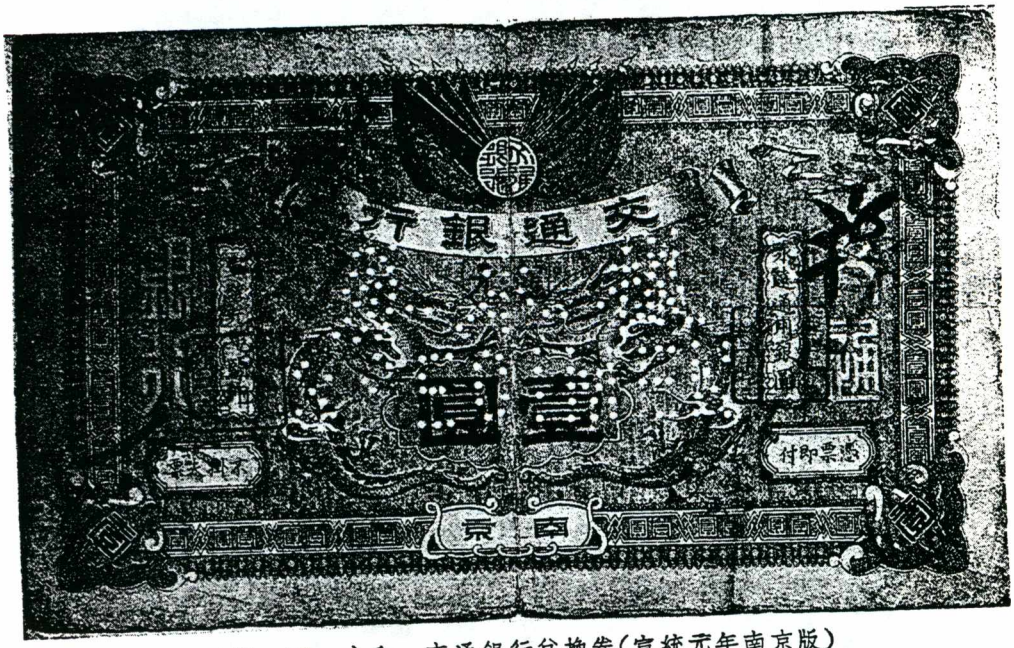
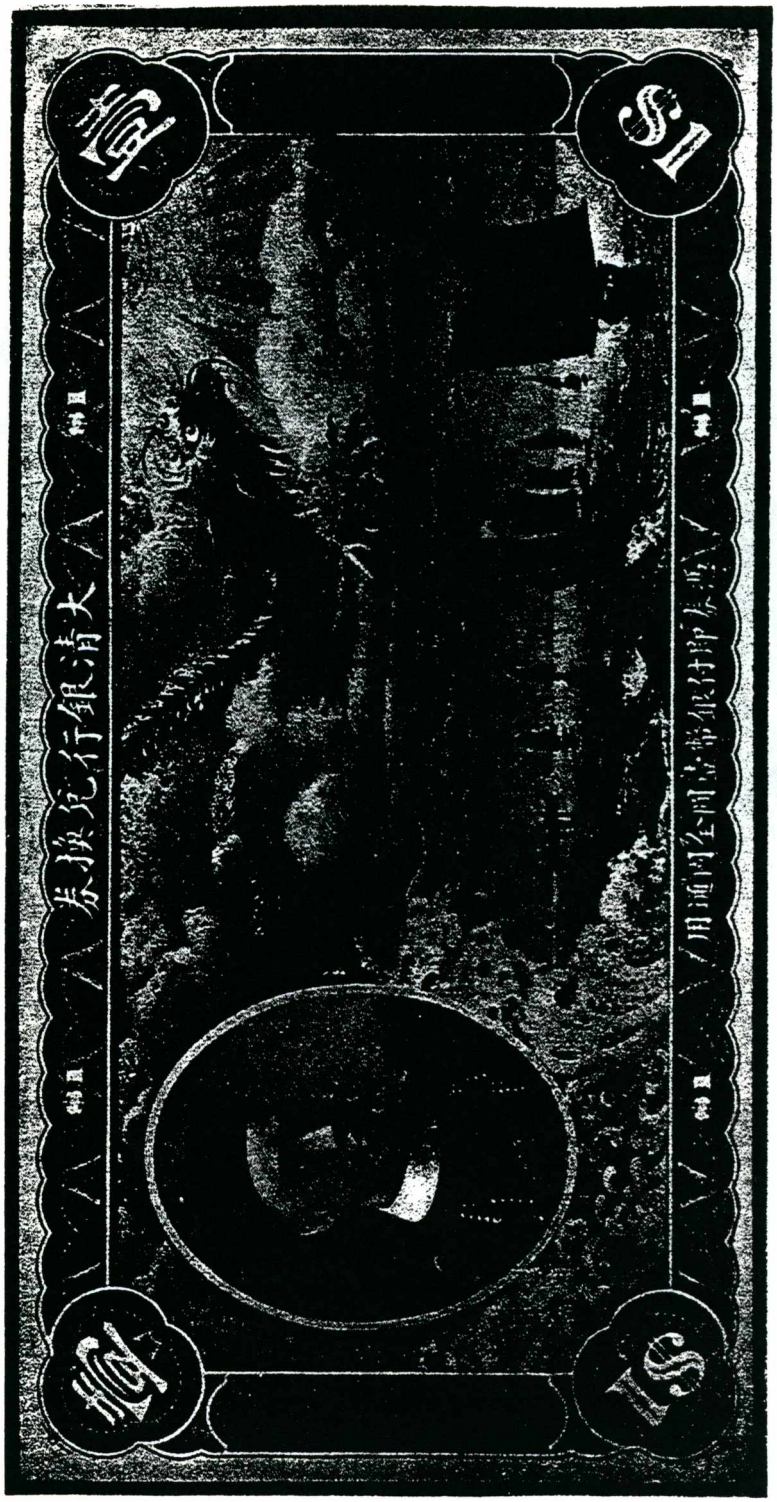


PLATE CXVII. GREAT QING BOARD OF REVENUE BANK EXCHANGE TICKET
(GUANGXU 32, TIANJIN VERSION)



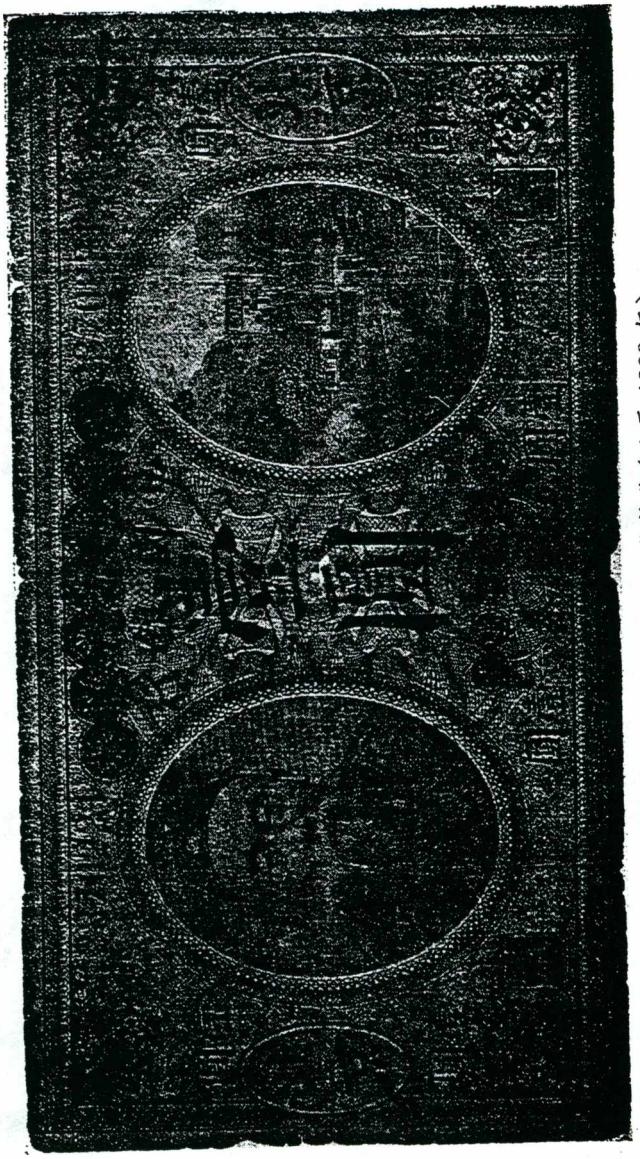
圖版一百一十八　交通銀行兌換券(宣統元年南京版)

PLATE CXVIII. BANK OF COMMUNICATIONS EXCHANGE TICKET
(XUANTONG 1, NANJING VERSION)



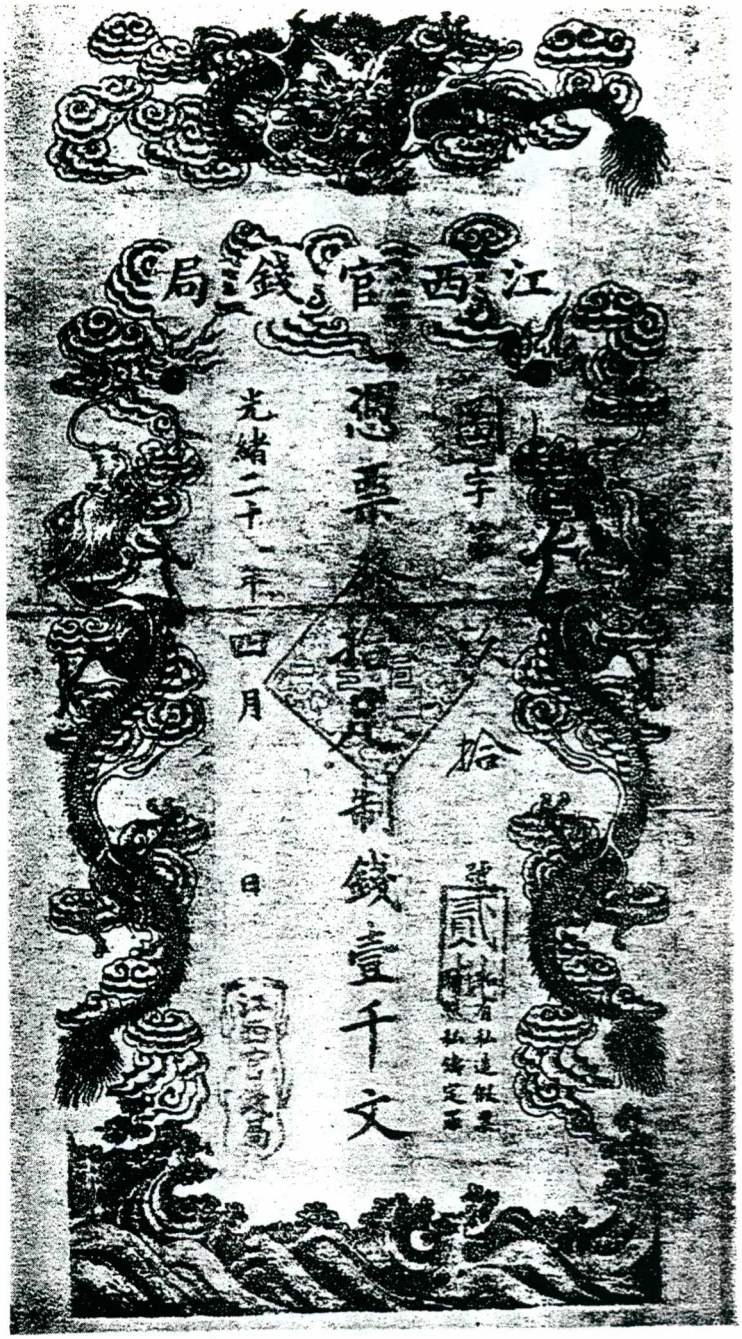
圖版一百一十九　大清銀行兌換券(樣票)

PLATE CXIX. GREAT QING BANK EXCHANGE TICKET
(MODEL NOTE)



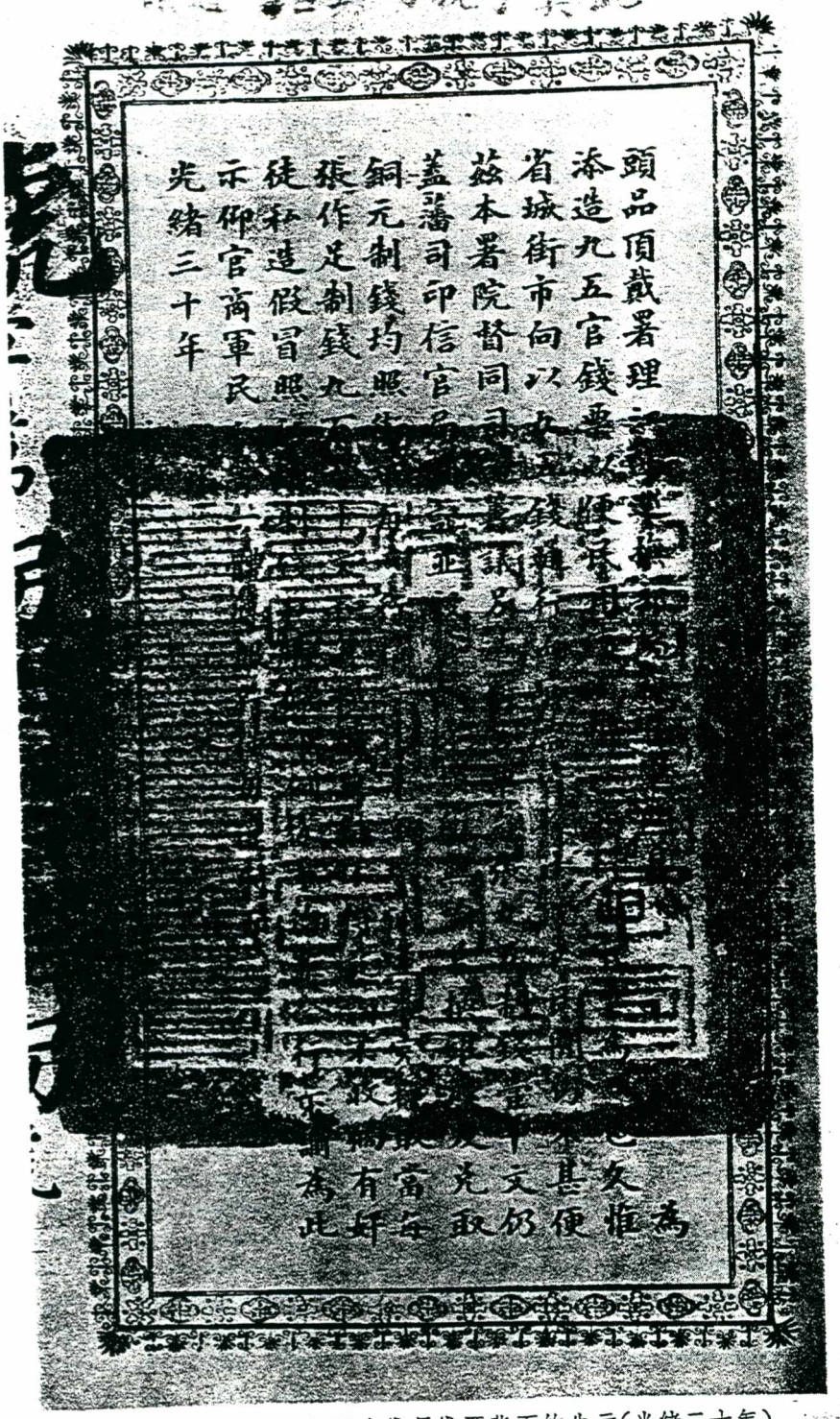
圖版一百二十　大清銀行兌換券（公元 1909 年）

PLATE CXX. GREAT QING BANK EXCHANGE TICKET (1909)



圖版一百二十一　江西官錢局錢票（光緒二十八年）

PLATE CXXI. JIANGXI OFFICIAL COIN OFFICE CASH BILL
(GUANGXU 28)



圖版一百二十二　江西官錢局錢票背面的告示(光緒三十年)

PLATE CXXII. JIANGXI OFFICIAL COIN OFFICE CASH BILL REVERSE PROCLAMATION (GUANGXU 30)

8.2 Money's Purchasing Power

1. Oscillations in the Value of Coins at the Beginning of Qing

Qing Dynasty money's purchasing power fell continuously. Over the course of three centuries, silver's purchasing power dropped to one third of its original level, and prices calculated in copper cash rose six or seven fold. Nevertheless, except for the one large scale monetary depreciation which occurred during the xianfeng period [1851-1862], changes in the value of money were gradual.

Practically all of the Qing Dynasty government's expenditures were made in silver, and it also encouraged the people to use silver. But silver's purchasing power was, after all, relatively high, and because it was not minted, every fraction of an ounce of it had to be weighed, which was troublesome. Hence for small daily expenditures and dealings among the common people, copper cash continued to be the main form of money. This phenomenon was already evident during the qianlong period [1736-1796]. From xianfeng times on, since silver was scarce and expensive, even the grain tax was calculated in terms of copper cash.

Although the tendency was for there to be few sudden changes in the value of money, small oscillations were frequent, especially for copper cash, which was so intimately connected with the people's livelihood.

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During the the first century of Qing, this was a troublesome problem.

The Qing court did not then understand the theory behind primary and secondary moneys. It merely believed that it would be best to have a fixed price ratio between silver and copper cash. This was set at 1 ounce of silver to 1,000 cash. From shunzhi 2 (1645) on, they wanted to maintain this ratio, particularly for the coins bearing thousandths of an ounce of silver equivalent inscriptions that they minted from shunzhi 10 on. The other standard coins were also frequently raised or lowered in weight to maintain this price ratio.

The market, however, was more changeable than these official changes in price, and as a consequence, both light and heavy standard cash remained in circulation, with consequent differences in their purchasing power. This in turn stimulated melting down of coins and private coining, i.e. heavy coins were melted down and light ones minted.

Qing standard coins originally were heavier than Ming ones, especially after their weight was increased to 0.14 ounce in shunzhi 17, without their exchange price with silver being raised. This made the intrinsic value of copper cash greater than their face value. If a coin was destroyed for its copper, a profit of 100 percent could be obtained.[1]

The consequence of such destruction of coins was a reduction in the quantity of standard coins, and a rise in their price. This phenomenon was noted by the authorities in kangxi 18. By kangxi 23 (1684), an ounce of silver could only exchange for 800-900 cash. The prices of articles of food and drink for daily use were very low reckoned in copper cash. A bowl of noodles was only 10 cash. A plate of mantou [steamed breads] was only 4 cash.[2] Four hundred cash could buy a pig.[3]

The Executive of the Board of Personnel, Chen Tingjing, proposed reducing the weight of the copper cash from 0.14 to 0.1 ounce, so that there could be a 40 percent increase in the quantity of coins minted. At that time the Beijing Treasure Spring and Treasure Origins Offices annually minted 404,800 strings. The weight reduction would enable them to increase this figure by 161,920 strings.[4] This was

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[1] *Imperial Dynasty Investigation of Literary Remains*, 14, "Investigation of Coins," kangxi 12.

[2] Cf. *Dessicated Words of the Old Man of the Wilderness*, chapters 21 and 16. We can discern prices of the kangxi period from this book's contents. Chapter 16 contains the following: "'You Li asked, How many cash per pot is this tea of yours?' The shopkeeper replied, 'Tea is 2 cash a pot. Steamed breads, sugar strips, melons, preserved dried meat, are all 4 cash per portion.' You Li took 2 cash out of his purse and said, 'Take the coins. I'll just drink half a glass of your tea, and call it a pot-ful.'"

[3] *Suchu New Record*, 19, "Cautious Hut Accidental Jottings," an incident occurring in Shanghai during kangxi 12.

[4] *Imperial Dynasty Investigation of Literary Remains*, kangxi 23, petition by Chen Tingjing: "If we wish to remove the abuse of destroying coins, and seek a system under which coins will be many, there would be nothing better than to mint somewhat lighter coins. . . . Altogether the Treasure Spring and Treasure Origins Offices each annually move 253,000 ounces of tax silver, and handle 3,892,307 odd catties of copper, including a meltage and wastage of 350,307 catties, leaving 3,542,000 catties of pure copper, from which is minted 404,800 strings of coins. If we now change the weight of a coin to 0.1 ounce, an additional 161,920 strings of coins can be minted annually. This would be profitable both to the people and to the state."

The figures for minting that Chen Tingjing quotes do not correspond to those in the *Qing Veritable Records* and *East China Record*. According to the figures in those two works, in around kangxi 23, annual coin production averaged over 294,000 strings, and there was no increase after the weight reduction. The figure in the *Qing Veritable Records* may have been for the Treasure Spring Office alone.

probably the reason for the weight reduction in that year.

The price of coins fell after the weight reduction, and goods prices rose. In kangxi 36 (1697), 1,000 cash could only be exchanged for 0.32 or 0.33 ounce of silver.[5] This represented a three or four fold difference from the level of kangxi 23. That the fall in price exceeded the degree of the reduction in weight was undoubtedly the result of private coining.

The 0.14 ounce coin weight was restored in kangxi 41 (1702), and a separate light coin of 0.07 ounce was also minted. The large standard coins were priced at 1,000 to the ounce of silver. The small standard coins were priced at 1,000 to 0.7 ounce of silver.[6] Because, however, the weights of the standard coins differed, so too did their purchasing power, and this led to a proliferation of coin names. There were new coins and old coins, large coins and small coins. Small coins dominated in the capital; large coins predominated in the provinces.
[821]
This meant that in Beijing 50 coins were used as 100, so that 200 capital cash were actually 100 cash.

There were people who advocated abolition of the small coin, but others said that to do so would cause alarm among the people, and that there was an insufficient quantity of large coins. As a result, the large and small coins should circulate simultaneously until the quantity of large coins should become large enough to allow the gradual melting down of the small coins. In fact, however, as late as qianlong 36 [1771], when the Hunan financial administrator, Wu Hubing, requested investigation of a ban on ancient coins and small coins, the authorities made it clear that the small coins of the kangxi period were not to be included in such a ban.

Once the standard coins had been made heavier, their market price in terms of silver immediately rose. Previously, an ounce of silver could exchange for 800 or 900 cash. In kangxi 61 (1722), it could only exchange for 780 standard coins.[7] This, however, was in terms of capital large coins. The situation was different for small coins and private coins.

In yongzheng 3 (1725), the practice of private coining was in a very flourishing state in Hu-Guang and Henan. Because the value of coins had falled to too low a level in Zhili and Fengtian, an edict was sent down in yongzheng 7 fixing the price of silver at only 1,000 cash per ounce. Evidently the market price of silver then was at some other level. Nevertheless, in qianlong 2 (1737), capital large standard coins still only went for 800 cash per ounce of silver.

Private coining and private melting down of coins advanced simultaneously because increases in the volume of copper production in China then were limited. China had depended on imports of Japanese copper since the kangxi period.[8] The capital mints shifted to use of Yunnan copper in qianlong 3. The lower Yangtze provinces continued to use Japanese copper. In all cases the quantities involved were not very large.

The majority of private coiners depended on melting down large standard coins. There were even cases of recasting coins into utensils because copper objects were so expensive. Reports of such occurrences were frequent during the yongzheng period. The official price then was an ounce of silver for 1,000 cash. The market price was only something over 800 cash. Naturally standard coins were hidden away.

For this reason another depreciation and weight reduction was effected. The green cash were minted in qianlong 5 [1740], which constituted a form of depreciation. Minting of a 10-cash large coin was proposed in qianlong 3. Such a coin would have weighed only 0.4 ounce.[9] The proposal was not adopted, but the Associate Administrative Commissioner, Li Shizhuo, requested that the weight of the standard coin be reduced to 0.1 ounce, and in qianlong 5, Zhili reduced its coin to 0.07 ounce. In qianlong 9, Hubei changed its coin to 0.1 ounce,

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[5] *Qing History Draft*, 54, "Xiao Yongzao": "In kangxi 36 . . . a petition stated that coins were many and their price cheap. A thousand had a market price of 0.32 or 0.33 ounce. The supply for one or two soldiers would come to just a few tenths of an ounce. . . . He requested a temporary halt in minting."

[6] *Qing History Draft*, 53, "Tang Youceng."

[7] *Imperial Dynasty Investigation of Literary Remains*, "Investigation of Coins."

[8] *Imperial Dynasty Investigation of Literary Remains*, 17, "Coins, 5."

[9] *East China Continued Record*, qianlong 8, qianlong 3, 8th month, day yiyou: "The Proclamation Censor, Silu, . . . memorialized to request minting of 10-cash coins, each of which would weigh 0.4 ounce, and be equal to ten small coins, and five current standard coins. Forty of these large coins could be obtained from a catty of copper, and thus the price of the coins would float along with the price of copper. Illicit
[827]
melting down of coins could be eliminated without any other moves being made. He also requested the reestablishment of coin brokers. . . . It was maintained that it was based on unreasonable doctrine, and the result of a blind desire to change established procedures in a disorderly fashion. . . . Silu's proposal was handed over to the Board for serious discussion."

and in qianlong 11, Liang-Hu shifted to 0.8 ounce.[10] These weight reductions likely evoked popular opposition, and so later on the coin's weight was restored to 0.12 ounce. We can tell from this that the problem with the price of coins lay in the fact that the official price of copper coins in terms of silver was too low.

The authorities expended a lot of effort on the problem of the price of coins at the beginning of the qianlong period. At first, someone advocated setting up ten official coin offices within Beijing and in the provinces at which people could exchange copper coins for ounces of silver. These offices would also weigh the copper coins taken in by pawn shops, since people mostly used copper cash to redeem pawned articles. During seasons when pawn shops needed copper coins, they could

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obtain them at these official coin offices.

Others, however, opposed this proposal. They supposed that it was only necessary for the government to fix the silver-copper coin exchange price ratio, and have the brokers and shopkeepers buy a certain number of strings of cash each day at that price less a small profit for themselves. In this way the circulation of copper cash could be made smooth.[11] As a consequence, though they seem to have set up official coin offices and coin brokers, the price of coins remained unstable.

In qianlong 9 (1744), the Academician E'ertai put forward a petition containing an eight point proposal for circulating copper coins.[12] The gist of it was, first, assemble copper artisans to inspect the copper which entered the shops and to smelt it. Second, deposit funds in the pawn shops, and collect coins for transmission to the official coin offices. Third, have the official rice offices sell rice for coins. There would be no need to accumulate them. They could be sent into the market to exchange for silver. Fourth, the coins accumulated from the pawn shops and sent to the official coin offices would all be sent out to the market. Fifth, the coin brokers would be assembled in one place, and the officials would carefully investigate them so as to prevent them from raising prices. Sixth, the food stores of the capital would be forbidden to use coins to purchase food. Seventh, there would have to be a strict ban on the movement of coins out of the capital city. Eighth, there should be serious study of a ban on storing up coins in places near the capital.

None of these proposals could have had any great efficacy. The authorities wanted to encourage the use of silver in part so as to diminish the demand for standard coins. For example, in qianlong 6, the Guangdong Provisions Chief, Zhu Shuquan, memorialized a request that local officials exhort people to use both silver and coins, and that they not solely use coins for sums above a few ounces.[13]

In qianlong 10, the authorities sent down an order reaffirming the government's original aim to mainly use silver. Nevertheless, the habit of using coins only increased its hold on the people, so the authorities finally adopted a *laissez faire* policy, because the basic cause of the problem was the fall in the price of silver. This encouraged the flow of Japan's Kan'ei coins into China.[14]

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[10]Tang Yuhun, *General Investigation of the Standard Coin.*

[11]*Imperial Dynasty Texts Through the Generations*, 53, "Financial Administration," 28, "Coins," latter part, qianlong 2, Reviewing Policy Advisor Tian Hui, "Petition on Leveling the Price of Coins."

[12]*East China Continued Record*, qianlong 20.

[13]*Qing Emperor Gaozong Veritable Record*, 139, qianlong 6, 3rd month, day guiwei: "The Guangdong Provisions Chief, Zhu Shuquan, memorialized to say that coins were expensive because they were few in number. . . . In former years though silver was used in trade, both ancient coins and silver were used. Now, those who once used silver have mostly shifted to use of coins. Those who had used ancient coins have mostly shifted over to use of current coins. In places like the region south of the Yellow River and the Miao frontier, all are using yellow coins. . . . There should be instructions to local officials to exhort people to use both silver and coins, and for transactions of several ounces and more, they should not solely employ coins. Only then can coins' price be stabilized at a lower level. This was accepted."

[14]*East China Continued Record*, qianlong 36: "In qianlong 17, 7th month, day jiashen, there was a proclamation to the high military officials: In the past We have heard that in places along the seacoast there are places where Kan'ei coins are circulated. In qianlong 14, Fang Guancheng memorialized to request that a ban on this be investigated. Because We saw that standard coins were expensive, We did not order a deep investigation to be made, and We considered that even what the market calls clipped edge sand-board types of coins also bear the name of this dynasty. In recent days in Zhe province there has been a case of a foreign bill being captured along with a pirate, and there is also talk of circulation of Kan'ei coins. These coins bear the inscription Kan'ei Circulating Treasure. Standard coins of this dynasty, and coins bearing Yuan year-period names, or private coins and small coins all circulate together. Punishment is only levied for private coining. If there are these Kan'ei Circulating Treasure coins, then their source must be seriously investigated. We have also heard that from the Huai and Yangtze on south, they have circulated in especially large numbers in the rice and salt markets. When exchanging an ounce of silver for coin, among the standard coins this sort of coin has come to constitute half the number. Since such coins are being minted, and they are enter-

The productive power of Qing coin casting furnaces seems also to have risen. The Treasure Spring Office altogether had 50 formal furnaces and 10 hired service furnaces. It could turn out at least 1 or 2 *mao* of coins per month, and as many as 6 or 7 *mao*. One *mao* was 12,498 strings.[15] Evidently the maximum productivity per annum per furnace was 17,497 strings, which was more than double the figure for early Ming, and over five times the Tang level. However, the above figure is a later one.

Generally speaking, during the first century of Qing, the price of coins was relatively stable. Though coins were minted every year, since there were limits to the supply of copper, the quantity minted could not be greatly increased, and the annual production figure for the entire country probably averaged around 3 billion cash.[16] This was not enough to keep up with the increase in the population, and so the phenomenon of a slight constriction in the money supply appeared, particularly since the policy had always been to keep the supply of coins steady. There was a still more severe constriction during the yongzheng period. Except in Yunnan, which produced copper, the price of standard coins vis à vis silver was very high.[17]

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ing into the markets to be circulated, people must be opening furnaces, and there must be places where they are being sold."

There is also a memorial by Yinjishan and Zhuang Yougong: "The Kan'ei coin is minted by the Wa of the Eastern Sea. They are carried by merchant vessels of the Inner Territory to ports like Shanghai in Jiangsu and Ningbo and Zhapu in Zhejiang, where they circulate in especially large numbers."

[15] *Great Qing Collected Statutes*, 24.

[16] The figures contained in the *Qing Veritable Records* for the shunzhi, kangxi and yongzheng periods are as follows (These must be the figures for the Beijing Treasure Spring Office alone. Cf. subsection 8.2.6.):

shunzhi	1	71,663,900 plus cash
	2	443,751,760
	3	624,823,960
	4	1,333,384,794
	5	c.1,449,494,200
	6	c.1,096,910,000
	7	c.1,682,424,510
	8	c.2,430,509,050 (plus 213,370 old minted coins)
	9	c.2,097,632,850 (plus 201,210 old minted coins)
	10	2,521,663,740 (thousandth coins) (213,370 old coins)
	11	2,488,544,460 (thousandth coins) (201,210 old coins)
	12	2,413,878,080 (thousandth coins) (186,210 old coins)
[828]		
	13	2,604,872,380 (thousandth coins) (213,370 old coins)
	14	2,340,870,816 (thousandth coins) (201,210 old coins)
	15	140,173,990 (thousandth coins) (201,210 old coins)
	16	191,805,710 (thousandth coins) (213,370 old coins)
	17	280,394,280 (201,210 old minted coins)
	18	291,584,600

kangxi	1	297,896,380	kangxi 29	289,930,600
	2	295,735,360	30	289,921,050
	3	295,909,500	31	289,925,400
	4	298,652,400	32	289,958,670
	5	295,879,800	33	236,536,550
	6	293,953,600	34	236,940,670
	7	287,133,400	35	237,063,050
	8	287,656,560	36	238,063,060
	9	290,543,250	37	238,065,400
	10	290,475,830	38	238,065,400
	11	298,652,400	39	238,065,800
	12	293,476,680	40	238,065,800
	13	293,477,530	41	238,065,800
	14	293,476,600	42	238,066,800
	15	231,365,360	43	238,065,900
	16	231,365,360	44	238,065,900
	17	231,365,360	45	238,075,800
	18	231,365,360	46	238,085,900
	19	231,365,360	47	268,422,600
	20	231,398,600	48	294,942,600
	21	294,851,480	49	297,963,400
	22	294,851,480	50	374,933,400
	23	294,851,480	51	374,936,800
	24	294,851,480	52	375,629,800
	25	289,869,080	53	386,559,900
	26	289,936,700	54	386,559,900
	27	289,869,080	55	398,969,900
	28	289,930,650	56	399,167,300
[829]				
kangxi	57	413,268,800	60	437,325,800
	58	437,455,800	61	461,700
	59	437,325,800		
yongzheng	1	499,200	7	748,480,000
	2	409,200	8	757,865,000
	3	675,160	9	1,048,759,660
	4	675,160	10	910,171,120
	5	723,528,000	11	684,362,000
	6	746,304,000	12	685,390,000

[17] The figures in the following table are drawn from *Qing Veritable Records*, *Qing Dynasty Investigation of Literary Remains*, *Great Qing Collected Statutes Elucidated* and *Imperial*

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QING DYNASTY STANDARD COIN MARKET PRICE TABLE (1)

Date	Quantity of Standard Coins Per Ounce Silver
shunzhi 1 (1644)	700
kangxi 9 (1670)	1,250 (Beijing)
23	800-900 (Beijing)
61	780 (Beijing)
yongzheng 4 (1726)	845
qianlong 2 (1737)	900
	800 (capital region)
4	830 (Beijing)
5	800 (various provinces)
	700 (Jiangsu)
6	800 (bad coins)
	800 (Jiangsu green coin)
8	700-815 (Guangdong)
10	720-740 (Shaanxi)
13	750 (Shandong)
14	800 (Zhili)
16	781 (Shanxi)
	820 (capital region)
18	830-870
24	885 (Gansu)
25	880
31	1,100 (Yunnan)
35	1,150 (Yunnan)
40	955 (capital region)
41, 4th month	955 (capital region, large coins)
5th month	885 (capital region, large coins)
43	890 (Shaanxi)
	1,200 (Yunnan)
44	880 (capital region)
45	910 (Zhili & nearby provinces)
56	1,550 (Sichuan)
59	2,450 (Yunnan)
	1,400 (Min, Zhe)
60	1,000 (Shanxi)

[824]

Dynasty Texts Through the Generations. Of these, all except the shunzhi 1 figure are market prices. Official prices were mostly set at times when the weight of the coin was changed. Later, the authorities generally desired to maintain the exchange price of 1,000 cash to the ounce of silver.

There is a point we must emphasize here: By the price of coins we mean their price in terms of silver, and not in terms of goods. Qing government calculations were made in terms of silver. in the view of the government, copper cash were virtually no more than commodities.

During the first century or so of Qing the trend was for the price of silver to fall. During the qianlong period in particular there were internal wars requiring large expenditures in silver. Even though expenditures were matched by income, and there were even frequent surpluses in the treasury, nevertheless because the price of silver was falling abroad, large quantities of silver flowed into China, and so prices calculated in silver rose rather sharply. In qianlong 10 [1745], Yang Xifu said that in his home town rice cost only 0.2 or 0.3 ounce (of silver) per picul during the kangxi period, but that by yongzheng times the cost had risen to 0.4 or 0.5 ounce, and that at present a picul cost 0.5 to 0.6 ounce.[18]

The Qing government's policy was to take extreme steps to maintain the exchange price between silver and coins, but in fact during the first century of Qing, the quantity of standard coins for which 1 ounce of silver exchanged ranged from 700 or 800 to 800 or 900. As a consequence, prices expressed in copper coins were very low during the kangxi and yongzheng periods.[19]

[18] *Qing History Draft*, 95, "Biography of Yang Xifu."

[19] Prices during the yongzheng period can be observed in the novel *The Scholars* (written near the end of yongzheng or the beginning of qianlong). Whether expressed in silver or in copper cash, prices were all rather low. Chapter 14 describes the trip of Mister Ma Two to West Lake as follows: "Mister Ma Two, carrying a few coins, walked along out the Qiantang Gate. He drank a few cups of tea in the tea pavillion . . . got up, and walked another *li* or two, looking at the wine shops lined up along the shore of the lake. . . . Mister Ma Two had no more coins to buy something to eat. . . . He only had to walk into a noodle shop, and for 16 cash he ate a bowl of noodles. His belly not yet full, he went into a teahouse next door, had a cup of tea, and bought a couple of *chupian* to-gnaw on until he felt he had gotten the flavor. . . . All he could do was run into the hideout. The woman did not look at him, and he did not look at the woman. He ran from front to back once, and then came out to sit in that tea pavillion . . . and have a cup of tea. On the counter were arranged a number of small plates of orange cakes, sesame sweets, wraplings, baked cakes, *chupian*, black dates and boiled chestnuts. Mr. Ma Two bought several cash worth, and kept eating things good and bad until he was full. . . He saw a seller of *shuaiyi* cakes, and had him hand over a dozen cash worth of cakes, which he ate. . . . Mister Ma Two was greatly pleased, and bought several dozen cash worth of cakes and beef."

The silver-copper exchange price exhibited changes by the time of the qianlong period. The price of copper rose a bit. In Yunnan's Jinchai Factory, low quality copper cost 9 ounces of silver per hundred catties, and high quality copper ran to 11 ounces. Foreign copper could originally be bought in Jiangsu for 14.5 ounces, but the market price rose to 19.8 ounces, and so there was no choice but to raise the official price to beyond 14.5 ounces, adding a transport charge of 3 ounces.[20] Because, however, of the reduction in weight of the copper cash, prices expressed in copper cash rose accordingly.[21] For example, during kangxi times, noodles were 10 cash per bowl.[22] By the end of yongzheng or the beginning of qianlong, noodles had risen to 16 cash per bowl.[23] One might even say that the degree of the rise was a little more severe than for prices expressed in silver. This was the case for the price of rice.

QING DYNASTY RICE PRICE
TABLE(1)[24]

Period	Number of Standard Coins Per Hectoliter
1651-1660	843
1661-1670	600
1671-1680	456
1681-1690	604
1691-1700	626
1701-1710	821
1711-1720	787
1721-1730	719
1731-1740	853
[825]	
1741-1750	915
1751-1760	1,381
1761-1770	1,515
1771-1780	1,347
1781-1790	1,465
1791-1800	2,750

The Pu'er [*pul*] coins circulating in Xinjiang underwent a severe depreciation. In qianlong 24 [1759] they were still worth 50 cash to the ounce of silver. The coins then were very thick and heavy, but I suspect that this price was a nominal one for tax collecting purposes, and does not correspond to the natural silver-copper exchange price then. In fact it could not be maintained. The official price was changed to 70 cash per ounce of silver in Kashgar during qianlong 25, and the following year this was

The prices specified in *The Scholars* may be set forth as follows:

snacks	2 cash	school food, 0.02 oz daily	
chupian	2 cash	noodles 16 cash or 0.08 oz per bowl	
mantou buns each	3 cash	chop suey	0.12 oz per purchase
baked cakes each	2 cash	house rent	10 oz per house
village school, tuition	12 oz silver per year	a feast	4 oz silver

[20] *General Investigation of the Standard Coin.*

[21] Qian Yong, *Sandal Garden Collected Words*, 1, "The Price of Rice": "In kangxi 46, there was a drought in the four prefectures of Su, Song, Chang and Zhen. A *sheng* of rice cost 7 cash then, and in the end it rose to 24 cash. The next year there were floods, and there were floods again in kangxi 48. Still, the price of rice was low compared to its earlier level, a *sheng* still only costing 16 or 17 cash. During yongzheng and at the beginning of qianlong, rice was a bit more than 10 cash per *sheng*. In qianlong 20, there was a plague of insects in all four prefectures, and the price rose to 35 or 36 cash. Countless numbers died of starvation. Over the subsequent years of good harvests, the price gradually returned to its old level, and a price of only 14 or 15 cash per *sheng* became the norm. In
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qianlong 50 there was a drought, and a *sheng* reached 56 or 57 cash. From then on, whether the harvest was bad or good, the price normally ranged from 27 or 28 to 34 or 35 cash."

[22] *Dessicated Words of the Old Man of the Wilderness.*

[23] *The Scholars*. Cf. note 19. There was probably not a large rise at the beginning of qianlong. By qianlong 21, Zheng Xie (Banqiao) had put together the 19 Man Club in Yangzhou, each of whom put up 100 cash for a whole day's joys. Its members included the painter Huang Shen (Yingpiao) and the calligrapher Wang Wenzhi (Menglou). ("On Orchids, Bamboo and Stone Tune On a Cut Plum," *Zheng Banqiao's Collected Works*, p. 174.) These were all talented men, capable of eating and drinking well. Evidently such pleasures were still cheap. They probably did not begin to become expensive until late in the qianlong period.

[24] During Qing, the official rice price was mainly set in terms of silver. The figures in the table are commuted from the silver prices.

increased to 100 cash. In qianlong 36, Wushi's [Uch-Turfan?] Pu'er [*pul*] coin had its weight reduced to 0.15 ounce in weight. Before long, the exchange price rose to 150 or 160 cash, and in Kulja to 120 or 130. Later a 10-cash coin was minted, which was lighter than the previous 1-cash coin, and as a consequence it took 400 cash to be able to match an ounce of silver.[25]

The standard of living of the people of a particular period is not solely determined by the value of money or by the prices of goods. One must also examine changes in the level of people's incomes. In other words, the people's standard of living depends on their real incomes.

The income of laboring people during Qing was very low. In kangxi 9 [1660], labor service workers on the two rivers were given food money of 0.04 ounce of silver per day, which was equal to 4 *sheng* of rice. Those engaged in labor service at a distance got 0.06 ounce per day.[26] This would be 6 *sheng* of rice, and could be commuted to between 32 and 48 cash. During qianlong 15 [1750], the wage for river labor in Yongding was 1 *sheng* of rice per day, which had a commutation price of 10 standard coins. To this was added 5 cash in salt and vegetable money.[27] In qianlong 18, hired laborers engaged in carrying wood, digging coal and burning it, and chopping firewood also got a daily wage of 15 cash.[28] Hence the real wage was 1.5 *sheng* per day, which was quite a bit short of the kangxi period rate.

If these two items are representative of the trend for early Qing laborers' incomes, then the real income of the people was falling even more rapidly than the purchasing power of money. When the Kangxi Emperor neared the end of his reign, he merely said that all within the Four Seas were at peace, but admitted that not everyone had enough materially. The Yongzheng Emperor conceded that life was hard for the Chinese. "The families with an abundance," who ate meat every day were very few in number. The poor "work with diligence for their food, but can only bring gruel to their mouths."[29] Some peasants had to sell their fields to get by. The early part of the Qing, which people generally consider to have been an age of great peace and abundance, was, therefore, only superficially thriving.

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In England during kangxi 24 [1685], an infantry soldier's provisions only came to 4 shillings 8 pence per week, or 21 shillings per month. If these coins had not undergone clipping, then they were equivalent to 3.3 or 3.4 treasury ounces of silver. An ordinary peasant's wage was equal to 2.7 ounces per month. A skilled worker got around 4 ounces. All of these exceeded the wage for Chinese river labor. At that time, however, very few English coins were intact. Most had suffered clipping, leaving them only a little more than half their original weight. Hence English prices were higher than Chinese prices.

It has been estimated that there were around 880,000 commoner households in England at that time. Only half of these could eat meat twice a week. The remaining half might either eat meat once a week at most, or would not eat meat at all. Wheat flour bread was very rarely encountered. Most people ate buckwheat[?], barley and oats[30] almost exclusively. In other words, they consumed nothing but grain of one sort or another.

[25] *Great Qing Collected Statutes Elucidated*, 163, "Xinjiang Land and Excise Taxes."

[26] *Qing Emperor Shengzu Veritable Record*, 34.

[27] *Qing Emperor Gaozong Veritable Record*, 378.

[28] Petition by the Governor of Jiangxi in qianlong 18. Cf. Ni Mo, *Outline of Ancient and Modern Coins*, first section.

[29] *Imperial Dynasty Investigation of Literary Remains*, "Investigation of State Needs": "Now, when the Chinese seek to earn a living, they still know how to be frugal. There are terribly few rich families, who eat meat every day. The poorer people work with diligence for their food, but can only bring gruel to their mouths."

[30] T. B. Macaulay, *History of England*, chapter III, gives a detailed analysis of the situation in England as of 1685.

2. *The Qing Government's Monetary Depreciation During the Taiping Revolution*

Beginning with the last years of the qianlong period, the Qing dynasty's bureaucracy went bad. All ranks of officialdom became covetous and extortionate. That which the people had obtained through their labor became concentrated into the hands of a minority of men. At the beginning of jiaqing [1796], the government's annual income was 70 million ounces, but the total illegally accumulated by Heshen was, I suspect, no less than this figure.[1] Nor was corruption limited to Heshen alone.[2]

[1] *East China Continued Record* does not contain a complete record of the family property of Heshen. *Yongtan Notes* contains an "Investigation Certificate of the House and Flower Garden of Heshen Complete List," which enumerates 109 items. Of these 83 have not yet been priced. Only 26 have had their prices estimated. Altogether these were calculated as being worth 223,895,161 ounces of silver. If we assume the remainder were of proportionate value, the total must be no less than 800 million ounces. Of course so mechanical a calculation method is not sat-

Hence, though on the surface taxes during early Qing were not heavy, the actual burden on the people was very great, and this evoked opposition. This was directly reflected in the establishment of various religious groups, like the White Lotus and Eight Trigrams. In response, the authorities added a surtax to the land tax, and increased the severity of their exactions, which in turn caused social contradictions to deepen.

During the jiaqing and daoguang periods, there was one incident after the other, all testifying to the inability of the Qing court to exert its power. In jiaqing 15 (1810) there was a violent incident involving the followers of the Heavenly Reason Religion. At the beginning of daoguang [1821], the Muslims of Xinjiang also rose in rebellion. By the end of the Opium War [1842], uprisings by the Heaven and Earth Society occurred one after the other in various places, and before long had given rise to the Taiping Heavenly Kingdom revolutionary movement.

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The jiaqing period was a turning point in the relationship between silver and copper cash. Prior to that time, coins had been expensive, and silver had been cheap. From then on, silver became expensive and coins cheap. Coins became cheap because of private minting of small coins and the influx of light foreign coins. By the end of the qianlong period, small coins poured out like a mountain torrent, as dealers loaded their pack animals with them.[3] Nor were there any fewer during the daoguang period.[4]

I suspect that the quantity of coins minted also increased during the jiaqing period. According to the "Board of Revenue Coinage Regulations" composed in jiaqing 7, The Treasure Spring Office and the provincial mints of Zhili, Jiangxi, Hubei, Yunnan, Shanxi, Fujian, Hunan, Guangdong, Guizhou, Jiangnan, Shaanxi and Guangxi could mint a total of 6,074,028 strings of cash. The Treasure Origins Office and the two provinces of Sichuan and Zhejiang minted an undetermined additional amount, and Ili produced 1,520 strings.[5] If actual production

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isfactory. Nor is this list altogether reliable, since at the time some believed that Heshen had squirrelled away additional wealth outside of the capital. It was only because the Jiaqing Emperor did not desire to get to the bottom of the affair that the situation was not clarified.

It is hard to determine how much of Heshen's property was obtained through corruption, and how much through usury. Not only are we unable to determine the total extent of his wealth, there are no reliable figures for the amount of his capital invested in the silver houses and pawn shops he established. In any event, however, corrupt practices must have provided him with most of his income.

[2]There were few provincial governors and circuit inspectors at the time of Heshen who were not corrupt. Men like Guofeng, Wang Tanwang, Chen Huizu, Fu Song, Wulana and Pulin, were all involved in prosecutions for stealing funds. The amounts they stole often amounted to several millions. Cf. Qiu Luanzhang, *Qing Mirror*, 4, qianlong 44, 5th month. The enumeration of the 20 great crimes of Heshen issued in jiaqing 4 had as its last item: "His household servants followed him into thievery, and had more than 200,000 in property."

[3]Yue Zhenchuan, *Xing'anjun Gazetteer*, "On Food and Money": "Of the coins of the five reigns of Sagely Qing, those of shunzhi and kangxi are mostly green copper. Those of yongzheng are evenly divided between green copper and red copper. The coins of the sixty years of the qianlong period and the coins of the jiaqing period up to the present are mostly of red copper. . . . It is only that after qianlong 50, since peace had lasted so long, wicked thieves flourished in concealment. In the two commanderies south of the mountains, small coins were as abundant as water tumbling out from a mountain spring. In the west, Tong, Qian and Feng commanderies did not suffer from this. The commanderies of Xing and Han alone suffered deeply. As far south as the mountains of Shu, and east to the marshes of Chu, there existed the hideouts of evil people, and the nests and caves of illicit coiners. The dealers in small coins would either heavily load their beasts of burden, or conceal them in ships. They were concealed in a hundred places. No time limit could be established to defeat them. . . . Goods which normally sold for 10 Thousands could not be obtained for 20 Thousands." Cf. *Imperial Dynasty Texts Through the Generations*, 53, "Financial Administration," 28, "Coins," latter part.

[4]*Qing History Draft*, "Treatise on Food and Money, 5": "By the daoguang period, there were being circulated in Min and Guang such barbarian coins as the Guangzhong, Jingzhong, Jingxing and Jialong. Evil people profited from them, and arbitrarily imitated them." *East China Continued Record*, daoguang 18, 8 proclamation: "The Censor Zhang Zeng memorialized that it is rumored that among the coins in circulation in Guangdong the most numerous are a Guangzhong Circulating Treasure and a Jingsheng Circulating Treasure. Also present are Jingxing Circulating Treasure, Jingxing Great Treasure, Jingxing Large Treasure and Jialong Circulating Treasure. These are said to be barbarian coins. They are intermixed among the coins in circulation in the proportion of 6 or 7 of every 10 coins. They are especially numerous in Chaozhou, and there are several places which exclusively use barbarian coins. Evil people of the interior take advantage of their bad metal and thinness to counterfeit them."

[5]Ni Mo, *Outline of Ancient and Modern Coins*, first section. The "Board of Revenue Coinage Regulations" only records the number of *mao*, or the the number of furnaces. We may reckon that the Treasure Spring Office could turn out 75 *mao*, the Treasure *zhi*

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reached full capacity, that would have far exceeded the production figures for Northern Song's yuanfeng period.

The reason why silver was expensive was that the metal was flowing abroad. This in turn was related to the trade in opium. The reduction in the weight of the copper cash, and the reduction in the supply of silver both contributed to a rise in the price of silver. During early Qing, an ounce of silver exchanged for 700 to 800 standard coins. During the jiaqing period, an ounce of silver could exchange for over 1,000 cash. During the daoguang and xianfeng periods, the price sometimes reached 2,000 cash, and still more for capital cash.[6] As a consequence people demanded silver heavily and coins lightly.[7][8][9]

QING DYNASTY STANDARD COIN
MARKET PRICE TABLE(2)

Year	Number of Standard Coins Per Ounce Silver
jiaqing 4 (1799)	1,450 (Jiangsu)
7	1,450-1,650 (Shandong)
23	1,300 plus (Min, Zhe)
daoguang 2 (1822)	2,000 plus (Zhili capital coins)
	3,000 plus (Zhili capital coins)
8	2,600 (Shandong capital coins)
	1,300 (Soo, Song)
	2,550 (capital coins)
9	1,400 (Henan)
10	2,700 (Shandong capital coins)
12	1,250 (Huzhou)
18	1,650
22	1,650 (Zhejiang)
26	1,500 (Jiangnan)
	1,500 (Hedong)
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daoguang 27	2,000 (Hu-Guang)
xianfeng 1 (1851)	2,000
2	1,500 (capital region)
3	1,600
	1,850
4	2,000
5	1,600
7	1,190 (Shanghai)[10]
11	1,650
tongzhi 1 (1862)	1,550-1,650
6	1,500-1,600 (various provinces)

Naturally changes in the silver-cash coin exchange price influenced prices in general, but the nature of that influence depended on what money

48 *mao*, the Treasure *chang* 24, the Treasure *wu* 21, the Treasure *yun* 38, the Treasure *jin* 12, the Treasure *fu* 36, the Treasure *nan* 36, the Treasure *guang* 36, the Treasure *qian* 72, the Treasure *su* 28, the Treasure *shaan* 24, the Treasure *gui* 36, the Treasure *yi* 1,520 strings, the Treasure *chuan* 40 furnaces, and the Treasure *zhe* 10 furnaces. One *mao* was 12,498 strings, but we cannot tell how many *mao* a single furnace actually produced. We also lack the figure for the Treasure Origins Office.

[6]*High Grade Treasure Inspection*, chapter 3: "That seller of jade objects . . . said . . . 'I don't want whole ones, I want broken ones. The fact is, under current market conditions, whole ones are 6 ounces of silver. Broken ones are 6 strings of large coins, or 12 strings of capital coins."

[7]*Qing History Draft*, 208, "Biography of Zhu Zun[?]," petition of daoguang 26: "At present, those in charge of salt are guilty of abuses. Because silver is expensive and coins cheap, they all use this as an excuse to sell salt for coins and not for silver." *Ibid.*, "Now the value of coins becomes cheaper by the day, and prices daily rise. The mints have to spend 2 cash to mint 1 cash. Official soldiers take 1 cash as equal to only half a cash." *High Grade Treasure Inspection*, chapter 8: "Those places of amusement all befuddle people into squandering their souls. Actually there is a limit to the expenses. It is just 7 or 8 strings of capital cash. If you pay with silver, it is just a bit over 3 ounces. They set up a platform on the south side, and they can't spend enough on wine." *Ibid.*, chapter 34: "There is nothing to this shortfall. As soon as you take office, you'll have something of the order of 20,000 in silver. This 3,000 strings [gift of thanks] of cash doesn't amount to anything. Converted to silver, it would only come to 1,200 ounces."

[8]For the most part the figures in the following table are based on the *Qing Veritable Records*. The figures for jiaqing 23 and tongzhi 6 are based on *Imperial Administrative Law Compiled By Category*. The figure for xianfeng 1 is drawn from a memorial by Zeng Guofan. Cf. *Complete Works of Duke Zeng Wenzheng*.

[9]Except where indication is given that capital coins are involved, all figures in column two of the following table are in large standard coins. During late Qing, capital coins were only a kind of pricing unit. At the time of payment, ordinary standard coins would be used at the rate of 1 standard coin for each 2 capital coins.

[10]Englishmen in Shanghai in xianfeng 7 were buying standard coins, and hence the price of these coins was high. (Cf. *Qing Emperor Wenzong Veritable Record*, 235.)

was used to express a price or what money was used to pay for something. If payment was made in silver, there was a tendency for prices to fall, or at least not to rise. For payments made in copper cash, there was a tendency for prices to rise. Some prices were set in silver, but payment was made in copper cash. Such prices would certainly have risen.

In fact, during jiaqing 3 (1798) it was said that prices were several times higher than the level of a century previous.[11] This can be verified from the figures for the cost of rice. At the end of the eighteenth century, the cost of rice in copper cash was four or five times what it had been at the end of the seventeenth century. During the daoguang period [1821-1851], the price calculated in silver was lower,[12] but because of private coining and the inflow of foreign coins, the weight of copper coins was down. While eleven provinces halted minting during the daoguang period,[13] during the 55 years from jiaqing 1 to the end of daoguang, the population increased by half, and yet prices calculated in copper cash during the first half of the nineteenth century were double the level of the last half of the eighteenth century. The increase was, however, gradual.

The change in the silver-copper cash exchange price was a blow to the peasantry, because their income from sale of grain was both calculated and paid to them in copper cash, while they paid their taxes in silver. If the price of silver increased 50 percent against copper cash, that would increase the tax burden of the peasantry by half as well. From the end of jiaqing [1821] to the beginning of xianfeng [1851], a picul of rice sold for around 3,000 cash in the rice producing regions of the southeast, but silver rose to 2,000 cash per ounce, and so a peasant's sale price for a picul of rice

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in copper cash could only be used to pay a tax of 1.5 ounces of silver.[14] This forced down the peasantry's standard of living, and there must have been a number of people lacking the strength to pay their taxes, thus affecting the government's fiscal policy. Hence from jiaqing on, government extortion and official corruption grew stronger, while the people's lives grew more bitter, forcing them into resistance. Popular societies like the White Lotus and Eight Trigrams sects rose up at this time. Eventually, these contributed to the Taiping revolutionary movement.

The most wrenching change in the value of Qing Dynasty money occurred as the Taipings grew in strength There was a famine in Guangxi during daoguang 27 [1847], and the Three Harmonies Society rose in rebellion under the banner of overthowing the Qing and restoring the Ming. In xianfeng 1 (1851), a Taiping army under the leadership of Hong Xiuquan occupied Yong'anzhou, and in less than two years the Taipings had occupied Nanjing and eight or nine provinces in both east and west.

During the ensuing fifteen years, the situation was very much like that at the time of Li Zicheng and Zhang Xianzhong at the end of Ming, except that the political ideas of the Taipings were more progressive. The Qing Dynasty should have fallen then. Unfortunately, the Taipings suffered from internal splits, and the Qing court came under the control of men who wanted to preserve the old order. Eventually they obtained aid from the English and American imperialists, and therely extended the life of the corrupt Qing government.

By xianfeng 3 [1853], army supply was requiring 20 million, but the Taiping army was advancing as though it were smashing through bamboo, and this greatly diminished tax receipts. The opium trade was legalized then, and so far from being able to increase the supply of silver, it was not even possible to ban its outflow. Yunnan copper could not be transported because the lines of communication had been cut by the Taiping armies. The only way to respond to this situation was to mint large coins, and to issue paper money.

The first large coin to be minted was a 10-cash large coin. That was issued in xianfeng 3, 3rd month. Each coin weighed 0.6 ounce. Ever since the yongzheng period, the standard coin's fixed weight

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[11] *Qing History Draft*, 111, "Biography of Guan Hanzhen," quoting a statement of jiaqing 3 by Jiang Zhaogui: "Banner capitation transport expense was an item obtained from the very beginning. Its level was fixed less than a century ago. Now, prices have increased several fold, and expenditures for this purpose are inadequate."

[12] *Contending Spring Garden* (published in daoguang 29), chapter 13: "'Even to let the two of us, elder and younger brother, eat three meals per day, drink some wine in the evening, and have rent money, I'll give you an ounce of silver per day.' Upon hearing that it would be an ounce of silver per day, little second brother was greatly pleased."

[13] *East China Continued Record*, daoguang period, 44, daoguang 21, 8th month, bingshen, proclamation by the Board of Revenue: "According to what has been revealed by this Board's investigation, as many as eleven provinces have halted minting, and have done so for many years. We fear that the coinage will gradually reach the point of extinction, and there will not be enough coins to meet the people's requirements. Noted. . . . Each governor is responsible for annually minting a set number of *mao*, and should hasten resumption of minting."

[14] Xianfeng 1, 12th month, 18th day, Zeng Guofan, "Petition on Alleviating Causes of Suffering Among the People."

had been 0.12 ounce. This was reduced to 0.1 ounce in xianfeng 2, but this was still something of an experiment. Therefore, the minting of a 10-cash large coin amounted to a weight reduction of 50 percent.

During the 7th month, Wang Yide had requested that additional furnaces be set up in Fujian to produce 10-cash, 20-cash, 50-cash and 100-cash large coins.[15] These coins were not much reduced in weight, since the 100-cash coin weighed 5 treasury ounces. During the 8th month, the Treasure Spring Office minted 50-cash large coins, each of which weighed 1.8 ounces, amounting to a weight reduction of 70 percent. In the 11th month, minting of 100-cash, 500-cash and 1,000-cash large coins was discussed. The 100-cash coin would weigh 1.4 ounces, a reduction in weight to one-ninth of the original level. The 500-cash coin would weigh 1.6 ounces, a reduction to 1/37th of the former level. The 1,000-cash coin would weigh 2 ounces, a reduction to 1/60th. These large

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coins were all presented as models to begin minting from in xianfeng 4, 1st month.[16] The weight of the 50-cash large coin was reduced to 1.2 ounces, and that of the 10-cash coin to 0.44 ounce, but their metal fineness remained unchanged.

In addition, they also minted iron coins. The standard coin weighed 0.12 ounce, the 5-cash coin 0.24 ounce, and the 10-cash coin's weight is not specified. The coins themselves weigh around 0.45 ounce. There were also lead standard coins, each weighing 0.12 ounce.

As soon as coins like the 1,000-cash large coin appeared, private coiners sprang up like wind-blown clouds. Four ounces of copper could be used to mint two large coins which could be equated with an ounce of silver. If used to buy old coins, 60 ounces of copper might be obtained. Under such circumstances, standard coins would in the end have disappeared without a trace.

Production of large coins by the government then was limited by the supply of copper, and it probably minted few of them.[17] The number of privately minted coins[18] could have exceeded the number of official coins. Hence large coins fell in price. The 1,000-cash and 500-cash large coins were only worth 400 to 500 cash per thousand in xianfeng 4, 7th month.[19] The 100-cash and 50-cash coins fell from 500-600 cash per thousand to something over 300 cash. By the 10th month, they no longer even circulated in the market.[20]

Nevertheless, they could not solely depend on large coins to meet war expenditures, and so also issued paper money. Silver Certificates were issued first, in xianfeng 3 [1853]. Not many were issued then, and they did not circulate widely, and so evoked no large effect. At the end of the year (i.e. at

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[15] *Qing Emperor Wenzong Veritable Record*, 101.

[16] Different works disagree on the date of minting of the Xianfeng large coins. For example, most books say that the 1,000-cash and 500-cash coins were first minted in xianfeng 3, 11th month, but according to the *Qing Veritable Records* and the *Great Qing Collected Statutes Elucidated*, minting did not get under way until xianfeng 4.

[17] *Great Qing Collected Statutes Elucidated*, 214, "Coinage," records the quantity of coins minted during xianfeng 4 as follows (using standard coins as the unit of enumeration):

1,000-cash:	29,114,000	500-cash	27,794,000
100-cash	1,410,500	50-cash	1,554,000
lead std cns	24,990,000	100- & 50-c	43,161,200
100- & 50-c	43,488,100	also	62,423,600
also	31,245,000		

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Ibid., 215, "Board of Revenue Coinage," mentions 200-cash, 300-cash and 400-cash large coins, but they were probably not issued. Huang Junzai, *The Concealed Jar of Gold*, 2, "Large Coins": "In the Autumn of xianfeng 5, I went across the Qing River, and heard the rumble of carts coming. I saw that the carts held coins. I asked what they were doing. They replied they were using coins to mint coins. I asked, how can you use coins to mint coins? They replied that treasury metal was insufficient, and the official bureau expenses could not be met. They were now melting down standard coins to make 10-cash large coins. Deducting the cost of labor, there could be a 40 or 50 percent profit, so why should they not engage in minting? During the Winter of this year, I again crossed the Qing River, and heard the rumble of carts coming. I saw that this time the carts held large coins. I asked what they were doing. The reply was they were minting coins. I asked how they could use large coins to mint coins? The reply was that large coins were not circulating. Those who would make up for the loss bought them at 20 or 30 percent of par. Now they were melting down large coins to make standard coins of still smaller size. They were also alloying them with lead. Deducting the cost of labor, one could be turned into three or four, so why should they not have engaged in minting?"

[18] *Qing Emperor Wenzong Veritable Record*, 185, xianfeng 5, 12th month, guisi, proclamation: "We hear that in places under Tongzhou, and to the left of Changxingdian and near West Mountain, all have private furnaces illicitly minting 10-cash large coins. An ounce of silver exchanges for 10 Thousands plus of private coins. Hence coins become ever cheaper, and silver ever more expensive."

[19] *Guangxu Period Shuntianfu Gazetteer*.

[20] Xianfeng 4, 10th month, 15th day, Xianbao, "Memorial on Official and Private Coin Shop and Wicked Merchant Schemes to Profit From Ruining the Coinage."

the beginning of 1854), Cash Bills came out. Within three or four months they had issued well over a million strings worth.[21] Later, a still larger quantity was issued so as to redeem the 1,000-cash and 500-cash coins. Those who found themselves with paper money exchanged it for ready cash with difficulty because the general office charged with this task only operated on alternate days, and there were just several dozen branches, each limited to only a hundred notes. Hence noteholders might wait all day and still be unable to exchange their paper money for coins.[22]

The Cash Bills of private money shops had better credibility, and so people preferred private bills to official certificates, causing the latter to fall in price. At first 1,000 cash worth of Treasure Certificates were worth 400 to 500 cash, the same figure as the 1,000-cash large coin in xianfeng 4, 7th month. By xianfeng 6, 12th month, an ounce's worth of Silver Bills was only worth 800 or 900 cash in Beijing, and still less elsewhere.[23]

At that point all of the Qing government's expenditures were being made in paper money. Things even reached a point where the government would only issue the paper money, but was unwilling to accept it. If people tried to use paper money to buy things, merchants would either deliberately raise their prices or hide away their goods. When people took paper money to the official branches to redeem it for ready cash, even if they succeeded in doing so, they would just get large coins.[24] When we add to this the abuses committed by the officials, the flood of paper money[25] caused its price to suffer a great decline. Silver Bills were only worth 500 or 600 capital cash per ounce in Beijing during xianfeng 9, 11th month. This was equal to 200 or 300 standard coins. An ounce of real silver was worth more than 12 Thousands of capital cash. That is to say, it took 12 ounces of official bills to match an ounce of actual silver.[26]

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Given the large coin depreciation and the paper money inflation, it was natural that prices were affected. There was a good harvest in the Beijing region during xianfeng 4. The price of grain in the countryside was very low, but there was a food shortage in Beijing because large coins and paper money were mainly circulating inside the walls of Beijing, and the peasants were unwilling to transport grain into the city for sale. Therefore, a catty of wheat was only 16 or 17 standard coins in the countryside, but was 37 or 38 cash inside the walls. Crossing the city wall made for a doubling of the price.[27] This shows that the 100-cash and 50-cash coins had by then already declined in purchasing power by half.

After mid-Autumn, the situation further deteriorated. Pawn shops stopped taking in pledges, and food stores everywhere closed their doors, forcing prices a step higher.[28] During the Spring of xianfeng 7, a picul of grain cost a dozen or so Thousands of capital cash, and in xianfeng 8, 1st and 2nd months, the price rose to more than 20 Thousands.[29] Peng Yunzhang said that "since the change to use of large coins, rice has been expensive inside the city."[30] Hence in the 4th month of that year, the auth-

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[21]Wang Maoyin, "Memorial Again Discussing Certificates" (*Memorials of Expectant Executive Wang*).

[22]Yang Zhongya, "Petition on Aid to be Provided for the Circulation of Certificates."

[23]Memorial by Zhang Xiuyu. However, *Qing Dynasty Investigation of Literary Remains Continued* says that in xianfeng 5, an ounce in Silver Bills was only worth 400 to 500 standard coins.

[24]*Qing History Draft*, "Food and Money, 5, Coinage."

[25]*Qing History Draft*, 174, "The Imperial Clan: Sushun": "In xianfeng 8 . . . the Board of Revenue circulated Certificates to meet the financial requirements of military activity. Treasure Certificate Centers were established, and large coins circulated. They established an Official Coin General Office to divide the work. They also set up official silver houses, and merchants were invited to aid in their disbursal and collection. There were four branches with the character *qian*, and five with the character *yu*. Large paper money certificates lacked credibility. They were circulated by legal fiat. Links between officials and people involved much corruption. Sushun investigated the deficiencies of funds in the five Treasure Certificate character *yu* branches. Their books did not correspond with those of the Official Coin General Office, and he memorialized to request investigation of their administration. He obtained a closed indictment covering the officers of the branches and the merchants, and several dozen officials had their property confiscated."

[26]Gao Yanyou, "Memorial on the Stoppage of Silver Certificates."

[27]Tang Renseng, "Memorial Requesting a Broadened Circulation of the Large Coins So as To Assure a Sufficiency of Food and Convenience the People."

[28]Xian Baoguan, "Memorial On the Wicked Merchants of Private Coin Shops Scheming For Profit and Ruining the Coinage."

[29]Chen Henian, "Memorial . . . On the Blockage of Large Coins and Daily Rise In Prices."

[30]*Qing History Draft*, 172, "Biography of Peng Yunzhang." *Ibid.*, 209, "Biography of Yuan Xizu," xianfeng 9 petition: "At the beginning of xianfeng, because roads were obstructed and copper scarce, there was a change to minting of large coins. Before long, neither the 100-cash nor the 50-cash coins would circulate. Only the 10-cash coin circulated. At first it was worth 3

orities had no choice but to increase the soldier supply allowance per 1 ounce by 1,000 cash.[31] During xianfeng 11, 6th month, the cost of a picul of rice rose to 60 or 70 Thousands in paper money, and a Thousand was only worth 62 standard copper coins.[32] At that time a worker's daily wage was only a few hundred cash, which could only purchase one or two *sheng* of rice.[33]

During the period of inflation, the majority of prices were calculated in standard coins. Large coins and paper money were mostly commuted into standard coins according to their market prices. When making purchases, the price would be increased in proportion to the number of large coins employed.[34] Hence prices varied according to the type of coins people offered in exchange. In the Spring of xianfeng 7, if a purchase was made with standard copper coins, prices were virtually the same as prewar. If the purchase was made with lead or iron standard coins, then prices were 20 or 30 percent higher. If the purchase was made in 10-cash copper coins, the price was doubled. Paper money behaved like 10-cash copper coins. If 10-cash iron coins were employed, prices were several times higher.[35]

Iron coin offices were established during xianfeng 4 and 5 [1851, 1852]. They minted small standard coins and 10-cash coins. At first there were four factories, one each in the east, west, south and north. In xianfeng 8 another was set up in the center. Altogether they had 225 furnaces, each producing 5 *mao*. In a month 265,625 strings of cash were minted. By xianfeng 9, they had turned out well over 9 million strings. At first these coins were used to pay 20 percent of the monthly soldier ration.

Because they were carefully made, the people did not discriminate against them. People even gave them a better reception than the 10-cash copper coins. During the Spring of xianfeng 8 [1858], 1,000 iron standard coins were worth 2,000 cash in 10-cash copper coins. Later, however, they began to fall in price, and by the Spring of xianfeng 9, they were circulating at par with the 10-cash copper coins.[36] During the 7th month, 200 cash in 10-cash coins could exchange for 1,000 iron standard coins.[37] This was because there were not just iron standard coins, but also large coins, up to 1,000-cash size. More 10-cash coins were minted than of any other denominations. As a consequence there were also more problems involving the 10-cash coin.

In fact, this 10-cash iron coin received the least
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welcome. In xianfeng 7, 1st month, 10th day, the Beijing merchants began to refuse to accept it. The next day all the rice shops and most of the small food stores closed their doors in what amounted to a market strike.[38] The minority of shops which remained open employed a variety of methods to avoid taking in large iron coins. For example, if one used a 10-cash copper coin to buy white flour, though the price would be much higher than if one used standard coins, one could still get to buy real flour. If you used 10-cash iron coins, then not only would the price be five times higher, the merchant would adulterate the flour with other things to the extent that you would not be able to eat the stuff.[39]

Though this monetary inflation lasted several years, its center was in the north. The 1,000-cash and 500-cash coins, for example, were only minted in several northern provinces. They seem not to

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or 5 standard coins. Recently it has only been worth 1 coin. Silver has become increasingly expensive. Prices of goods in general have leaped. The people are in heavy difficulties. The Banner Provisions payment of 3 ounces per month, when commuted to 15 Thousands in coin is no longer enough to maintain one's self. Heretofore a standard coin has weighed 0.12 ounce, and large coins 0.48 ounce for the 10-cash, with a seignorage of 0.54 ounce. Now with a 10-cash worth 1, 0.48 ounce of copper has a value of 0.12 ounce in use. Private melting down and reminting has given rise to numerous ill effects."

[31] Board of Revenue placard.

[32] Li Ciming, *Yueman Hall Diary*, Collection H, first part, xianfeng 11, 6th month, 12th day.

[33] Fukuan, "Memorial On Changing the Price Of Coins In Circulation So As to Save the People's Livelihood."

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[34] *Capital Region Gazetteer*, quoting *Respectful Record of Imperial Audiences*, which records that in xianfeng 7, 2nd month, the Shandong Frontier Offices's Wu Yandong memorialized in audience: "The Ruler asked whether or not Zhili could circulate large coins? The reply was 'The markets of Zhili once circulated large coins at 20 percent of par. This Spring their circulation was broadened, and they circulated at 30 percent. The little people only honor them in that proportion. When purchases and sales are actually made in the market, if 20 percent of the payment for a 100 cash purchase is made in large coins, 120 cash is actually paid. Now, when large coins are circulated at 30 percent, then that much of a premium is paid by quietly discounting these 30 percent large coins."

[35] Pu'an, "Memorial . . . On Evil Merchants' Wicked Customs Dominating the Market."

[36] Enying, "Memorial . . . On the Current Blockage of Iron Standard Coins in the Capital City."

[37] Liu Youming, "Memorial On Wicked Merchants Seeking Profit From the Unusual."

[38] Zhang Xiuyou, "Memorial On the Blockage and Non-Circulation of the Iron Large Coin Hindering the People's Food."

[39] Pu'an's memorial. Cf. note 35.

have been minted at all in the south. This was because the southern provinces had long since been occupied by the Taiping armies, and in a number of provinces, not even the 100-cash coin got to be minted. The place in the north where the inflation was most severe was Beijing. The various large coins did not circulate much in the provinces. Use of paper money was also probably concentrated in a few cities like Beijing. As for the provinces occupied by the Taiping armies, naturally they were not influenced by the Qing court's monetary policies. They had their own monetary system.

Xinjiang's money system originally constituted a separate entity [before it became a province in 1884]. Its Red Cash did not circulate much in other provinces. Nor could the Green Cash of the other provinces circulate in Xinjiang. Even in Xinjiang the former were limited to the eight cities of the southern circuit, and were not used by Turfan in the north or Hami in the east. It is, therefore, reasonable that Xinjiang should not have been influenced by the monetary depreciation going on in the other provinces.

Nevertheless, the Qing court did carry out a depreciation in Xinjiang. The Treasure *di* Office of Dihua (Urumqi) minted 8-cash, 10-cash and 80-cash coins. The Treasure *yi* Office of Ili minted 4-cash, 10-cash, 50-cash, 100-cash, 500-cash and 1,000-cash large coins. None of these were genuine Red Cash. The Uighur frontier's four cities, Aqsu, Yarkand, Kulja and Kashgar, also minted coins with face values from 5-cash to 100-cash. In addition to the already existing mints in Aqsu and Kulja, Yarkand once again took up minting, and the Kashgar mint was altogether newly established.

The extent of the weight reduction carried out by these mints was much more severe than what had occurred in the other provinces. We can tell this by comparing the 100-cash coins minted by different provinces. The 100-cash coins of various provinces differed in weight. Of those xianfeng period 100-cash coins which I have weighed myself, the lightest are more than 1 treasury ounce. Only those minted in Xinjiang's Yarkand and Aqsu weigh less than an ounce.

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Under Qing rule, prices were mostly expressed in terms of standard cash, and not only was it not possible to increase the supply of standard cash, but rather it was the case that melting down of coins reduced their supply. As a consequence, the phenomenon of a coin famine appeared in the midst of a monetary inflation.[40] Therefore, prices expressed in standard coins did not rise. This can be seen from rice prices.

COMPARISON OF WEIGHTS OF 100-CASH COINS FROM VARIOUS PROVINCIAL MINTS

Provincial Mint Name	Weight (grams)	Notes
Fujian Tr. fu Office	186.5	Officially set at 5 tr oz
Zhili Tr. zhi Office	76.5	
Shaanxi Tr. shaan Office	67.3	Heavier ones over 90 grams
Rehe Tr. de Office	56.0	
Shandong Tr. ji Office	54.4	
Zhili Tr. ji Office	54.4	
Gansu Tr. gong Office	50.9	
Hubei Tr. wu Office	49.8	Heavier ones over 56 grams
Henan Tr. he Office	48.5	
Jiangsu Tr. su Office	41.8	Heavier ones over 100 grams
Beijing Tr. Origins Off.	41.0	
Xinjiang Tr. yi Office	41.0	Heavier ones over 54 grams
Beijing Tr. Spring Off.	40.0	Heavier ones over 48 grams
Sichuan Tr. chuan Office	40.0	Heavier ones over 51 grams
Xinjiang Ke'erqiang Off.	32.0	
Xinjiang Aqsu Office	13.8	Even heavier ones only 19gm

QING DYNASTY TABLE OF RICE PRICES (2)

Period	Number of Standard Cash Per Hectoliter
1751-1800	1,626
1801-1810	3,262
1811-1820	3,330
1821-1830	2,524[41]

[40] *Flower Moon Traces*, chapter 31: "Chizhu . . . said . . . 'I'm not just saying this. There is also a great deal going on now which cause sighs in the midst of happiness . . . The fourth is the copper coin famine. The fifth is the abuse of paper money . . .'"

[41] For 1821-1830, the rice in terms of capital cash was 4,630 cash per picul. An ounce of silver was equal to 2,157 capital cash. The figure in the table is derived by commuting capital

1831-1840	3,548
1841-1850	3,871
1851-1860	2,914

Rectification of the monetary system required a number of years. The 1,000-cash and 500-cash large coins were only used for several months. The government stopped minting them in xianfeng 4, 7th month. By then the total of these two types of coins issued was

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over 294,000 strings. The authorities estimated that it would require one-third that number of standard coins to redeem them all.[42] Actually, they probably used paper money to redeem them.

In general, from then on the large coin problem was one involving 100-cash and 50-cash coins. The authorities did not know how to dispose of those two coins. They were probably already no longer circulating by xianfeng 4, 10th month. Only the 10-cash coin continued to be made and used. The government did not stop minting it until the end of the guangxu period. However, at the beginning of tongzhi [1862], its weigh was reduced from 0.44 to 0.32 ounce, and in guangxu 9 [1883] it was further reduced to 0.26 ounce.[43] Naturally, private coins were even lighter. Its circulation was limited to within the walls of Beijing, and its price fell uninterruptedly. In xianfeng 9, 4th month, it fell to parity with the standard cash, at which point people began to melt these coins down, since one of them could be used to mint 3 or 4 standard coins.[44] If thin and light standard coins were made, then 5 or 6 cash could be obtained.[45] After the weight reductions of the tongzhi and guangxu periods, the 10-cash coin was generally used as the equivalent of two standard cash.

Within the sphere of the Taiping Heavenly Kingdom, the coinage was relatively stable. We cannot make a comparison between the Taiping and xianfeng period 100-cash coins. If we did, the Taiping coin would be lighter than the xianfeng coin, since if we suppose that the highest denomination Taiping coin was the 100-cash, which only weighs around 31 grams, that would only be comparable in weight to the Aqsu xianfeng period 100-cash coin, but would be lighter than the xianfeng period 100-cash coins of the other provinces.

Such a comparison would not, however, be appropriate. The xianfeng period 100-cash coin was only in use during xianfeng 3 and 4. Thereafter, the Qing court mainly promoted the circulation of paper money. In other words, at a time when under Qing rule paper money and lead and iron coins were being used, copper coins continued to be used within the sphere of operations of the Taiping Heavenly Kingdom. It is only in terms of such a comparison that one can tell whose money enjoyed more stable purchasing power, and only such a comparison would be a complete one.

Of course the phenomenon of monetary depreciation also appeared within the Taiping realm. For example the weight of the Heavenly Kingdom Sagely Treasure of the Nanjing region was reduced, but the Taipings never used iron coins, lead coins or paper money. This allowed the people to be able to maintain a relatively peaceful economic life.

By xienfeng 11, the paper money had all but become waste paper. Only a portion of taxes or of the funds for redeeming pawned articles could be paid with it. A 1,000 cash in paper money was only worth a little more than 100 cash in 10-cash coins,[46] or 23 standard coins. That is to say, it had lost 97 percent of its purchasing power. At the beginning of tongzhi, the government ordered Zhili, Shandong, Henan and Sichuan provinces to stop accepting paper money for payment of taxes, and to change over to collecting them in silver. Nor were their expenditures to be made in paper notes.[47] In fact, however,

cash into standard coins at the rate of 2 capital cash to 1 standard coin.

[42]Board of Revenue, "Memorial Honoring the Imperial Edict To Again Circulate a Secure Coinage: Appendix" (xianfeng 4, 7th month, 26th day).

[43]*Qing History Draft*.

[44]*Qing Emperor Wenzong Veritable Record*, 293, xianfeng 9, 9th month, proclamation: "The Censor Xu Qiwen's memorial 'Request for a Strict Ban on Private Melting Down and Private Minting So As To Circulate the Coinage' stated that the copper 10-cash coins presently circulating in the capital city were most abundant, but in recent days they have suddenly become deficient in curculation. In surmising the reason for this he noted that a copper 10-cash coin was only equated with 2 copper standard coins in the capital. If reminted into standard coins, 3 or 4 of them could be obtained. It must be that there are wicked people seeking profit by the corrupt practice of illicitly melting down and reminting these coins."

[45]*Ibid.*, 318, xianfeng 10, 5th month, proclamation: "The Censor Zhu Hu memorialized . . . 'All say the large coins have become scarce. There are wicked people who take 10-cash large coins and melt them down to obtain the material for private coining. One 10-cash large coin can be used to make 5 or 6 light and thin standard coins.'"

[46]Liu Yunan, "Official Bills Stoppage . . . Memorial."

[47]Shen Baozhen, "Memorial Considering the Proposal to Manage the Situation Caused By Obstruction of Official Bills By Halting their Use" (*Political Documents of Duke Shen Wensu*, 2).

Zhili province continued to use them. Land tax payments could be made 90 percent in silver and 10 percent in bills.

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Cash payments were made half in silver and half in bills. Right down to tongzhi 7 and later, the same arrangements were followed in Jiangxi.[48] From a national perspective, however, the circulation of paper money had already become a thing of the past.

Only after the defeat of the Taipings did the value of money stabilize. Prices were still low in the rural areas,[49] but generally speaking, the war had raised prices. We can tell that this was the case from the fact that few standard coins were minted during the tongzhi period. Most of the coins in circulation then were old coins minted before the war. These included a number of foreign coins, such as coins from Vietnam and Japan.

[48]Liu Shenyi, "Memorial Weighing the Proposal To Solely Use Standard Cash."

[49]*Xinzheng Interpolated Collection* (written in tongzhi 7), first part, "Straw Shoe Old Man": "Outside the west well was a man named Zhou Shunxing, who was over sixty years old. He ran a small tavern with a couple of tables. Those who came in for a drink paid a couple of cash a glass, and got a plate of sprouted beans for another cash. For 5 or 6 cash you could drink yourself into a stupor. . . . There was a seller of straw shoes who came in every few days for a drink. . . . The straw shoes he sold went for 7 cash a pair."

Xinzheng Annual Collection (written in tongzhi 9), latter part, "Retribution": "There was a fellow named Zhao Shengmou who went to the Eternal Virtue Temple to see a show. In the afternoon he went into a small tavern next to the bridge. Stillbeer was 3 cash per glass. Five-flavor cooked beans were 2 cash per per small plate. Without using much money, he got half drunk."

Xinzheng Alternate Collection (written in tongzhi 6), latter part, "Field Employment": "And he came to this temple to tend cattle. He worked energetically for a year, and took care of the plowing. In his spare time he would sweep up, carry water and firewood, bake clay, and take it off to a distance. There was nothing he did not do, and with great energy. I asked what his wages were, and he replied that when he first came, for several years he got nothing, but for the last two or three years he had been getting 300 cash per month, and that was sufficient to meet his food and clothing requirements."

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3. *Changes in the Value of Money During Late Qing*

From xianfeng times to the beginning of tongzhi [the 1850s and '60s], there were irregular movements in the silver price of copper. Beginning in tongzhi 10 [1871], there appeared another change in the relationship between silver and copper cash: Just as happened at the beginning of Qing, coins became expensive and silver cheap. At that point, the nations of Europe were adopting the gold standard one after the other, and demand for silver greatly diminished. At the same time the production of silver increased, silver's price fell, and copper's price rose. The quantity of standard coins for which an ounce of silver could be exchanged steadily declined. During the xianfeng period, an ounce had exchanged for as much as 2,000 standard coins. In tongzhi 10 it could still fetch more than 1,800 cash, but by guangxu 31 [1905], an ounce could only exchange for a bit over 1,000 cash.[1,2]

[1]*Compiled Record of Important Events in China and Abroad* (guangxu 24), "The Coin Trade in the Capital": "The names of the coins used in the capital are numerous. There are Bill Coins, large

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coins, Two Road Coins, Original String Coins, reverse inscription equals-tens, all of which are 1-cash coins used as 2-cash. The large coin is thick and heavy, and is used in the markets within the city and in the region near the walls outside the city. The Original String Coin is extremely thin, and resembles the sand coins used in the provinces as 1-cash pieces. Most numerous is the equals-ten, a 1-cash piece used at 2-cash, and used in the region outside the city. Since receiving the Imperial Edict prohibiting the coin shops from picking and choosing among coins for fineness, people coming into the markets inside the city walls have all been avoiding the large coins, and have shifted to the Original String Coins. The Original String are 80 percent of the value of large coins. If exchanged for a foreign dollar, it takes 800 large coins and 1,000 Original String Coins. Because of the Imperial Edict banning picking and choosing among coins, the merchants have not dared to debate the matter, but the large coins hitherto used have been sold off out of the capital by the merchants, and have been reminted into Two Road and Original String Coins. One large coin can be minted into 2 Two Road Coins or 3 Original String Coins. This is really a good business, one yielding a profit of three fold." (10th month, "Report of State Information.")

[2]The figures in the table are based on Maritime Customs statistics. Cf. Liang Qichao, "Short History of the Excessive Production of Copper Dollars in Various Provinces," *Drink Ice Room Collected Works*, 21. However, the original figures were in terms of the Maritime Customs ounce. To standardize the figures and make comparisons more convenient, I have commuted

QING DYNASTY STANDARD COIN
MARKET PRICE TABLE (3)

Year	Std Coins Per Oz Per Oz Silver	Year	Std Coins Silver
tongzhi 9	1,856	guangxu 15	1,569
10	1,856	16	1,473
11	1,856	17	1,481
12	1,782	18	1,536
13	1,787	19	1,536
guangxu 1 (1875)	1,760	20	1,493
2	1,705	21	1,648
3	1,660	22	1,364
4	1,582	23	1,364
5	1,604	24	1,292
6	1,636	25	1,312
7	1,673	26	1,315
8	1,668	27	1,336
9	1,668	28	1,331
10	1,664	29	1,265
11	1,633	30	1,213
12	1,631	31	1,089
13	1,530	32	1,386
14	1,564	33	1,485-1,683

The price of copper rose because of the fall in silver's price. As a consequence, during the 30 years from tongzhi through the first half of guangxu, prices calculated in terms of copper cash had a tendency to fall.

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QING DYNASTY RICE PRICE TABLE (3)

Period	Number of Std Coins Per Hectoliter
1801-1850	3,267
1851-1860	2,914
1861-1870	4,480
1871-1880	2,991
1881-1890	2,311
1891-1900	3,449
1901-1910	5,250

the Maritime Customs ounce into the treasury weight ounce, on the basis of 1 treasury ounce being equal to 0.99 Customs ounce.

If, however, we take into account the whole of the Qing period, prices calculated in copper cash still rose. They rose still more during the dynasty's last decade. If we examine the whole of the two and more centuries of the Qing Dynasty by fifty-year intervals, we can see that the cost of rice rose five fold during that time.

QING DYNASTY RICE PRICE TABLE (4)

Period	Std Coins Per Hectoliter	% of Base
last half 17thc	614	100.00
first half 18thc	816	132.90
last half 18thc	1,626	264.82
first half 19thc	3,267	532.08
last half 19thc	3,152	513.35

The rise in prices calculated in copper cash did not occur because of a decline in the production of rice, or an increase in the size of the population, but because of a reduction in the value of copper cash. This decline in the price of copper cash was not due to a fall in the price of copper, but to reduction in the weight of copper coins.[3]

The reduction in weight of the copper coins did not mainly come about by way of the standard coins, since their weight remained virtually unchanged over the long term. The shunzhi 1 standard coin weighed 0.1 ounce. The guangxu period Guangdong machine-made standard coin also weighed 0.1 ounce. The first three reigns of Qing even witnessed an increase in the standard coins' weight.

Since the qianlong period, however, private coining had run wild, and during xianfeng and tongzhi times this problem had grown even more severe. The proportion of private coins in the money supply was very large, and they generally were not up to standard weight. Some guangxu private coins were as light as 0.03 ounce. By the end of the dynasty, even some machine-made standard coins were as light as 0.04 ounce.

[3]According to the Shanghai British Consulate reports, the weights of 100 standard coins from qianlong times on were as follows (Cf. Liang Qichao, "Short History of the Excessive Production of Copper Dollars in Various Provinces"):

Qianlong cash	12.19 Engl. oz.	Jiaqing	10.73 oz
Daoguang cash	10.80	Xianfeng cash	9.00
Guangxu old csh	9.80	Guangxu new csh	6.80

Since the rise in prices was not due to a fall in the price of copper, but rather to a reduction in the weight of the copper cash, there would be

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a negative correlation between prices and the weight of the copper cash or its copper content. If we examine that most important food item for the Chinese, particularly northerners, the *mantou* [steamed bread], we find that they cost 1 cash apiece during the kangxi period.[4] During the yongzheng period, they cost 2 cash apiece.[5] During the guangxu period, they fetched 4 or 5 cash apiece.[6] This was three or four times higher than the early Qing level. If the Qing government had been able to maintain the weight of 0.1 ounce per cash from beginning to end, then prices calculated in standard coins would certainly have been much more stable.

They began to mint the Copper Dollar in guangxu 26 [1895]. This represented a great turning point in Chinese monetary history. This was not only a reform of the monetary system. It simultaneously also influenced the people's standard of living, since the adoption of the Copper Dollar tripped off a price revolution. What I call the price revolution was something different from an ordinary monetary depreciation or inflation.

China had gone through a number of monetary depreciations and monetary inflations in the course of its history, but in the aftermath of an inflation, prices generally reverted to their previous levels. Hence the price changes evoked by previous monetary depreciations and inflations were merely temporary oscillations. It was like when a man suffers an illness. After he has recovered his health, often no trace of the illness remains.

Ever since Han times, even when the ruling class used gold, silver or paper money, the masses generally employed copper cash, even when they had to risk violating a ban against its use. In actual fact, no matter how the government might try to enforce such a prohibition, it finally had to allow copper cash to circulate. Though the weight and fineness of copper cash might differ from age to age, with weight reductions occurring frequently, no matter how many such reductions might occur, the ultimate result was always to restore the 0.1 ounce standard weight for the coin, or something close to that level.

The reason why this had always happened in the past was that over the course of two millennia most people had taken the copper cash as a monetary unit. Though governments might frequently issue large denomination coins, the people always strenuously opposed this, and in doing so they were always in the end victorious. The first such coins were Wang Mang's large coins. The last were the large coins of the xianfeng period. None of these won the faith of the people. As a consequence, the authorities always had to restore the small coin.

With the minting of the Copper Dollar, circumstances changed greatly. Strictly speaking, there was no particular difference between using the Copper Dollar and the 10-cash large coin.[7] At first the 10-cash coin of the xianfeng period weighed 0.6 ounce. Later, after going through several weight reductions, it weighed 0.26 ounce. The 10-cash Copper Dollar, however, only weighed 0.2 ounce from the beginning. The 10-cash large coin fell in price not long after it was first issued. Later, it came to be valued at only 2 standard coins.

Although the Copper Dollar fell in price against both silver and the silver dollar, it only fell in price against the standard coin for a short period in particular places. Generally speaking, from beginning to end, it retained its status as a 10-cash coin. This is one point of difference between the Copper Dollar and the large traditional coin, and this is also the crux of the price revolution.

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It was not until after two thousand years that the Chinese people finally discovered and accepted a new monetary unit to replace the old style copper cash. Prices calculated in copper cash must have risen several fold. This price revolution only began

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[4] *Dessicated Words of the Old Man of the Wilderness*, chapter 16, says that *mantou* went for 4 cash per sale. One sale probably involved four *mantou*, or at least two of them.

[5] *The Scholars*, chapter 17: "He then walked into a steamed bread shop. . . . Those steamed breads were 3 cash each. Third Lord's Son only gave him 2 cash, and started a ruckus in that shop." This could have occurred during the period of transition from the 2 cash to the 3 cash price per bread.

[6] *Notes on the Current Shape of Official Life* (a work written in guangxu 29), 2: "Later, he went on to say that he had bought steamed breads on the road today for 4 cash apiece. He insisted on 5 half-cash apiece. A dozen steamed breads cost 18 cash. He was really a scoundrel."

[7] Guangxu 23, Censor Chen Qizhang, "Memorial on the Request to Order the Board of Revenue to Add the Minting of Copper Dollars": "The advisers may say that the Copper Dollar is not different from the 10-cash large coin. Would it not be better to regularize the large coin than to change over to the Copper Dollar? That way we could remain within our practices and our laws. They do not realize that even though these large coins are 10-cash, their weights are not uniform, their sizes are not regular, and they cannot gain credence in all the provinces." Cf. Zuo Zongtang, *Memorials of Advice Collected For Inspection Since Guangxu Year Yiwei*, 6.

at the end of Qing. It was not completed until after the republic got under way.

The people accepted the Copper Dollar for the same reason they had accepted the Silver Dollar: Its design was finely executed, and it was of uniform size. It was also because the Copper Dollar had been reduced in weight the fewest number of times. One may also say that this was a victory of machinery over handicraft industry, or of capitalism over feudalism. Hence when they first came out, the Copper Dollars' market price exceeded their face value, which had originally been fixed at 100 Copper Dollars to the Silver Dollar. In actuality, during guangxu 28 [1902], a Silver Dollar could only fetch 80 to 90 Copper Dollars.[8] Cost of production of the Copper Dollar was only around 0.44 ounce of silver per hundred coins.[9] The seignorage was practically 100 percent.

Provincial officials realized that this was a short cut to wealth, they promptly made large purchases of machinery, and set about minting coins. By guangxu 31 [1905], 12 provinces had set up a total of 15 mints, with 846 coin-making machines. According to estimates made then by the Shanghai Foreign Merchants Association, if this machinery had been working at full capacity, it would have turned out 16,413,700,000 Copper Dollars per year. With a total population of 400,000,000, that would have come to 40 coins per capita per annum. Fortunately, this machinery was only worked at 60 percent of capacity, and some of it had not yet been delivered. Eventually, at the urging of some people, minting was halted for a short time, but by the end of Qing, the total quantity of Copper Dollars produced must have been some 20 billion.[10] As a consequence their price fell. The number fetched by a Silver Dollar increased from 80 to over 130.

LATE QING SHANGHAI COPPER DOLLAR MARKET PRICE TABLE[11]

Year (As of the 12th month)	Number of 10-Cash Copper Dollars Equal To One Silver Dollar
guangxu 28	80
29	84
30	90

[8] According to Maritime Customs reports, in guangxu 28, 1 Silver Dollar was worth 88 Copper Dollars in Suzhou, and 90 in Hangzhou. In Jiaozhou it was 80, and in Anqing 95. During guangxu 31, it ran from 92 to 95 in Shanghai, and was 95 in Ningbo. Geng Aide, *On Chinese Money*, p. 390.

[9] Liang Qichao, "Short History of the Excessive Production of Copper Dollars in Various Provinces": "In the various offices minting copper dollars, their raw materials involve adding 50 catties of inferior lead to each thousand catties of copper. The market price of copper is around 35 ounces per *dan* of 50 kilograms. A *dan* of lead is around 1 ounce. Therefore, the cost of the raw materials for a *dan* of Copper Dollars is actually less than 35 ounces, from which 8,000 coins can be minted. Therefore a single Dragon Foreign should fetch 169 of them. A treasury ounce of silver should fetch 228. If we equate them with standard coins, the pure copper content of 1,000 of the presently circulating standard coins is 2 catties 8 ounces. If we calculate the price ratio just in terms of copper, then 100 Copper Dollars are equal to 694 standard coins. However, the present market price of standard coins is 1,500 per ounce of silver. Therefore, 213 Copper Dollars should exchange for 1 ounce of silver, and 100 of them should be worth 0.448 ounce of silver." (*Drink Ice* **[849]** *Room Collected Works*, 21.)

[10] Liang Qichao records the annual quantity of Copper Dollars as follows:

Year	Raw Material In Dan of Copper	Quantity of Copper Dollars (in thousands)
guangxu 30	255,771	1,741,167
31	749,000	4,696,920
32	213,673	1,709,384
33	356,400	2,851,200
34	178,500	1,428,000
	1,753,344	12,426,671

Those produced during guangxu 28-29 and during the xuantong period are not included. In addition, there were also those privately coined among the Chinese people and those privately coined by foreigners. Liang Qichao estimated that in late Qing times there were 14 billion Copper Dollar coins. Cf. *Drink Ice Room Collected Works*, 21, "Short History of the Excessive Production of Copper Dollars in Various Provinces." This figure would appear to be too low. According to an investigation by the Ministry of Finance Coin Office during Republic 2, 12th month, the figure for production and circulation of large and small Copper Dollars had already reached over 29 billion coins. Therefore, there must have been some 20 billion Copper Dollars produced during late Qing.

[11] According to Zhang Jiaxiang, *History of Chinese Monetary Systems*, Volume 5, p. 35.

31	107
32	110
33	116
34	123
xuantong 1	127
2	131
3	134

Previously, when large coins fell in price, the people simply used standard coins, and prices returned to their former levels. This time, when the Copper Dollars fell in price,

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the living expenses of people in the cities rose in proportion.

For example, the price of labor for carving book printing blocks had hardly changed since late Ming times, but there was a very large change at the end of Qing. At the beginning of guangxu, to carve printing blocks for books in Hunan cost 50 or 60 cash per hundred characters. By mid-guangxu, this had increased to 80 or 90 cash, and by the beginning of xuantong it had gone up to 130 cash.[12]

Why, after not changing for several centuries, did it change so drastically within a few decades? It was the price revolution. There was no one now calling for the abolition of the Copper Dollar in favor of the standard coin.[13] This too was a characteristic of the price revolution. Nor was the fall in price of Copper Dollars the consequence of a rise in the price of silver. In fact, during this period silver was itself in the midst of a price decline. This was itself a fundamental aspect of the price revolution.

Although China had a long history of contact with foreign nations, its prices and standard of living had remained isolated, and up to that point had not suffered much foreign influence. This was because China was largely self-sufficient in production of articles necessary for everyday life. From the time of the defeat of the Taipings, the Western nations deepened their aggression against China, and foreign trade figures steadily increased. Hence there was a tendency for Chinese and foreign prices to converge. Connected with this was the fact that the Europeans and Americans had adopted the gold standard, causing the price of silver to fall substantially. Payments in China were calculated in silver, and so it would have been hard to avoid having prices being pulled up by this fall in silver's value.

The fall in the price of silver constituted a severe threat to the people's livelihood. People who depended on wages for their livings suffered a clear lowering of their standard of living. In the last years of Western Han, a substitute labor serviceman received a monthly income of 300, and a hired watchman's wage was 2,000 per month. At the beginning of Song, a soldier could get between 300 and 500 cash per month. By the end of Qing, urban labor's wages were sometimes reckoned in silver, but in the countryside, where coins were mostly employed for this purpose, the level of wages did not increase. For example, during the tongzhi period, hired field labor was still 300 cash per month.[14]

During Western Han, 300 cash could buy half a hectoliter of rice, but during tongzhi times I suspect it could not even purchase one *dou*. During late Qing, urban laborers' wages were relatively high: In Tianjin, a leather worker, a weaver of oriental carpets, a dyer or a knife grinder could get 300 cash per day,[15] but even if such a laborer found work every day, he would only get 9,000 cash per month, and that would only buy something over 1 hectoliter of rice. This would not come up to the wage of a Western Han hired watchman. A wheelbarrow pusher in Shanghai only got from 130 or 140 to 350 cash per day for his labor. Averaging 25 days of labor per month,[16] he would get a total of 6,000 cash for the month, and this could not purchase even 1 hectoliter of rice. Hence wages during late Qing were by no means higher than those of earlier times.

[12] Ye Dehui, *Pure Words from the Book Grove*, 7, "The Modest Price of Book Carving Labor During Ming Times."

[13] In guangxu 34, the Reviewing Policy Adviser Gao Runsheng said in his "Memorial On Regulating the Dollar One Ought to Control the Abuse of Profit, and Fix a Return to a Unified Coinage System as the Foundation": "As the Copper Dollar is not what the people treasure, it ought resolutely to be abolished, and we should return to the old standard coin unit. We should also make it a matter of urgency to fix on a silver coin system, so that the standard coin and the Silver Dollar directly support each other, and we can remove the several denominations of large and small Copper Dollars." Such a point of view was different from that of the masses, but at the time there were not many to echo it.

[14] *Xinzheng Alternate Collection*, latter part, "Field Labor."

[15] *Complete Book of the Chinese Economy*, "Late Qing Workmen's and Artisan's Hire Silver and Payment Regulations."

[16] *Ibid.*

4. Silver's Purchasing Power

During the Qing Dynasty silver continued the [downward] trend in its purchasing power established during the Ming Dynasty. Though silver's purchasing power was somewhat more stable than that of copper cash, it still tended to gradually decline. A soldier's daily rations cost 0.05 ounce of silver during early Qing. In the aftermath of the defeat of the Taipings [in the 1860s] it was 0.2 ounce per man day. As for river control work, each time the Yellow River flooded during early Qing, the government expended 1 million ounces. A flood during daoguang or xianfeng times evoked an expenditure of 10 million ounces. If we take the price of rice as our standard, then during the five centuries from the fifteenth to the nineteenth century, silver's purchasing power fell to 17 percent of its original value. On the average, the cost of rice increased 55 percent per century, and over the course of these five centuries it rose five or six fold.
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TABLE OF CHANGES IN SILVER'S PURCHASING POWER

Period	Number of Hectoliters Rice 1 Kilogram of Silver Buys (Hectoliters)	Price Per Hectoliter (gms silver)
15thc.	75.11 (100.00)	13.31 (100.00)
16thc.	46.44 (61.83)	21.53 (161.73)
17thc.	31.40 (41.80)	31.84 (239.19)
18thc.	20.87 (27.78)	47.91 (359.84)
19thc.	13.05 (17.37)	76.63 (575.56)

If we use such long-term averages, the rise in the price of rice or the fall in silver's purchasing power seems to be somehow mechanical or deterministic, when that was actually not at all the case. The rise over the course of a century was not evenly spread within that time. There were very large oscillations. This was true not only for the Ming Dynasty, but for the Qing as well. If we shift to every-ten-year averages, the price of a hectoliter goes from 24 grams to 145 grams of silver, a range of seven fold.[1]

QING DYNASTY RICE PRICE TABLE (5)

Period	Price/Hectoliter (in grams silver)	Period	Price/ Hectoliter (gs silver)
1641-1650	47.11	1781-1790	60.01
1651-1660	44.81	1791-1800	73.28
1661-1670	31.94	1801-1810	81.13
1671-1680	24.31	1811-1820	80.19
1681-1690	32.22	1821-1830	72.44
1691-1700	27.50	1831-1840	90.19
1701-1710	36.01	1841-1850	84.13
1711-1720	34.53	1851-1860	63.72

[1] For the following table I have collected a total of around 900 Qing Dynasty rice prices, an average of three per year. The largest number for any one year was 28, for qianlong 16. I have 23 prices for qianlong 3. I have not included any incapable of being used. The sources for the figures are mainly the Qing Dynasty's
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various *Veritable Records*. I also consulted *East China Record* and *Qing History Draft*. There are fewer rice price records for early Qing, as is also the case for late Ming. Hence I have taken several figures from novels, but have limited these to ones whose dates can be verified. From the xianfeng period on, the *Veritable Records* lack details. I have taken some of the figures from contemporary memorials, such as *Complete Works of Duke Zeng Wenzheng*, *Draft Memorials of Marquis Zuo Kejing*, *Political Documents of Duke Shen Wensu*, *Li Suyi's Memorials of Advice*, *Draft Memorials of Duke Cen Xiangjin* and *Tao Yunding's Memorials of Advice*.

From the guangxu period on, there are Shanghai rice price records. I have used the same methods for calculating averages as I used for the Ming Dynasty. I first strike an average for each year, and then calculate ten-year or 25-year averages. Fifty-year averages are calculated by averaging the five ten-year averages it comprises. Hundred-year averages are the average of two fifty-year averages. I obtain the annual averages by adding up and then averaging the available rice prices for a year, including the prices involved in actual exchanges as well as commutation prices. Unusual prices are all included in the calculations, except for a small number which deviate excessively from the average. Under normal circumstances, I do not distinguish between localities when striking averages, but sometimes a province had suffered some natural disaster, rice prices were very high, and reports of prices are numerous. Under such circumstances, I first extract an average price for that province, and then average that in with the average prices for other provinces. For the last years I put heavy emphasis on Shanghai prices, but these would have been twice the level of prices in the interior. The figures used by some foreigners, such as Jamieson, are expressed in terms of units of 50 picul *dan* and 100 catties. I here convert them into the Qing picul before proceeding further with the calculations. For prices calculated in terms of Silver Dollars, I convert them using the ratio of 1 dollar to 0.72 ounce of silver. I assume the Qing picul's size as being 1.0355 hectoliters.

1721-1730	32.84	1861-1870	97.84
1731-1740	37.37	1871-1880	64.88
1741-1750	42.69	1881-1890	53.72
1751-1760	61.06	1891-1900	89.72
1761-1770	64.22	1901-1910	145.28
1771-1780	56.75		

We can tell from these rice price figures that prices were still high at the beginning of Qing. By the beginning of the kangxi period, they were slowly falling, and thereafter they remained stable for fifty years. From the middle years of the eighteenth century, they began to rise, and this rise only halted during the middle years of the nineteenth century. For a time there was even a retrenchment, but during the late nineteenth and early twentieth centuries they again

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rose. The figures for this rise are skewed in the high direction because of the Shanghai market, whose rice prices were generally twice the level of prices in rice producing regions.

When the new Emperor returned to Beijing to ascend the throne, the price of rice was at times higher than 4 or 5 ounces per picul. Even the average price was rather high, at the same level as at the end of Ming. During the reign of Ming Emperor Chongzhen, the average price of rice was 1.1 to 1.2 ounces of silver per hectoliter. The average price during the reign of the Qing Shunzhi Emperor was also 1.1 to 1.2 ounces per hectoliter. This would be considered too high in the context of the modern history of Chinese prices. By too high I mean to say that a portion of the price was not the result of monetary factors, but was the result of the failure to restore the social order and consequent shortage of goods.

We can tell this as soon as we compare rice prices of the shunzhi period with those of the kangxi and yongzheng periods. The average rice price during kangxi times [1662-1723] was 0.59 ounce per hectoliter, less than half the shunzhi [1644-1662] price, and virtually the same as the price during the jiajing period [1522-1567] of Ming. The price was a bit higher during the yongzheng period [1723-1736], at 0.87 ounce per hectoliter, but even this was lower than the shunzhi period price. It is probably for this reason that the historians label the first three reigns of the Qing "high" or "flourishing" Qing.

The situation was much different from qianlong times [1736-1796] on. If we consider the first three reigns as constituting early Qing, then the period from qianlong to daoguang [1821-1851] times could be called mid-Qing. Prices during this period underwent a sudden rise. During the qianlong period, the price of rice averaged 1.4 or 1.5 ounces per hectoliter, which exceeded the level during the shunzhi period. Under the Jiaqing Emperor, a hectoliter averaged 2.1 ounces, which was more than 40 percent higher than under the Qianlong Emperor. During the daoguang period, a hectoliter was 2.16, somewhat higher than during jiaqing times. There was a slight increase in silver's purchasing power during xianfeng times, with a hectoliter of rice worth 1.99 ounces, but tongzhi period prices rose once more, and by the end of guangxu and during xuantong [1908-1912] times, the rise was still more severe.

QING DYNASTY RICE PRICE TABLE (6)

Reign	Avg Price Per Hectoliter (in treasury ounces)	Value In Gms of Silver of 1 Hecltr of Rice
Shunzhi	1.15	43.00
Kangxi	0.59	21.91
Yongzheng	0.87	32.34
Qianlong	1.48	55.19
Jiaqing	2.10	78.31
Daoguang	2.16	80.75
Xianfeng	1.99	74.34
Tongzhi	2.27	84.84
Guangxu	2.17	80.84
Xuantong	4.04	150.91

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The rise in the cost of rice during the qianlong period evoked profound attention from contemporaries. The rise began right from the time the Qianlong Emperor assumed the throne. Yang Xifu sent up a petition in qianlong 10 [1745] which referred to the rise in grain prices, and gave reasons for it. The first reason he offered was that population was increasing. The second reason was wasteful practices. The third was that land was being engrossed by rich families, so that when the peasants wanted to buy grain, it became expensive.[2] In qianlong 13 (1748), the

[2] *Qing History Draft*, "Biography of Yang Xifu," qianlong 10, petition: ". . . if population is large, then demand for grain will be large, and its price will gradually increase. At the beginning of the state, when the people had just escaped from disorder, customs were still simple and pure. Several decades later, people had gradually become wasteful, the raising of loans had become common, and people did not exert effort in the fields. As Winter turned into Spring, the peasants were buying

authorities ordered the provinces to investigate the reasons for the rise in the cost of rice.

The provinces' replies[3] say virtually the same thing in different words: That population was increasing. Some also mention that customs were becoming wasteful, or that there was drunkenness, or might refer to other technical problems, but not a single one of them says that the phenomenon was caused by the fall in the price of silver, or by the increase in the quantity of silver. Aliai, the Governor of Shandong, clearly saw that all types of cloth were rising in price, and even that copper cash were rising in price, but turned a blind eye to the fall in the price of silver, and joined the chorus blaming the situation on the steady increase in births.

Of course the increase in population was a fact, but that did not begin with the qianlong period. There are annual census reports for the Qing Dynasty. We do not know if the governors-general of that time had seen these. If they had seen them, perhaps they were fooled by them, since their figures were not reliable. According to the *Qing Veritable Records*, the figure for shunzhi 18 is 80 percent larger than that for shunzhi 8. This might be explained as the result of exaggeration by those who made the household registers. During the decade between yongzheng 9 [1731] and qianlong 6 [1741], there was a 4.5 fold increase, something which could not have actually occurred.

Among the reasons for such figures is the fact that beginning in the kangxi period, a number of people did not report the size of their households so as to escape taxes and labor service. The authorities gradually became aware of this phenomenon, and so in kangxi 51 [1712] they proclaimed that the amount of the tax currently on the books would neither be increased nor decreased thereafter. The amount would remain fixed permanently. This was what was called the permanently fixed land tax registered population.

Even so, the increases in the reported population were not large. The kangxi period was the golden age of the Qing Dynasty. The administration was simple, and expenses were light. The rate of popula-

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grain in the market, and grain would become even scarcer. As the days of peace lengthened into years, land prices steadily rose. Poor people who had earlier sold their fields lacked the power to buy them back. As much as 50 or 60 percent of the land was concentrated in the hands of the rich. Rich households do not market their grain lightly. Buyers are many, and sellers are scarce. No wonder its price has increased."

[3] *Qing Emperor Gaozong Veritable Record*, 311, qianlong 13. The provincial replies were as follows:

Anhui: "The population is proliferating, and those seeking to buy are excessively numerous."

Jiangxi: "Births increase daily. Local officials' salaries are not good."

Hubei: "Population is gradually increasing. . . . The price of grain is high. This is inevitable. The proliferation of births causes competition to set up production. Agricultural land gradually becomes expensive. Peasant families seek profit with the fundamental activity. . ."

Hunan: "The high price of grain is owing to the numerousness of those who buy it for consumption. That those who buy it for consumption are numerous is because people are impoverished. There are four things which are gradually accumulating: One is the increase in population. Another is the profligacy of the customs. Yet another is the reversion of agricultural land to the rich. The fourth is the purchase of grain from the granaries."

Liang-Guang: "One lies in the prohibition of pawn broking. When the time comes for poor peasants to do the plowing, there is none of their family property which is not in the pawn shops. They wait until Autumn, when the harvest is complete, to redeem it. Things to ward off the Winter cold are still more necessary. They each exchange food for cold weather clothing. When Spring comes, they exchange the cold weather clothing for grain. . . . Hitherto, the coming and going in the pawn shops has only yielded a profit of a fraction of an ounce of silver per picul. Now, when buying rice it is necessary to use actual silver. The purchase price is as much as 0.6 or 0.7 ounce more than the selling price, and as little as 0.3 or 0.4 ounce more."

Yun-Gui: "The reasons why rice is expensive are 1) the steady increase in births, 2) hoarding and loss of ability to adjust. . . . In yongzheng 8 or 9 a picul was still only 0.4 or 0.5 ounce. Now it has gone beyond 1 ounce, and at its cheapest is 0.8 or 0.9 ounce. . . . During the century or so since the state reduced the southwest to order, the increase in population has been no less than several tens of millions. . ."

Guizhou: "The province of Qian has high mountains and steep valleys, and is not penetrable by boats or carts. The soil is sterile, and the people impoverished. Barbarians are numerous and ethnic Chinese few. . . . We first arrived in Qian province in yongzheng 4. . . . Throughout the province people were thinly distributed among the localities, and there were few shops. The gentry and the masses interacted with each other. In general, all lived simply in remote villages, since there were no taverns. . . . Now the provincial capital and the local towns are all crowded with shops, goods are piled up, and merchants daily come together. The gentry and the masses all compete with each other in conspicuous display when conducting capping, marriage and funeral ceremonies. Customs grow more wasteful by the day, and . . . drunkenness daily grows more common."

Shandong: "Rice is expensive because births daily increase in number. As people become more numerous, hemp, cotton and silk cloth all rise in price. The rise in the price of coins corresponds to the rise in the price of rice."

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tion increase must have been very large, and yet the price of rice remained very stable. Evidently the influence of the population increase on silver's purchasing power was not large. At the very least, the fall in the price of silver during the qianlong period was not primarily the result of an increase in the size of the population.

A superficial reason for the increase in prices during the qianlong period was the increase in governmental expenditures caused by the large number of military campaigns along the frontiers. During qianlong 22 [1757] alone, the "pacification" of Xinjiang cost over 20 million ounces. In qianlong 41, the battles on the Little and Big Gold Rivers used up over 70 million ounces.

Nevertheless, the fundamental reason for the rise in prices during the qianlong era was the flow of cheap silver from the American continent into China. Given the fact that Columbus reached the American continent during the middle years of the Ming Dynasty, and that the coming of the Europeans to China to carry on trade also occurred during Ming times, why was it not until the Qing Dynasty that American silver finally began to

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influence Chinese prices? This problem can only be clarified by examining the situation then in Europe, and the evolution of Euro-Asian commerce.

The influence of gold and silver from the American continent on European prices was not uniform over time either. The response in Spain was the most rapid, since the gold and silver were first transported to Spain. As a consequence, the general level of prices in Spain began to climb during the middle years of the sixteenth century. By the beginning of the seventeenth century, prices had risen four fold.[4] The rise began in England and France a half century later than in Spain, and only reached its peak during the middle of the seventeenth century.[5] This lag is easily explained. It was only after the passage of a certain amount of time that American gold and silver could have flowed from Spain into England and France.

The rise of prices in China began a century later than in England and France, and it was not as severe as in those two countries, just as the rise in England and France had not been as severe as in Spain. The separation in time and space had diluted the increase. The reason why China's silver began to fall in value a century later than in England and France was that silver came in via the overseas Chinese of the Philippines and the British East India Company. It took fifty years to go from Spain to England, and so for the inflation to have taken a century to move from Mexico and England to China should not be considered a long time.

During the several centuries after the Spanish colonialists occupied the Philippines, they often shipped Chinese commodities to Mexico, and brought Silver Dollars and uncoined silver back from Mexico to serve as money, and to aid in meeting the expenses of the administration of the Philippines. A letter from the Archbishop of Manila to Philip II in 1598 says that New Spain (Mexico and Peru) were annually sending a million pesos to the Philippines, but that afterward all of this was flowing into China.[6] On June 6, 1665 (kangxi 4), a royal edict fixed the amount at 2.5 million pesos, of which 2 million pesos was to be in coin.[7] Restrictions were placed on the trade of the Manila mer-

[4]The quantities of American gold and silver which flowed into Spain, and the changes in the price index which ensued as as follows (quoted from G. F. Warren and F. A. Pearson's *Gold and Prices*. Each *peso* was the equivalent of 42.29 grams of pure silver):

Period	Quantity of Gold & Silver Imported (in Peso)	Price Index (1573-1581 = 100)
1503-1510	1,187,293	40.1
1511-1520	2,188,751	40.7
1521-1530	1,172,609	50.9
1531-1540	5,588,124	54.4
1541-1550	10,462,718	63.0
1551-1560	17,864,531	74.3
1561-1570	25,348,752	90.6
1571-1580	29,158,552	99.5
1581-1590	53,180,243	109.4
1591-1600	68,643,364	121.7
1601-1610	55,808,536	136.8
1611-1620	54,640,581	129.3
1621-1630	51,965,206	129.8
1631-1640	33,425,457	131.3
1641-1650	25,534,351	
1651-1660	10,654,883	132.1

[5]Willard L. Thorp and George R. Taylor, "Price History," *Encyclopedia of the Social Sciences*. For prices in England and France, cf. subsection 8.2.5 below, "Gold's Purchasing Power," which contains a "Table of Sino-Foreign Comparative Food Prices Over the Last 500 Years."

[6]E. H. Blair & J. A. Robertson, *The Philippine Islands*, Vol. X, p. 145.

[7]J. Foreman, *The Philippine Islands*, pp. 243-244.

chants with China in kangxi 59 [1720]. This ban was rescinded in yongzheng 5 (1727), but we cannot tell how much silver flowed into China during the interval.

It has been estimated that between 1571 (longqing 5), when the port of Manila opened, and 1821 (daoguang 1), when Mexico established its independence, a total of more than 400 million pesos had been transported from Mexico to Manila, of which at least one-fourth, or 100 million, flowed into China.[8]

Silver was also coming into China from Japan during this period. A portion of this inflow was
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carried back by Chinese who had gone to the Japanese city of Nagasaki to carry on trade. Another portion was brought from Japan to Macao by the Dutch, and from there indirectly into China. It is said that during the sixty years from shunzhi 5 [1648] to kangxi 47 [1708], $100 million in Silver Dollars was imported into China.[9]

This occurred because since Ming times silver's purchasing powerhad been lower in Japan than in China. During wanli 43 [1615], a hectoliter of rice cost 33 grams of pure silver in Japan, whereas in China the same amount of rice only cost 23 grams of silver. In kangxi 34 [1695], the Chinese price was only 29 grams, while the Japanese price was 100 grams. During kangxi 50, the Japanese price was 78 grams, and the Chinese price only 41 grams.[10]

The most material and the most credible material is available for the quantity of silver the British East India Company imported.

Though the Portuguese had reached China by the middle years of Ming, their trade was not large, their ships were very few, and could not carry much silver. The British East India Company sent the ship *Catherine* to China in chongzhen 10 [1637], but soon thereafter civil war broke out in England, and they did not continue to come. Right down to the kangxi period, only one of their ships came east from each convoy, and such visits only occurred every few years. Nor did these ships carry many Silver Dollars. For example, in kangxi 20 [1681], the *Barnardiston* carried just $60,000, most of which was used to buy Japanese goods.

In kangxi 59 (1720), the Canton merchants [with a monopoly license from the state. EHK] had organized the Co-Hong, but it was not until the following year that the number of ships began to increase, initially to four per annum. In yongzheng 10 [1732], in addition to the ships of the British East India Company, there were also other merchant ships, and ships from Holland, Sweden and Spain. Thereafter the number of ships steadily increased. In qianlong 6 (1741), there were French, Swedish, Dutch and Danish ships totalling 14 vessels which arrived in Canton.

The cargo of foreign vessels coming to China then was 90 percent silver, because the Chinese demanded no other European goods, while two-thirds of the silk and tea bought by the foreign merchants from China had to be paid for with silver. At most, one-third could be paid for with their own country's goods. Sometimes, as much as three-fourths of what they bought had to be paid for with silver.

According to the records of the British East India Company, during the 153 years between kangxi 20 and daoguang 13 [1833], the actual amount of, or estimated figure for, the quantity of silver imported into China by European ships came to a total of more than 70 million ounces. From the early years of the daoguang period, however, silver began to flow out of China, and so during the 140 years before daoguang, the amount of silver European ships transported into China was more than 80 million ounces. If we add the silver from the Philippines and Japan, I suspect the total would come to more than several hundred million ounces.
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QING DYNASTY SILVER IMPORT TABLE (1)

Period	Quantity Imported (in ounces)[11]
1681-1690	196,627[12]

[8] J. B. Eames, *English in China*, p. 63, De Comyn's computation.

[9] P. M. Martin, *China*, Vol. I, p. 176. Cf. also Otake Bunfu, *Studies in Modern Chinese Economic History*, pp. 56-59.

[10] The Japanese rice price is drawn from the *Great Japan Monetary History*, but I have made the calculation on the basis of the actual silver content of the ingot silver in circulation then.

[11] The commutation rate I have used is drawn from Morse's book. One English Pound made 3 ounces of silver. One Silver Dollar contained 0.72 ounce, or 120.8
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English ounces made 120 Chinese ounces. This was in terms of the Canton standard ounce. I have here commuted the figures to the treasury ounce. The Canton ounce was 37.57 grams, and the treasury ounce was 37.3 grams.

[12] *Chronicles of the East India Company* contains a table at the back of Volume I, "Table of English Ships Which Traded to China for the East India Companies." This gives a total import figure for silver during each of the three years 1681, 1682 and 1687 of 135,000 ounces. Of this total, the amount for 1687 is

1691-1700	140,840
1701-1710	775,206[13]
1711-1720	6,358,250
1721-1730	2,304,147
1731-1740	2,546,542
1741-1750	646,622
1751-1760	415,772
1761-1770	3,436,015
1771-1780	7,618,783[14]
1781-1790	16,549,464
1791-1800	5,196,690
1801-1810	26,850,828
1811-1820	10,003,955
1821-1830	(-)2,298.468[15]
1831-1833	(-)9,994,185
Net Imports	70,741,088 ounces or 2,638,643 kilograms

The figures recorded by the East India Company cannot, naturally, be considered complete. There is no reliable material for some years, and no way to make entries for them. Because the files of the East India Company for the two decades from 1754 to 1774 have been lost, the figures in the table represent only a small proportion of the total for those years. Even the figures for the other years are not absolutely correct, since though the records of the East India Company include the vessels of other countries, these are sometimes only estimates or contain omissions. Therefore the quantity of silver which may have entered China by this route could have been more than 100 million ounces.[16] However, the bulk of the trade then was in the hands of the East India Company, and so these figures are broadly representative.

Furthermore, when we set these figures next to contemporary Chinese rice prices, we can immediately discern the relationship between the two. There are, however, two points which must be emphasized.

First, silver is not used up when it is consumed, and in this respect differs from grain. As a consequence, though silver imports for the 25 years from 1726 to 1750 were not as great as during the preceding 25

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years, the cost of rice continued to climb. The only correct procedure is to cumulate the total increases in the supply of silver.

Second, the silver figures for the third quarter of the eighteenth century are only a portion of the actual totals. As a consequence they do not seem to jibe with the degree of rise in the cost of rice. I am not saying that there is some mechanical link between the rise in prices and the increase in the supply of silver. The world price of silver was already falling, but China's ability to produce silver had not yet reached the level of the other regions of the world, and so silver retained more of its original purchasing power in China. It was surely not until the Chinese were able to fully employ low priced silver that silver's purchasing power in China could have corresponded to its price.

COMPARISON OF SILVER IMPORTS WITH RICE PRICES

Period	Silver Imports (oz)	Price Index for Rice
last half 17thc	331,467	100.0
first half 18thc	12,630,767	117.1
last half 18thc	33,216,724	198.9
first half 19thc	24,562,130[17]	246.0

only 165,000 ounces [*sic*]. However, according to the text of that volume (p. 62), in addition to the 11 chests of Silver Dollars brought on the *London*, two other ships were despatched to Macao carrying a total worth £14,000 or £15,000, of which most were Silver Dollars.

[13]The figures for 1701 to 1732 are all drawn from the tables in the *Chronicles of the East India Company*, but I have supplemented them with figures from the present work because the silver carried in non-English vessels is not included in the tables. Ninety percent of each ship's cargo was silver.

[14]Imports of silver from 1771 to 1804 were mostly reckoned in chests, with each chest holding $4,000.

[15]The minus sign (-) indicates an excess of imports over imports. Imports of opium were leading to an outflow of silver.

[16]Morse, in his lecture to Clark University, "China and the Far East," said that during the 130 years prior to 1830, the quantity of silver imported into China by the nations of Europe, particularly England, was no less than $500 million. R. M. Martin, however, believes it was only $50 million.

[17]Only up to 1833.

The Taiping Revolution led to a depreciation via both coins and paper money during the xianfeng period, but silver's purchasing power ran counter to this trend, and displayed a tendency to increase. In other words, there was a tendency for the silver price of rice to fall during the last half of the nineteenth century. This tendency was evoked by the scarcity of silver, and that in turn was the consequence of opium imports.

Although opium was known in China from a very early time, it had previously been used only as a medicine, and so the amount used was extremely small. Its importance only became evident in modern times, when British East India ship officers privately imported opium into China.

According to British East India Company Records, opium was first brought to China in kangxi 43 (1704). The *Stretham* carried a minuscule quantity from Madras in India. A ban on its import was issued in yongzheng 7 (1729). At that point only several hundred chests of opium were being imported annually. The East India Company assumed a monopoly over the sale of Indian opium in qianlong 22 (1757), and thereafter the trade in opium developed steadily. By qianlong 38 annual imports increased to 1,000 chests. From jiaqing times on, import figures exploded: Annual imports during jiaqing

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were 4,000 chests. At the beginning of daoguang [1821], the annual figure was over 8,000 chests, and by the end of daoguang [1851] it had increased to over 30,000 chests. The annual figure during xianfeng [1851-1862] was as much as 60,000 chests.

Most New World silver imported into China came by way of English merchants, but because of the opium trade the quantity of silver imported declined substantially after the end of the eighteenth century. At the beginning of the nineteenth century, English merchant vessels began to export silver. In jiaqing 7 (1807), the East India Company exported over 2.4 million ounces of silver from China.

Thereafter, there were silver exports almost every year, ranging from as little as several hundred thousand ounces to over a million ounces, and on up to 5 or 6 million ounces. According to a statement during the daoguang period by the Chief of the Honglu Temple, Huang Jueci, prior to daoguang 3, several million ounces of silver were exported annually. From daoguang 3 to 11, the annual figure was 17 or 18 million ounces. In addition, another several tens of millions of ounces were exported through the ports of Fujian, Zhejiang and Shandong, and from Tianjin.[18] Lin Zexu also said that the drain of Chinese silver abroad down through the years was no less than several hundred million.[19]

All these figures were probably extrapolated from the statistics for opium imports. The actual quantity of silver being exported was not that large. For example, during the first decade of the nineteenth century, the British East India Company was exporting silver every year, but imports of silver into China still exceeded that amount because American merchants were bringing Silver Dollars into China on a large scale to buy tea.[20] During the

[18] *East China Continued Record*, daoguang section, 37. In daoguang 18 Huang Jueci sent up a "Petition Advising the Prohibition of Smoking."

[19] *Xinji Record*, "Draft Proclamation to Foreign Merchants Ordering the Barbarians to Offer Up the Smoke Mud."

[20] The first United States ship to come to China was the *Empress of China*, which arrived in qianlong 49 (1784). The silver that English and Portuguese merchants later on carried away to pay for opium was mostly silver melted down from coins American merchants had imported. For example, during the period 1807-1820, the situation involving the import and export of silver was as follows (*Chronicles of the East India Company*):

Year	Imports		Exports	
1807	U.S.	$6,128,000	Eng.	$3,377,070
	Port.	500,000		
1808			Eng.	4,102,660
1809	U.S.	2,896,500	Eng.	1,564,518
	Spain	150,000		
1810	U.S.	2,679,126	Eng.	1,402,461
1811	U.S.	1,433,500	Eng.	1,158,685
	Eng.	75,000		
	(private merchants)			
1812	U.S.	321,000	(Because of Napoleonic Wars unable to export to England.)	
	Eng.	120,000		
1815	U.S.	1,214,220		
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1815	Dutch	92,000		
	Sweden	107,700		
	Eng.	1,520,400		
1816	Eng.	3,557,088		
1817			Eng.	2,000,000
1818	U.S.	7,330,000	Eng.	3,088,679
			Port.	3,000,000
1819	U.S.	6,297,000	Eng.	861,410
			Other	1,600,000
1820	U.S.	2,023,000	Eng.	495,000
	Eng.	2,754,084	Other	900,000

half century before 1833, it has been estimated that U.S. merchants brought some 60 to 70 million ounces of silver into China.[21] The U.S. merchants later shifted to payment with bills of exchange on London, and no longer employed silver. Only then did silver exports exceed imports. The price of rice fell in parallel with this change.

The attitude toward the opium trade of people at the Chinese court then was mostly based on the bullionist position. What worried them was not that opium was harming the health of the people, but that the trade was causing China to lose silver. In daoguang 16 [1836], the Shaoqing of the Taichang Temple, Xu Naiji, sent up a communication arguing that it would be unsuitable to ban the opium trade. He said that it was only necessary to reduce the trade to the level of barter, so that payment for the drug need not be made in specie.[22]

Imports of opium increased further after the Opium War, but there are no statistics on import and export of silver. Some say that during this period China imported very little silver.[23] Others, however, adduce import figures for particular years, like 1856, when a total of $20.4 million worth of Silver Dollars was imported, and 1857, when $17.5 million came in.[24] This was probably for Shanghai alone, and we cannot tell what the situation was for the entire country. Nevertheless, given the broad circulation of the Mexican Eagle Foreign, we can surmise that year after year a certain number must have been imported. Such must have been the case up until guangxu

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14 [1889]. The year after that, silver imports were 6 million ounces, but for the next three years exports exceeded imports. It was not until guangxu 19 (1893) that imports again exceeded exports, and this continued to be the case right down to the close of the nineteenth century.

QING DYNASTY TABLE OF SILVER IMPORTS (2)[25]

Period	Quantity Imported (In Treasury Ounces)
1871-1880	32,880,000
1888-1890	588,802
1891-1900	96,648,231
1901-1910	(-)87,823,974
Net Imports	42,293,059 ounces (1,577,521 kilograms)

Two seemingly contradictory phenomena appeared during late Qing: First, China's international trade suffered from a long-term surplus of imports, and yet during the last three decades of the nineteenth century there were net imports of silver. Second, during the first decade of the twentieth century, net silver exports came to more than 80 million ounces, and yet the price of rice swiftly rose. When we place these two sets of events within the context of contemporary international and domestic financial circumstances, they will no longer be felt as contradictory.

[21] T. Pitkin, *Statistical View of the Commerce of the U.S.A.*, makes the total to have been more than $90 million. Cf. Otake Bunfu, *Studies in Modern Chinese Economic History*, pp. 67-70, quoting K. S. Latourette, *The History of Early Relations Between the United States and China, 1784-1844*, pp. 27-28. Martin's estimate is $100 million.

[22] Xu Naiji stated: "To block the import of opium to the point of halting commerce would be entirely improper. The more severe the laws are made, the more bribes there will be, and the greater the extortions of officialdom will be. . . . Secret imports will not be blocked, and there will be those who will be unable to memorialize on the efficacy of such a ban because they will hold out hope for an enormous income for themselves. Those who smoke opium are merely society's thieves. We need pay no attention to them. We need only seek to save the nation from an outflow of specie. How can we not hold discussions to make such arrangements?" Quoted in *Qing Dynasty Complete History*.

[23] The British Consul in Shanghai, G. Jamieson, in his *The Silver Position in China*, says that during the several decades before 1893, China imported very little silver.

[24] Morse says that on November 26, 1853, the Great English Company imported $1,544,000; that on three occasions in 1854 it imported a total of $2,120,700; on two occasions in 1856 it brought in a total of $2.8 million; and that on three occasions in 1857 it imported a total of $5,535,500. These figures all refer to Shanghai alone, and are the amounts brought in by the paddle-wheelers of just one firm, the Great English Company. He also states that for the entire year 1856 imports of silver amounted to $20.4 million, and that the figure for 1857 was $17.5 million. Cf. H. B. Morse, *The International Relations of the Chinese Empire*, chapter XVIII, p. 467.

[25] The statistics issued by the Maritime Customs do not fully correspond to those in Table 20 of Yang Duanliu and Hou Houpei, *Chinese International Trade Statistics Over the Past Sixty-five Years*. The unit originally used was the Maritime Customs ounce, which I have here converted into the treasury ounce. The Maritime Customs ounce was 37.66 grams, and the treasury ounce 37.3 grams.

Ever since the middle of the seventeenth century, the price of gold in Europe had been around fifteen times that of silver, with only very few large changes. [These changes were, however, enough to destabilize American attempts at bimetallism as early as the 1790s. EHK] That stable an exchange price had been maintained for two centuries. As a result, a country could use either gold or silver, or a bimetallic gold-silver standard with no great inconvenience. Beginning with the '70s of the nineteenth century, however, the price of silver began to fall. There were two reasons for this fall: First, silver production capacity had increased. Second, demand for silver was falling.

Annual production of silver had been around 10 million ounces since the seventeenth century. During the first four decades of the nineteenth century, annual production had averaged 20 million ounces. Thereafter production figures steadily increased. By the end of the nineteenth century, annual production averaged over 100 million ounces.

LATE QING WORLD SILVER PRODUCTION[26]

Period	Production (In Treasury Ounces)
1851-1860	240,068,027
1861-1870	325,072,872
1871-1880	592,384,114
1881-1890	837,616,200
1891-1900	1,347,731,956
1901-1910	1,522,714,428

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While production of silver was increasing so greatly, the nations of the world were one after the other going over to the gold standard, which greatly diminished the outlets for use of silver. Nations that went onto the gold standard during the last half of the nineteenth century included Portugal, Germany, the United States, Denmark, Sweden, Norway, Finland, Haiti, Argentina, Egypt, Japan and Russia. Nations adopting a gold exchange standard included India. There were still other nations which, though they did not go onto the gold standard, halted free coinage of silver, and turned their silver standard into a crippled one. This was the case with France and the other members of the Latin Monetary Union. All of this threw a large quantity of silver onto the international silver market. Though gold production was also simultaneously undergoing a very large increase, its price rose to a very high level anyway, doubling over the course of three or four decades.

LATE QING WORLD GOLD-SILVER EXCHANGE PRICE TABLE[27]

Period	Number of Ounces of Silver Per Ounce Gold
1851-1860	15.36
1861-1870	15.48
1871-1880	16.92
1881-1890	19.88
1891-1900	30.28
1901-1910	35.99

Of course the Chinese masses and even Chinese merchants were not acquainted with the facts about gold and silver production then, though they must have been aware of the rise in the price of gold on the market. What they normally used were silver and copper cash. Since prices expressed in silver did not rise, a number of people sold off their inherited gold jewelry.

Gold exports came to a value of over 80 million Maritime Customs ounces over the course of some two decades.[28] Most of this amount was exported

[26]Commuted from the figures quoted by Edward Kann in *The Currencies of China*, on the basis of 1 English ounce as 31.1 grams, and 1 treasury ounce being 37.3 grams.

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[27]J. L. Laughlin, *Money, Credit and Prices* (University of Chicago Press, 1931), Vol. I, p. 56.

[28]The data on export of gold from 1888 to 1910 is as follows:

Years	Exports
1888-1890	5,036,000 Maritime Customs Ounces
1891-1900	68,656,007
1901-1910	13,565,469
TOTAL	87,255,476 Maritime Customs Ounces

Of these figures, those for the years before 1890 are based on G.

during the nineteenth century. During the thirteen years from 1888 to 1900, gold valued at 73,692,000 Maritime Customs ounces was exported. This allows us to understand why simultaneously silver imports reached a total of over 70,620,000 Maritime Customs ounces. It was for this reason that prices in general began to rise.

Why then was there large scale export of silver during the last decade of Qing (i.e. the first decade of the twentieth century)? This was in part caused by the long-term excess of imports over exports, but was mainly because of the large

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remittances of indemnities. According to the Treaty of Shimonoseki, an indemnity of over 200 million ounces was owed to Japan, and there was also the Boxer Indemnity of 450 million ounces. Both began to be paid out at this time.

If silver was being exported, why was there so large an increase in domestic prices?[29] It was because Chinese paper money underwent a great increase in issue, and the paper notes had a faster velocity of turnover than silver. Though in principle paper money could be redeemed for cash, in actuality the issuers of a number of private bills suspended payment in specie from time to time. Even the large banks' notes were not fully backed by specie, and the quantity issued was not based on demand. Naturally prices rose.

Though there was a tendency for silver's purchasing power to decline in China, the rate of decline was more moderate than in Europe, especially during the nineteenth century. We need only compare Chinese rice prices with European wheat prices to establish this point.

The price of wheat in Europe rose nine fold from the fifteenth to the nineteenth century, but during the same period, the price of rice in China rose less than six fold. In the sixteenth century, silver had virtually the same purchasing power in terms of Chinese rice as in terms of European wheat. During the first half of the seventeenth century, silver had a higher purchasing power in Europe than in China. The price of Chinese rice was somewhat higher than that of wheat in Europe. In China itself, wheat was cheaper than rice,[30] especially in the north. Judging from the written sources for Ming and Qing, rice was 20 percent more expensive than wheat. The discrepancy was greatest during Song. Hence it was during the fifteenth and the first half of the sixteenth century that orient and occident were closest in the purchasing power of silver. At other times, silver had higher purchasing power in China than in Europe.

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Over the course of 500 years, silver's purchasing power fell to one-fifth of its original level in China, which means that prices expressed in silver increased five fold. This rise in prices was entirely the

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Jamieson's *The Silver Position in China*. Those from 1891 on are based on Yang Duanliu and Hou Houpei, *Chinese International Trade Statistics Over the Past Sixty-five Years*. Both sources say they employed the Maritime Customs ounce as their unit, and naturally they reckoned in terms of prices paid. Therefore we cannot tell the actual amount of gold exported.

[29]The Nankai Economic Research Institute constructed a "Silver Purchasing Power Index" based on prices of imports and exports. Cf. Andron B. Lewis and Chang Lu-luan, *Silver and the Chinese Price Level*. China is a self-sufficient and very large agricultural nation. The prices of goods involved in foreign trade may not necessarily represent the general price level, but in fact there is not much discrepancy between these prices and movements in the price of rice in China. I have here changed the base period to 1871-1880, and have used decade-long units of time to make the following comparisons:

SILVER PURCHASING POWER INDEX TABLE
(1871-1880 = 100)

Period	In Rice (Compiled By This Book's Author)	In Prices of Exports and Imports (By Nankai Economic Research Institute)
1871-1880	100.0	100.0
1881-1890	120.8	101.4
1891-1900	72.3	71.0
1901-1910	44.6	47.6

[30]For the pre-Qing rice-wheat price ratios, cf. chapter 7. The situation during Qing was about the same. In qianlong 26, upper grade rice was 2.5 ounces per picul. Second grade rice was 1.8 ounces. Wheat was only 1 ounce. In qianlong 48, rice was 1.7 ounces per picul, and wheat was 1.4 to 1.5 ounces. In qianlong 56, the price of rice was 2 ounces, and of wheat 1.48 ounces. In daoguang 12, glutinous rice was 1,700 cash, and wheat 1,500. The Chinese rice-wheat exchange price ratio was 1:1.8 during Song, 1:1.26 during Ming, and 1:1.25 during Qing. The average over a thousand years was 1:1.4. During Ming and Qing, wheat generally cost about 80 percent of what

result of the monetary factor, and it was entirely due to use of silver. If China had not used silver, and instead had used gold or copper, prices could not have climbed in this manner. I analyze gold below. I will here confine myself to a brief discussion of copper.

TABLE OF COMPARATIVE PURCHASING POWER OF CHINESE AND FOREIGN SILVER OVER THE PAST FIVE HUNDRED YEARS

Period	Amt of Rice 1 Kg of Chinese Silver Could Buy (Hectoliters)	Amt of Wheat 1 Kg of European[31] Silver Could Buy (Hectoliters)
15thc	75.11 (100.00)	57.36 (100.00)
16thc	46.44 (61.83)	45.67 (79.62)
lst ½ 17thc	31.07 (41.37)	36.53 (63.68)
last half	31.78 (42.31)	28.13 (49.04)
1st ½ 18thc	27.38 (36.45)	22.65 (39.49)
last half	15.92 (21.19)	13.70 (23.88)
1st ½ 19thc	12.30 (16.38)	6.76 (11.78)
last half[32]	13.87 (18.46)	6.15 (10.72)

The price of copper rose seven fold over five centuries. In hongwu 1 [1368], 100 catties of copper were worth 5 ounces of silver. In guangxu 34 [1908], they were worth 35 ounces. Hence over the course of five centuries, rice and copper both climbed in price to almost the same extent. If we use copper as our measure of value, then there were only temporary or local oscillations in the cost of rice. Viewed over the long term, the copper price of rice remained virtually unchanged, and even fell to a certain degree.

The growing importance of foreign relations caused the price of Chinese money vis-à-vis foreign prices to gradually assume more importance. When foreign countries were still using silver, the exchange rate of Chinese money for foreign would have been stable, with oscillations not exceeding the cost of transportation of silver between China and other countries. After foreign countries had changed over to a gold standard, the exchange rate of Chinese money with foreign moneys would have changed as changes occurred in the gold-silver exchange price ratio. Though the exchange rate of Chinese money was influenced by the international balance of bayments, this influence was relatively small. It was mostly influenced by changes in the gold-silver exchange price.

During the two centuries before tongzhi 10 [1871], the gold-silver exchange price was at its most stable, averaging 1:15.41. During the decade before tongzhi 10, the average silver price of gold was 15 for 483. One Chinese Customs ounce of silver was equal to 6 shillings 7 pence of English gold. If we take this as our base figure, then we can discern the decline of Chinese money against foreign currencies during late Qing times, and the relationship of this decline to domestic prices. This relationship was not a very close one. Although the long run tendency was for the two to converge, they did not suffer corresponding rises and falls year by year. We can tell from this that changes in Chinese domestic prices were not influenced by the exchange rate, but rather that the exchange rate and goods prices were influenced by the same factor, that is, by the fall in the price of silver.[33]

The fall in silver's price during the Qing Dynasty had a degree of influence on the corruption of the lower levels of administration. Qing Dynasty functionaries were paid in silver. Their real incomes were slightly higher than those of their counterparts during Ming at the time of the Great Ming Treasure Certificate inflation, but were far inferior to salaries at the beginning of Ming. They were much closer to the late Ming level. Income was calculated on an an-

rice did.

[31]The European wheat prices are based on commutation of Landrin and Roswag's figures. For the original figures, cf. Michael G.

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Mulhall's *The Dictionary of Statistics*. The original figures are expressed in terms of how many English pounds of wheat 1 English ounce of silver can buy. The source of this material is not clear. It probably deals with the entirety of Europe. I use the figure of 176 pounds of wheat to the hectoliter in converting these figures.

[33]The exchange price for the decade prior to tongzhi 10 (1851-1860) in the following table is calculated from the average exchange price, based on equating 1 English ounce of gold with £3 17 shillings and 10 pence. I take the average gold-silver exchange price for that decade as 1:15.41, and 1 Maritime Customs ounce (37.66 grams) to derive the value of English money. The exchange prices for guangxu 17 (1891) to xuantong 3 (1911) are based on H. F. Bell's average figures. Cf. Miyashita Tadao, *Concerning Chinese Currency*, p. 745-746. These figures differ from the Maritime Customs figures quoted by other works (e.g. Chen Zhongmin, *Gazetteer of Contemporary Chinese Trade*), but the figures in this table are mainly for use as a reflection of trends in silver's purchasing power abroad.

nual basis. Generally speaking, a first rank official's annual salary was 180 ounces of silver and salary rice of 180 *hu* or 90 piculs. A ninth ranker got some 33 ounces of silver and a bit over 16 piculs of rice. The high ranking official's annual salary was less than what a Song official received in a month.

LATE QING SILVER OUNCE PRICE VIS-A-VIS DOMESTIC AND FOREIGN PRICES

Period	Exchange Rate of Silver Against English Money (as percent of base)	Purchasing Power In Rice Of 1 Ounce of Silver (as percent of base)
1851-1860	100	100
1891(gx17)	68	98
1892	56	114
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1893	47	71
1894	40	87
1895	41	74
1896	44	55
1897	45	59
1898	39	50
1899	40	55
1900	42	72
1901	42	71
1902	35	37
1903	36	44
1904	38	45
1905	41	64
1906	45	57
1907	42	33
1908	36	35
1909	35	46
1910	36	34
1911	36	31

Beginning in qianlong 2 [1737], official salaries were doubled, but as the purchasing power of silver fell during the qianlong era, the real income of officials decreased still more. Silver's purchasing power had fallen to less than one-third the level of the kangxi era [c. 1700] by jiaqing times [c. 1800], while the way of life of the officials had become still more profligate. One reason for this fall in purchasing power was the increased importation of foreign coins. Another reason was that personal avarice could promote the spread of wasteful expenditures. As the Chinese proverb put it, "wrongs come, and they go." As a consequence, later on officials' "nourishing of virtue allowances"

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came to be larger than their formal salaries. And yet, in the view of some functionaries, this nourishing of virtue allowance was not a just price for their virtue, and so after selling their virtue to the Qing government, they were not averse to selling it again on the black market for whatever price the free market would bear. They thereby formed themselves into a band of villains.

The lives of people in general were also influenced by the fall in the price of silver, because their silver-denominated incomes did not change. Painters, for example, were so influenced. When Zheng Banqiao sold a painting at the beginning of the qianlong period, a middle-sized one went for 4 ounces.[34] During the daoguang period, Dai Chunshi also sold paintings for 4 ounces apiece.[35]

The purchasing power of 4 ounces of silver was not, however, as great during the daoguang period as it had been in the early years of qianlong. If we consider the wages for carving book printing blocks, at the end of Ming, to carve 100 characters cost 0.03 ounce of silver.[36] At the beginning of the guangxu period of Qing, it only cost 50 or 60 cash to both write out and carve 100 characters.[37] This also amounted to only a little more than 0.03 ounce of silver. At the end of Ming, 0.03 ounce of silver could buy 0.02 hectoliters of rice. At the beginning of the guangxu period, the same sum could only buy 0.014 hectoliters of rice.

The livelihoods of other laboring people were also similarly affected by the fall in price of silver. Late Qing wages were mostly expressed in terms of foreign silver coins. The fall in the price of silver caused workers' real incomes to be reduced. For example, in Shanghai a male textile worker's wage was 25 cents per day, and a female worker's wage was 22 cents. A plasterer and a carpenter got 40

[34]Zheng Banqiao, "Remuneration for Selling a Painting" (qianlong 24): "Large ones are 6 ounces; middling ones are 4 ounces; small ones are 2 ounces. A pair of joined scrolls is 1 ounce. A fan with handle is 0.5 ounce." (*Zheng Banqiao's Collected Works*, Zhonghua shuju edition, p. 193.)

[35]Dai Xi, *Collected Words on Ancient Coins*, 2, "Jingkang Circulating Treasure": "This morning a customer brought this coin and used it as the equivalent of 96 grains of white metal to pay me for a painting. I subsequently exchanged it."

[36]Xu Kang, *Reflection of a Dream of the Past*.

[37]Ye Dehui, *Pure Words from the Book Grove*, 7, "The Cheapness of Wages for Carving Books During Ming."

cents a day. A shipwright was considered a person of high technical skill, but only got betweeen 60 and 85 cents per day.[38] Shanghai had the highest wages in China. Wages were lower in Tianjin and Hankou.

All wages calculated by the day were probably short-term, and their holders could not expect to work thirty days per month. If we examine the wages paid by the Xiechang Match Company, we find that a male worker got between $4 and $6 per month, and received his meals from the company. A female worker was paid by the day, at the rate of 0.05 ounce per day, with meals provided by the worker herself. This would only come to $1.50 per month, which could only buy 0.2 or 0.3 hectoliters of rice. This was not enough to sustain life for a single person. Even $6 per month could only purchase 1 hectoliter of rice during the xuantong period.

Such a wage was not only not up to the level of an economically developed nation, it was not even as good as those earned in ancient China. If copper cash were used as the instrument for paying a wage, then the harm was still greater, because the lightening of the copper cash coins had caused their purchasing power to be still more severely affected. Officials could gain extra income through corruption. Laboring people no longer even had any way to preserve their own lives.

[38] *Complete Book of the Chinese Economy*, "Hiring Price of Late Qing Artisans and Methods For Their Payment."

5. *Gold's Purchasing Power*

I have two aims in investigating the price of gold in China. The first is to look at the relationship between gold prices in China and Europe, and to see how these two originally isolated markets gradually came together, and how the prices in these two places finally converged. The second is to look at the relationship between changes in the price of gold and changes in the price of silver, as well as changes in prices of goods, and to see if adoption by China of a gold standard would have caused prices to be more stable than they were under a silver standard.

Gold had never been formally monetized in China, but it had not been an ordinary commodity either. At various times it had performed different monetary functions, and it had retained its role as a store of value and as an instrument for international payments in all ages.

The fact that gold had not been minted into coins in China gives still more significance to ancient records on gold's purchasing power. The gold-silver exchange price ratio in China was practically always a market price, i. e. the ratio between 1 ounce of pure gold

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and 1 ounce of pure silver. Exchange price ratios in foreign countries were, however, to a great extent legally fixed ones, and such ratios lose their significance because of changes in the fineness of the coins made from the two metals. There were times when, in the course of a single year, gold and silver coins of a variety of finenesses would be minted, and these would produce a number of different legally fixed gold-silver exchange price ratios.

The price of gold in China was consistently low, and by low I mean lower than in foreign countries. Except for ancient Egypt, which is said to have priced silver higher than gold,[1] and Babylon, which in 2,000 B.C. had a ratio of 1:6,[2] ever since the fifth century B.C. (corresponding to China's Warring States epoch), an ounce of gold had exchanged

[1] A. R. Burns, *Money and Monetary Policy in Early Times*, p. 474. An ancient tomb dated to 3,000 B.C. was discovered in the neighborhood of the village of Dendra, Greece in 1926. It contained a silver plated gold bowl. Agatharcides said in the second century B.C. that 3,000 years earlier an ounce of silver could exchange for 10 ounces of gold. Edward Kann, quoting a Chamber of Commerce report by Samuel Montagu. Cf. Miyashita Tadao, *Concerning Chinese Currency*, p. 379. It is said that this translation is based on the third revised edition of Kann's book, but the translation appeared before publication of the original.

[2] A. R. Burns, *Money and Monetary Policy in Early Times*.

for 13 ounces of silver among the Western nations. At times the ratio fell to 1:11 or 1:12. The low point was reached during Roman times, when it fell to 1:9. Thereafter it rose again. In China, however, it had been 1:5 or 1:6 ever since Han times.

Actually, the real price of Chinese silver in ancient times must have been even higher than the prices recorded in the histories because the ancients had not developed good techniques for analyzing metal, and the fineness of silver was generally very low. For example, surviving Han Dynasty silver ingots are usually corroded. Evidently they must contain quite a lot of copper. As a consequence, the very pure Vermilion-silver had an especially high price. At the time of Wang Mang, the price of gold against this Vermilion-silver was only 3:16. The term Vermilion-silver [Chinese *Zhutiyin*] refers to silver produced at Mount Zhuti in Jianweixian, Sichuan, which probably was of better than average fineness.[3] As a consequence, for the Han Dynasty we ought at least to use this Vermilion-silver as our standard for establishing the gold-silver exchange price ratio. It is possible that even Vermilion-silver was not pure silver, whereas ancient gold was of very good fineness.

At about the time of Song's move to the south, unusual circumstances pushed the ratio up to 1:13 or 1:14, but before long it fell back again. At the beginning of Yuan, it was 1:7.5, and later rose to 1:10. In frontier areas like Yunnan, it might go as low as 1:5 or 1:6. Because use of silver as money during Ming increased demand for the metal, and because a great deal of silver had been exported during Yuan times, silver enjoyed a very high price in terms of gold, the ratio frequently being 1:4 or 1:5. It was not until jiajing and wanli times that the price of gold again became high.[4] If we use the weighted average method for calculating the Ming Dynasty average gold-silver exchange price, we find that it was always within the limits of a 1:10 ratio, whereas in Europe since the establishment of the Roman Empire, the ratio had only rarely fallen below 1:10.[5]

MING DYNASTY GOLD-SILVER EXCHANGE PRICE RATIOS (2)[6]

Period	Number of Ounces Silver Per Ounce Gold
last half 14thc	5
first half 15thc	5
last half 15thc	6
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first half 16thc	7
last half 16thc	7.5
first half 17thc	10
last half 17thc	10

China and Europe had enjoyed either direct or indirect commercial intercourse with each other ever since ancient times. Though Ming had a closed door policy, foreign relations were not entirely broken off. Both the land and sea routes remained open. Given the fact that the gold-silver ratios of both sides had converged during Song and Yuan times, why did the gap between them grow larger again thereafter? Why did their prices of gold not average out?

First, the scale of trade was not large. Second, during ancient times, trade in luxury items like incense and silks was more profitable than exchange involving gold and silver. The discrepancy between the Chinese and foreign gold prices was only 100 percent, and the profit margin for incense and silks was at least that. Third, in ancient times, trade between China and Europe was not direct, but rather was in the hands of the Arabs and the people of India. The ratio in Arabia and India was not drawn to the European level, and so of course China's ratio could not have been influenced by Europe's. Fourth, for one country's ratio to be aable to influence another country's, it is necessary for the quantities involved to be large, and for there to be unlimited free movement of specie between the two. In ancient times, however, neither Europe nor China employed much gold or silver.

[3]The Ming writer Cao Xuequan's *Shu Broad Record*, 67, p. 4, quotes *Eight Department Record in the South*: "Mount Zhuti is in Jianwei, in the old state of Shu. Of old it had several places where silver was mined. Zhuge Liang wrote, 'Even if you adopt the silver of Zhuti, it will not be enough to let you feed yourself,' and there is Han Yu's ode, 'I have a double drinking vessel; Its silver is from Zhuti.' These allude to Mount Zhuti's silver. The *Han Record* says that 8 ounces of Zhuti silver make one *liu*, worth 1,580 cash. A *liu* of other silver was worth 1,000."

[4]For the Ming Dynasty gold-silver exchange price ratio, cf. subsection 7.2.4 above.

[5]The European prices are drawn from J. L. Laughlin, *Money, Credit and Prices*, p. 95.

[6]The calculation of average gold prices in the table is based on computing gold price averages over 50 years. For any year lacking records of gold prices, I have used the previous year's or the nearest year's gold price. Cf. the Ming Dynasty gold-silver exchange price ratios given in subsection 7.2.4 above.

The ratio in Europe during the fifteenth century was 1:11,[7] India's ranged from 1:6 to 1:8, and China's was around 1:6. With the greater development of sea transportation in modern times, the situation changed. In particular, once the Europeans had gotten hold of the enormous quantities of gold and silver produced in the New World, the nations of the Orient gradually lost the ability to maintain the separate status of their gold-silver exchange price ratios.

During the last half of the seventeenth century, an ounce of gold cost 15 ounces of silver in Europe, but still only 10 in China. Once the European merchants who had come to China had taken care of acquiring the goods they had come for, they would use the remainder of their money for Chinese gold jewelry, which made an excellent investment. The ship sent by the British East India Company to China in chongzhen 10 [1637], for example, carried two kinds of gold in its return cargo. The first was 4,330 silver dollars worth of broken pieces of gold, and the other consisted of 14 lengths of gold chain.

During the first century or so of Qing, there were few European merchant vessels which came to China without buying gold there, particularly with the private funds of the ships' officers. The East India Company regulated the goods that ships officers might carry. They could only carry out from England silver, coral and amber.

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They were only permitted to bring gold and musk back from China because the space occupied by these articles was not great.

Chinese gold then was mostly formed into a horse-hoof shape. There were also gold strips weighing around 10 ounces, and with fineness ranging from 75 to 100 percent. The weight and purity of the gold and silver involved were measured for each transaction, which was rather troublesome, but where there is profit, people are happy to put up with such inconvenience. In kangxi 43 (1704), the boss of the Sitelie saimu House spent 18,800 ounces of silver to buy 2,000 ounces of pure gold. The silver originally only cost £6,250. The gold he bought with it, if brought back to London, would have been worth £9,350, a profit of 50 percent.

There was additional profit to be made, because oriental gold was mostly alloyed with silver, and when purchased in the East, only the value of the pure gold it contained was counted. The silver content was entirely neglected. Therefore, the lower the purity of the gold, the cheaper it was for the purchaser.

Though we cannot tell just how much gold was exported in this fashion, I surmise it could not have been more than 10 percent of the total.[8] This is because from begininng to end the surplus funds exchanged for gold by each ship after the goods had all been purchased had not all been brought to China to buy gold. One reason for this was that general trade was more profitable than buying gold. A second reason was that Japanese gold was then even cheaper than Chinese gold. If they wanted to buy gold, they could go to Japan to do so.[9]

The price of gold began to rise in Canton during yongzheng 10 (1732). That first year it rose 5 or 6 percent. The second year it climbed to an exchange price ratio of 1:11.4 or 1:11.5 By qianlong 3 (1738), it had risen to 1:11.7. Two years after that it was 1:12.5. By qianlong 33 [1768], the ratio in Canton was approaching the European level of around 1:15. In qianlong 40 [1775], the Chinese price broke the 1:16 barrier. Now European merchants would lose money buying gold in Canton, and so they began to import gold instead. For a time in Canton 1 ounce of gold could buy 18 ounces of silver, and this at a time when the price in Europe was still 15 ounces or less.

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[7]According to a table on p. 40 of W. A. Shaw, *The History of Currency 1252-1894*, the average ratio in Italy, France, England and Germany during the fifteenth century was 1:10.93. This does not include the figure for Spain, because its ratio was influenced by the Arab one. In addition, G. F. Warren and F. A. Pearson's *Gold and Prices*, p. 260, quotes Laughlin, who gives a general figure for the ratio between the years 527 and 1453 of 1:15.

[8]There are records of the amount of gold purchased by ships' officers of the East India Company in Canton during the first three decades of the eighteenth century. The total only comes to 21,759.94 ounces. Cf. *Chronicles of East India Company*.

[9]It was said then that gold and silver were virtually the same price in Japan. The Portuguese seafarer Mendez Pinto was driven by the wind to Japan in 1545, and he probably reported this news to the Portuguese merchants in Ningbo. A year or two later, they sent nine vessels to Japan to brave the risk, but only one vessel returned. This ship's cargo had, however, been entirely exchanged for gold. This led the Europeans to push open the door to Japan. Within fifty years two-thirds of Japan's gold and silver supply had been carried away by the Portuguese. Cf. A. Del Mar, *Money and Civilization*, p. 379. By 1579, the Spanish and Portuguese in Macao and Manila had received 2,000 chests of gold and silver worth several tens of millions of pounds, the great majority of which had come from Japan. Cf. Henri Martin,

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Histoire de France (Paris, 1862). From 1601 to 1708, some 6,190,000 ounces of gold were exported from Japan. Cf. Honshō Eijirō and Kuroshō Inei, *Japanese Economic History*.

By qianlong 45 [1780], however, excess importation of gold caused a fall in its price. Two years later, the authorities in Zhejiang confiscated 4,748 ounces of gold, but sent to Beijing 73,594 ounces of silver, an exchange price ratio of 1:15.5.[10] This was also higher than the European ratio, which was then 1:14.42. However, as the links between China and Europe proliferated, the gold prices of the two gradually converged. As a consequence, after the qianlong period, Canton's foreign merchants no longer made large gold purchases.

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EIGHTEENTH CENTURY SINO-FOREIGN GOLD-SILVER EXCHANGE PRICE RATIOS

Period	Chinese Gold-Silver Ratio (Oz Silver/Oz Gold)[11]	European Gold-Silver Ratio (Oz Silver/Oz Gold)[12]
1701-1710	10.0	15.27
1711-1720	10.0	15.15
1721-1730	10.25	15.09
1731-1740	10.90	15.10
1741-1750	11.77	14.93
1751-1760	14.9	14.55
1761-1770	15.0	14.81
1771-1780	15.47	14.64
1781-1790	15.23	14.76
1791-1800	15.4	15.42

Our figures, with a few exceptions, are all based on Canton prices, but because of purchases there by foreign merchants, the Canton gold price was often higher than in other places in the interior. In qianlong 1 (1736), for example, the ratio in Canton was above 1:11, while the Beijing government was estimating it at between 1:9 and 1:10.[13] The gold being traded in Canton was not, however, all from local supplies. Some of it had been bought up in several places, like Suzhou and Nanjing. Some of it had even come from as far as Shaanxi.[14] Therefore, as the scale of the trade increased, or as communications became better developed, the discrepancies between gold prices in various localities could not remain very large, just as had happened to Chinese and European gold prices in general.

Naturally it was frequently the case that there were short-term local divergences in the price of gold between China and Europe. For example, at the time of the Taiping army's attack on Nanjing (1853), the ratio in Shanghai climbed to 1:18.5.[15] Naturally, this had nothing to do with the price of gold in Europe. Aside from such localized perturbations, China's gold price often remained lower than Europe's. In guangxu 2 (1876), for example, the ratio in Europe averaged 1:17.75, while China's was 1:16.6.[16] Since the foreign countries employed gold and China used silver, the demand patterns on the two sides were mirror images of each other, and such discrepancies were hard to avoid.

Generally speaking, during the nineteenth century and thereafter, the Chinese gold price was for the most part close to the European price. Especially after the Opium War, its movements tracked those on the London market. For example, during the last half of the nineteenth century, the European

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silver price fell substantially, and the gold price rose in a large way. Chinese gold immediately started to

[10] *East China Continued Record.*

[11] The Chinese gold prices are not true ten-year averages. At times I could only find prices for one or two years within a particular decade. The prices for the first two decades are approximate figures. For later decades, I have averaged actual prices for each year. When constructing the averages, if there was no price for a particular year, then I used the price for the preceding year.

[12] The European gold prices are the averages for each decade, based on J. L. Laughlin, *Money, Credit and Prices.*

[13] The work *Nine Ministers' Advice on Fixing Goods Prices* (compiled in qianlong 1), 1, states: "Top grade red gold per ounce was 9.15 ounces of silver. Now it is fixed at 10 ounces of silver. Second grade red gold per ounce was 8.85 ounces of silver. Now it is fixed at 9 ounces."

[14] Report of December 14, 1768 by the Canton Representative to the London General Office Manager, as recorded in *Chronicles of East India Company.*

[15] During the three years from 1850 to 1852, the price of gold in Shanghai was $21.68 per Canton ounce. In February 1853, the month before Nanjing fell, it rose to $25.70. By the end of 1853, it was $17.47, and by the end of 1855, it had fallen to $14.69. Cf. H. B. Morse, *The International Relations of the Chinese Empire*, chapter XVIII, p. 467. During 1853, the European ratio was 1:15.32.

[16] *Political Documents of Duke Shen Wensu* (i.e. Shen Baozhen), 6, guangxu 2, intercalated 5th month, 7th day, "Memorial on Receiving the Repeated Accusation Against Tang Dingtao": ". . . he brought back from Taiwan 12,000 ounces of red gold . . . valued at 200,000 ounces of silver."

flow abroad, and as a consequence the Chinese and foreign prices reconverged.

Our main object in studying gold prices is to see what was happening to gold's purchasing power, and to see how its price compared with prices of ordinary commodities. There are not many surviving records of goods prices in gold and silver which have survived from antiquity. Even silver's monetary role only began to increase from Five Dynasties times on.

Records of gold and silver prices of rice gradually become more numerous during Song times. Though copper cash and Exchange and Account Notes were the main instruments of circulation, they were already being commuted into gold and silver prices. Material on prices is especially scarce for late Song, and there are not many price records for Yuan and early Ming either. We can only assemble relatively reliable statistics for gold and silver's purchasing power beginning with the xuande period [1426-36].

During the five centuries of Ming and Qing, silver was actually used as money, and so prices in silver were a bit more stable than prices under the paper money system, or even than copper cash prices. Viewed over the long run, however, prices calculated in silver were really not at all stable. If we take the cost of rice as our standard, it rose more than 50 percent per century.

If, beginning with the Ming, China had used gold instead of silver, then prices would have been more stable, or at least the price of rice would have been more stable. The price rise per century would have been less than 20 percent. The average price during the nineteenth century would have been only twice the level of the fifteenth century.

If we take the last half of the tenth century as our base period, and stop with the first half of the twentieth century, moving in fifty-year steps, then silver's purchasing power over the course of this millennium fell to one-thirty-eighth of its original level. This is a loss of over 94 percent.

Gold, however, preserved some 40 percent of its original purchasing power. In terms of the difference between the highest and lowest prices, rice prices calculated in silver ranged from 10 grams to 257 grams per hectoliter, a difference of more than twenty fold. However, the gold price of rice ranged from 1.68 grams to 6 grams per hectoliter, a difference of only four fold.[17]

PURCHASING POWER OF GOLD AND SILVER COMPARED OVER ONE MILLENIUM

Period	Amt Rice 1 Kg Gold Buys (in hctltrs) (% base in parens)	Amt Rice 1 KgSilverBuys (in hctltrs) (% bse parens)
last ½ 10thc	444.64(247)	71.11(1,828)
first ½ 11thc	319.16(178)	50.97(1,323)
last half	263.16(146)	32.89(845)
first ½ 12thc	149.78(83)	11.47(308)
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last ½ 12thc	262.20(146)	21.85(562)
first ½ 13thc	242.40(135)	20.20(514)
last half	242.42(135)	30.30(779)
first ½ 14thc	223.41(124)	22.34(574)
last half	388.58(212)	58.17(1,495)
first ½ 15thc	594.09(330)	92.25(2,371)
last half	354.73(197)	61.16(1,572)
first ½ 16thc	331.78(185)	49.52(1,273)
last half	318.71(177)	43.48(1,118)
first ½ 17thc	262.54(146)	31.07(796)
last half	317.87(177)	31.78(817)
first ½ 18thc	290.70(161)	27.38(704)
last half	246.91(137)	15.92(409)
first ½ 19thc[18]	192.31(107)	12.30(316)
last half	261.09(145)	13.87(356)
first ½ 20thc	179.71(100)	3.89(100)

Not only were Chinese prices calculated in gold more stable than those calculated in silver, they were also more stable than the European prices calculated in gold. We need only compare Chinese rice prices with English and French wheat prices to realize the truth of this statement.

[17]The figures in the following table for the period before the fifteenth century are only based on a small number of what appear to be normal rice prices. The gold-silver exchange price ratio for the first half of the thirteenth century is calculated at 1:12. Rice prices are more numerous from the fifteenth century on, but even for the twentieth century we are unable to achieve a representative statistical sample. Materials for this book were collected for the period ending May 24, Republic 38 [1949]. For other years the figures are incomplete because the authorities frequently banned the recording of market prices. Figures for the nineteenth century and earlier are nationwide in scope. That is, they comprise prices from various localities. The figures for the twentieth century, especially those for the Republican era, are all of Shanghai prices, and these must have been somewhat higher than prices in the nation at large. Please consult the text of this subsection for further discussion of this point.

[18]The nineteenth century gold-silver exchange price ratios are based on the averages for Europe. Cf. J. L. Laughlin, *Money, Credit and Prices*.

During the century and a half comprised by the fifteenth and first half of the sixteenth century, the gold price of rice in China was higher than the price of wheat in England and France. This was because gold was hard to obtain in Europe then, and so its price had increased. During the last half of the sixteenth century, there was a lot going on inside and outside China to hinder production and cause shortages of goods, thereby lowering gold's purchasing power, but in contemporary England and France, the stimulus of gold and silver from the New World greatly lowered gold's purchasing power, and so during the first half of the seventeenth century, prices were higher than in China.

COMPARISON OF CHINESE WITH FOREIGN GRAIN PRICES OVER THE LAST FIVE CENTURIES

Period	Chinese Rice Price (Grams Gold/Hctltr)	English Wheat Price[19] (GmsGold/	French Wht Prc (GmsGold/ Hctltr)
1st ½15thc	1.68(100.00)	0.87(100.00)	1.60(100.00)
last half	2.82(167.86)	0.76 (87.35)	0.80 (50.38)
1st ½16thc	3.01(179.17)	1.41(161.84)	1.56 (97.50)
last half	3.11(185.12)	2.68(308.50)	4.23(264.50)
1st ½17thc	3.80(226.19)	5.08(583.63)	4.51(282.15)
last half	3.14(186.90)	5.14(590.71)	5.47(342.10)
1st ½18thc	3.44(204.76)	4.32(496.55)	3.95(246.95)
last half	4.05(241.07)	5.98(687.71)	4.21(262.54)
1st ½19thc	5.20(309.52)	8.42(968.27)	5.92(370.15)
last half	3.83(227.97)	5.28(606.90)	
			6.19(387.22)[20]

[19]The English and French wheat prices are based on Sir Morton Eden and Marquis Garnier's figures in *The Dictionary of Statistics*, p. 468. One ounce of gold is equated with £3 17 shillings 10 pence. The English and French prices are only given up to 1889 in the original table. I have here supplemented them with the figures for 1890 to 1900 in the article on "Prices" in the fourteenth edition of the *Encyclopedia Britannica*. English wheat prices fell drastically during the last decade of the nineteenth century. The situation was probably the same in France. If we incorporate these figures for the last eleven years of the century into the average, then the figures for the last half of the nineteenth century were probably lower than for the first half of the century.

[20]Only for 1851-1889.

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From the latter half of the seventeenth century to the first half of the nineteenth century, Chinese prices gradually rose, while in England and France during the first half of the eighteenth century prices fell back. During the ensuing half century, however, the Napoleonic Wars [actually, the Seven Years War, the War of the American Revolution and the wars of the pre-Napoleonic first decade of the French Revolution. EHK] again stimulated a rise in English prices. The rise was still more violent during the first half of the nineteenth century. Prices also rose in France during this time. During the last half of the nineteenth century prices were relatively stable in all three countries. England had the expected post-war fall in prices. The price fall in China was because of the rise in the price of gold, even though China used silver. The price of rice denominated in silver was also falling then, but the extent of the decline was less drastic.

During the 500 years from the fifteenth through the nineteenth century, at least in terms of wheat and rice, prices in China only rose by a little more than 100 percent. In England they rose more than six-fold, and they rose three- or four-fold in France. If we use fifty-year steps, then the ratio between the lowest and highest fifty-year average rice price in China was 100 to 309; in England that ratio for wheat was 100 to 1,100; in France it was 100 to 774.

If, for the last 500 odd years, China had circulated gold as money, then its money's purchasing power might have been even more stable than the above calculations indicate, since under such circumstances, the demand for gold would have been greater than the increase in its supply. Though this demand would have stimulated gold mining, China's gold mines seem not to have been rich ones, and so gold's purchasing power would had to have remained high.

There are two explanations for the unusual stability of gold's purchasing power in China. Naturally the most important explanation is that there was no sudden change in the ability to produce gold, and its total quantity was not greatly changed as a consequence. English and French gold mining techniques progressed, and these countries also obtained gold from the Americas. Later they elaborated mercantilist ideas, and strenuous efforts were made to absorb gold and silver from other nations. Naturally, prices shot up more severely.

Over the course of a thousand years, the supply of gold in China never underwent sudden increases or decreases. Though gold had been imported down through the centuries prior to Qing, the quantities involved could not have been very great. Nor could

the gold exports of early Qing have amounted to much. Adjustments in the gold-silver exchange price ratio were, for the most part, accomplished by means of falls in the price of silver. Nor was the quantity of gold produced in China down through the centuries

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very large. In 1907 China only produced 6,000 or 7,000 kilograms of gold. This was only 1 percent of world gold production.[21] The next most important reason was that China has a very large land area, and so on the average price peturbations were of small extent. The surface areas of England and France were each equivalent to that of a Chinese province. Average prices were greatly influenced by local weather, and so naturally the peturbations of the price level were also large.

[21]The U.S. Mint estimated China's 1907 gold production at 6,771 kilograms of pure gold. In that year world

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gold production was 617,784 kilograms. Hence China's was 1.096 percent of world production. Cf. Prof. Dr. Karl Helferich, *Das Geld* (Leipzig, 1921, fifth printing), p.115.

6. *The Quantity of Money During Late Qing*

As prices rose during late Qing, the quantity of money also increased. An extraordinarily large number of kinds of money existed in late Qing China. These moneys may be roughly classified into the three categories of silver coins, copper coins and paper money. Each of these categories in turn embraced a number of different kinds of money.

Silver coins included silver dollars, silver dimes and silver ingots. Silver dollars included foreign and Chinese silver dollars. Copper coins comprised copper dollars and copper cash. Paper money not only included foreign and Chinese paper notes, but also bills denominated in silver ounces and silver dollars, copper dollar and copper cash bills. All of this made for extreme complexity.

There are no exact statistics establishing the sum total of all these forms of money. We can only make a general estimate based on fragmentary figures and estimates. In the course of doing so, we may be able to learn something about the circulation of money in China during the century after the Opium War. This was a semi-feudal, semi-colonial form of monetary circulation.

The most important silver coin was the silver dollar. There are differing estimates of the quantity of silver dollars, with wide discrepancies among them, the estimates ranging from $10 or $20 million[1] to $1.1 or $1.2 billion.[2] This gives us nothing to go on, and we can only attempt to make an estimate of our own.

The majority of silver dollars were foreign ones. This is accepted as a fact by everyone.[3] Hence I will first make an estimate of the number of foreign silver dollars. I will approach the problem of making this estimate from two directions. First, I will estimate the quantity exported and the quantity which were imported into China on the basis of the quantity minted of each type of coin. Second, I will make a composite estimate of the quantity of the different kinds of silver dollars which were imported on the basis of the routes by which foreign silver dollars flowed in.

There were no more than five major kinds of foreign silver dollars circulating in China during late Qing: These were the Spanish Silver Dollar, the Mexican Eagle, the Stick Foreign, Vietnamese coins (the French Trade Dollar) and the Japanese Dragon Foreign. There are no exact statistics on the number of Spanish Silver Dollars minted. The numbers for them were lumped in with those for smaller silver coins. From 1537 to 1821, a total of $2.082 billion worth were minted.[4]

If large silver dollars constituted 80 percent of the total, then they would have amounted to around $1.6 billion. The vast majority of these were used for export. The places which were the destinations for these exports included North and South America. If one-fourth of the total

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[1]Liang Qichao's estimate was only 10 or 20 *zhao*. No doubt he was using the word *zhao* to mean one million. Ten or 20 *zhao* would be 10 or 20 million. Cf. Liang Qichao, "After Reading Various Memorials of the Board of Revenue and Finance and the Monetary System Regulations" (xuantong 2).

[2]Zhang Gongquan, in his essay "On the English Dragon Foreign's Vicissitudes and the English Foreign's Natural Decrease," *Banking Weekly* (Shanghai, July, Republic 8 [1919]), says that in xuantong 2 [1909], the Board of Revenue and Finance investigated and found the quantity of foreign silver dollars to be $1.1 billion.

[3]Liang Qichao states: "The quantity of foreign coins must be more than several times the quantity of coins which the provinces used to mint." Cf. note 1 above.

[4]*Report on the Introduction of the Gold-Exchange Standard into China, the Philippine Islands, Panama, and other Silver-Using Countries* (Washington: Government Printing Office, 1904), p. 491.

flowed into China, that would have amounted to $400 million. This would be the number which came into China prior to the Opium War. The large quantity of opium being imported at about the time of that war had to be paid for by China with foreign silver dollars, and most of these were Spanish Silver Dollars. If we estimate the amount used for this purpose at $200 million, then by late Qing some $200 million would have remained. Most of these were in circulation along the middle reaches of the Yangtze, especially in Anhui, but a large proportion of such coins were placed into collections or melted down.

The number of Mexican Eagles of various face values which were minted between 1821 and 1903 totalled $1.466 billion, of which large silver dollar Eagles must have constituted more than 80 percent, since just during the three decades from 1874 to 1903, $674 million worth of large silver dollars were minted. The number of Eagles exported probably constituted more than 80 percent of the total number minted.[5] This would have been approximately $960 million. Not less than $300 of this amount would have flowed into China, since during the latter part of the nineteenth century, some countries which had been using foreign silver dollars began to mint such coins themselves, or even went over to the gold standard. Hence the quantity moving into China would have constituted a larger proportion of the whole. The Eagle's sphere of circulation was the lower Yangtze, including Jiangsu, Zhejiang, but also Hunan and Hubei, Fujian and Anhui, but was mainly in the first two provinces, with Shanghai as its main base.

Up until 1903, a total of $150 million worth of Stick Foreign were minted, and thereafter they continued to be produced. I estimate that at least $80 million worth were imported into China, and they circulated widely in the North China provinces of Zhili, Henan, Gansu, Shanxi, Shaanxi and Suiyuan.

More than $68 million worth of Vietnamese coins were minted up to 1903.[6] Up until 1897, $165 million worth of Japanese Dragon Foreign were minted.[7] A total of $20 to $30 million worth of the latter two coins came into China. Vietnamese coins circulated in Guangdong, Guangxi and Yunnan. Japanese Dragon Foreigns circulated in Fujian, Jiangxi and Guangdong.

There were also the silver dollars of the Portuguese, Dutch and other countries, which were imported prior to the Opium War. After the Opium War silver dollars came in from other South American nations. The vast majority of these coins tended to be used to mint silver ingots or were reminted into Dragon Foreigns during late Qing. Of course a certain number of Spanish Silver Dollars and Eagles were also reminted.

As a consequence, the quantity of foreign silver dollars which either were in circulation during late Qing or could enter circulation at some time or other was probably around $500 million.[8] This figure is an underestimate.

The inflow of foreign silver dollars can also be studied in terms of the different entrepots through which they came, since foreign silver dollars only came into China by way of a few routes.

The first route was the one by way of which the overseas Chinese of the Philippines brought them in. Some have estimated this source at $100 million.[9] These must all have been Spanish Silver Dollars.

The second route was the direct route from Europe taken by European commercial vessels.

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These coins were mainly brought by the ships of the British East India Company. There are various estimates for the number of coins brought in this fashion. These range from $50 million[10] to $500 million.[11] Probably the total was around $300 million. Spanish Silver Dollars also constituted most of this source, but it also included the silver dollars of a number of other nations.

The third route was the one followed by United States vessels. Some have estimated that $100 million worth were brought in by this route.[12] These included U.S. Silver Dollars, but the majority of the coins were probably Spanish Silver Dollars.

The fourth route involved coins brought in by the Portuguese via Macao and Japanese silver. Some have estimated that Japanese silver worth $100 million was imported into China.[13] The Japanese silver

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[5]Between 1877 and 1901, 77.74 percent of all the silver coins Mexico minted were exported, but the percentage of large silver dollars exported must have been a little larger. Cf. the work cited in note 4 above.

[6]Cf. work cited in note 4, above, p. 491.

[7]*Ibid.*

[8]According to the estimate of J. Edkins, *Chinese Currency* (Shanghai, 1901), p. 68. His figure includes treasure silver and small denomination silver coins, and is not limited to large silver dollars.

[9]R. M. Martin, *China*, Vol. I, p. 176.

[10]*Ibid.*

[11]H. B. Morse, *China and the Far East*. Clark University Lecture.

[12]R. M. Martin, *China*, Vol. I, p. 176.

[13]*Ibid.* The Japanese scholar Arai Hakuseki estimated the amount at $140 million. Cf. Otake Bunfu, *Studies in Modern Chinese Economic History* (Kōbuntō shokyoku, Shōwa 17 [1942]), p. 59.

was not necessarily in the form of silver dollars, but must have included some of them, including Spanish Silver Dollars, Dutch Horse Sword and Portuguese Cross coins.

The above sources all dated to before the Opium War. After the Opium War, there flowed in Eagles, silver dollars from the nations of South America, Japanese Dragon Foreign, Vietnamese coins and Stick Foreigns. According to Maritime Customs statistics, between 1871 and 1900, these totaled 118 million Customs ounces, or $160 million. Between 1901 and 1910, however, there were net exports of 80 million ounces. Possibly the imports were in silver dollars, and the exports in treasure silver. There are no figures from this source prior to 1871.

There were also imports which did not go through the Maritime Customs. For example, at the time of the invasion of China by the Eight Nation Coalition Army, the silver dollars carried by the foreign armies could not have been included in the totals.[14] It is said that over $3 million in Eagles were brought from the Philippines.[15]

Hence from the end of the Opium War to the end of Qing, the total of foreign silver dollars imported into China was probably more than $300 million. Most of them were Eagles, of about $300 million worth. Therefore by the end of Qing around $900 million silver dollars had been imported into China, exclusive of broken silver or small silver coins. Of this amount, $100 million was soon cast into silver ingots, $200 million was reexported to pay for opium, and another $100 million was melted down and reminted during late Qing. The remaining $500 million was either in circulation or could enter circulation as required.

There are no precise statistics for Chinese silver dollars either. In xuantong 2 [1909], the Board of Revenue and Finance used reports made by the provincial mints from guangxu 16 to 34 [1890-1908] to estimate the total minted at over 40 *zhao*, i.e. 40 million. Some have believed this estimate to have been too high.[16] Actually, if anything, it is too low. At the time of the Beiyang Warlords, the Ministry of Finance made several estimates of the number of Dragon Foreigns that had been minted. These ranged from $200 million to over $280 million.[17] This last figure probably includes coins minted during the republican era. The late Qing figure would be $200 million. These were mainly Dragon Foreign from Guangdong, Hubei and Jiangnan circulating in their province of issue. In the large urban markets of nationwide scope, however, different silver

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dollars could all circulate at par. Hence the total number of foreign and Chinese silver dollars during late Qing was some $700 million.[18] These silver dollars seem to have been just like commodities. Each had its own price, which varied in different localities. On the average a dollar was worth 1 string 340 cash.[19] Thus, $700 million was equal to 938 million strings of cash.

Silver dimes came in 5-dime, 2-dime, 1-dime and 5-cent denominations. There are no late Qing figures on them. A Republic 2 [1913] survey by the Coin Office of the Ministry of Finance estimated their quantity at over $286 million worth. The quantity during late Qing must have been somewhat less. A majority were 2-dime pieces. Next came 5-dime and 1-dime coins. Yunnan had minted a large number of 5-dime silver coins. The total face value amount for the entire country must have been as much as $250 million.[20] Therefore the total number

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[14]J. Edkins, *Chinese Currency* (Shanghai, 1901), Preface.

[15]Cf. work cited in note 4, above, p. 477.

[16]Liang Qichao, "After Reading Various Memorials of the Board of Revenue and Finance and the Monetary System Regulations."

[17]An investigation by the Coin Office of the Ministry of Finance of December 17, Republic 2 [1913], made the total $206,028,152. The same year's "Coinage Estimate" stated that the amount was $235,398,050. Liang Qichao quotes an April, Republic 3 [1914] investigation which made it $212,168,590. Cf. Liang's "My Coinage and Financial Policies," *Modern Chinese Coinage Question Compendium*, Volume I (January, Republic 4), p. 560. The Republic 8 investigation

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yielded a figure of $286,351,413. Kann made his estimate on the basis of this figure, but he said that $2 billion in silver dollars were in circulation in 1933.

[18]In Republic 2, a member of the Coinage Commission, Liu Mianzhi, said that at that time China had $1.7 billion in silver dollars. Cf. "A Capability Standard," *Modern Chinese Coinage Question Compendium*, Vol. II, p. 1440. Liu does not give his source for this statement.

[19]In xuantong 3, a silver dollar was equated with 134 single Copper Dollars in Shanghai. Cf. Zhang Jiaxiang, *History of Chinese Monetary Systems*, Vol. V, p. 35. A single Copper Dollar was equal to 10 standard coins.

[20]For an estimate of the silver dimes, I have consulted the figures in the Japanese edition of E. Kann's *Modern Chinese Monetary History*, [English title *The Currencies of China*] pp. 119-124. His estimate is the figure for 1939, but most of the figures from which he derives this estimate have dates connected with them. For example they take the form of stating the number of a given province's 5-dime silver coins from such-and-such year to such-and-such year. Some figures are his own estimates. Summing up his figures, we get a total for late Qing silver dimes having a total value of $180 million.

of silver coins of all sorts during late Qing would have approached $950 million, or 684 million ounces of silver.

Treasure silver was still in use during late Qing. In addition to the various sizes of Original Treasure and *kezi* small old style silver ingots, this included the thick silver cakes issued by the silver houses of Hunan, and the large and small Original Treasure issued by the Sino-Russian Daosheng Bank. Some have estimated the late Ming nationwide supply of silver at 250 million ounces. This estimate is too low, but I suspect that the amount which could actually take part in circulation and be used for making payments was only 100 to 200 million ounces. Later on, silver imports from the New World greatly increased this quantity, since most foreign silver dollars imported into China during the early period were made into silver ingots. However, a portion of these silver ingots were reexported by foreigners, and a portion were used during late Qing to mint new style silver coins.

Though there is no way to count up the remaining silver ingots, they must have amounted to a somewhat larger sum than the Chinese-made silver dollars. Not only did people from more remote regions use such silver as a store of value, even in large cities like Shanghai a large quantity of treasure silver exhibited the functions of money. In xuantong 3, the supply of silver readily available for the use of the Shanghai silver trade was, in addition to $12.07 million in silver dollars, some 23.67 million ounces of treasure silver, and 1,632 large strips of silver equal to more than 1.6 million ounces, for a total of some 25 million ounces.[21]

The amount of treasure silver was twice the quantity of silver dollars. The nationwide total of treasure silver must have been 250 million ounces. With 0.72 ounce to the dollar, that would have been equal to $347 million.[22]

Let us next examine the copper coins of late Qing. These included new style Copper Dollars and old style copper cash. Late Qing was a period of transition from old style copper cash toward use of new style Copper Dollars. The proportion of the supply made up by each of these two types of coins varied year by year, and is very hard to keep track of.

According to the figures obtained from a survey of the provinces by the head of the Postal Ministry, Chen Bi, the quantity of new style Copper Dollars (converting various denominations to 10-cash Copper Dollars) was 10,512,500,115 10-cash Copper Dollar coins as of guangxu 31-32 [1905-1906].[23]
[883]

According to another set of figures, provided by Liang Qichao, during the five years from guangxu 30 to 34 [1904-1908], the provinces minted a total of more than 12.4 billion Copper Dollars. If we add in the number minted during guangxu 28-29 and during the xuantong period, as well as those privately coined by Chinese and foreigners, we can estimate that during late Qing there was a total of 14

However, his figures are by no means complete. For example, they do not include Zhejiang. Nor are privately made coins included in the total. Therefore, the total should be some $200 million.

Liang Qichao (in a September, Republic 3 written recommendation on coinage presented to the President) states: "The amount of silver dimes and copper dollars minted for circulation by the various official bureaus over the years may be calculated at over 32 million 5-dime small silver dollars, 122 million 2-dime silver coins, 23 million 1-dime small silver coins, and 5 million 5-cent small silver coins." *Modern Chinese Coinage Question Compendium*, Vol. I, p. 544. These had a total face value of $285.5 million.

Li Fangzhuan quotes a survey by the Coin Office of the Ministry of Finance in the Winter of Republic 2 which gives a total of $286,473,806.45, including 2-dime and 5-cent coins.

[21]Zhang Jiaxiang, *History of Chinese Monetary Systems*, Vol. V, p. 47.

[22]Silver ingots were more pure than silver dollars. In fact during late Qing some foreign silver dollars could only circulate in some localities at a value of something over 0.6 ounce of pure silver, but in other places some would circulate at 0.8 or 0.9 ounce of silver. So I here continue to use the figure of 0.72 ounce per dollar.

[23]Chen Bi, *Precipice Facing Hall Memorial Drafts*, 6, "Report of Survey of Various Factories." He memorializes on the quantity minted in each of the provinces as follows (the unit being the single Copper Dollar coin):

Henan (as of guangxu 32/11/29)	230,545.850.0
Hubei (as of guangxu 32/12/15)	3,548,327,055.0
Jiangning (guangxu 32/12/end)	1,603,984,850.0
Guangdong (guangxu 32, yr end)	958,606,000.0
Fujian (guangxu 31, yr end)	347,244,868.5
Zhili (guangxu 33/3/end)	182,180,520.5
Sichuan (guangxu 32, yr end)	275,512,944.0
Jiangsu:Qingjiangpu (gx 32/7/end)	7,885,585.0
Suzhou (guangxu 32/5/12)	529,430,867.0
Anhui (guangxu 32/4/16)	519,361,334.0
Shandong (guangxu 32/12/14)	296,274,556.0
Jiangxi (guangxu 32/10/end)	379,722,376.0
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Zhejiang (guangxu 32/12/end)	821,107,384.0
Hunan old office (gx 32/8/end)	179,959,100.0
Hunan new office (gx 32/12/8)	632,356,825.0
	10,512,500,115.0

billion Copper Dollars.[24]

Chen Bi's figure was only for thirteen provinces, and did not include Jilin, Fengtian or Guangxi. Nor did it include the coins minted at the end of guangxu and during xuantong. Liang Qichao does not specify what provinces are included in his figure, and I suspect we must reject his figure as too low as well, since the survey made by the Coin Office of the Ministry of Finance in December of Republic 2 covered seventeen provincial mints (not including Guangxi). It commuted different sized coins into 10-cash Copper Dollars, and offered a figure of over 29 billion coins. In September of Republic 3, Liang Qichao stated that the number of Copper Dollars minted by the provincial mints over time came to 30 billion coins.[25]

We can estimate the total at 20 billion coins. During late Qing it took 134 Copper Dollars to make 1 silver dollar, and so 20 billion were equal to over $149 million in silver dollars. During late Qing, circulation of Copper Dollars was limited to the cities. Virtually all rural areas used copper cash. The smaller market towns used both copper cash and Copper Dollars, and even in the large cities, copper cash were still in circulation.

It is hardest to estimate the quantity of copper cash. In guangxu 21 [1895], 12th month, when the Investigative Censor, Wang Pengyun, discussed the purchase by the Japanese of Chinese copper cash to extract gold and silver from them, he expressed the opinion that it would only take 100 million ounces of silver to buy up all of China's standard coins.[26] The silver price of copper cash then was 1,648 cash to the ounce of silver, so 100 million ounces would have been equal to 164.8 billion cash. I suspect that this figure is too low.

The Qing Dynasty's supply of copper cash may be said to have been higher than the norm, and the raw materials for its manufacture were relatively common. Except for the Shunzhi character-*li* coin and the Xianfeng large coins, the Qing court rarely recalled standard coins for reminting. Though many of the standard coins of the shunzhi, kangxi and yongzheng periods were melted down privately, this was done for the purpose of reminting them, and so could only have increased the number of coins. It was not until late Qing that a portion of the copper cash were reminted into new style Copper Dollars. Nor were very many Qing cash buried in the earth. That is to say, the greater number of the standard coins minted during the Qing period remained in circulation, or could be thrown into circulation as needed.

The question is, how many copper cash did the Qing Dynasty mint over the course of its more than two centuries? The primary sources which might answer this question are not complete. The *Qing Veritable Records* records a total of around 43.4 billion cash as having been minted during the shunzhi, kangxi and yongzheng periods, an average of 430 million cash per annum. I suspect this is just the figure for the Beijing Treasure Spring Office, and not the quantity for the entire country. According to the *Great Qing Veritable Records*, the Treasure Spring Office must have received 4,016,880 catties of Yunnan copper per year, 2,940,000 catties of Guizhou white lead,

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325,476 catties of black lead, and 55,555 catties of Hunan black lead. All of this would have enabled the Treasure Spring Office to mint 900 million cash per year. The province of Yunnan alone had several hundred million cash per annum.[27]

It has been estimated that the Qing used over 10 million catties of copper per annum for minting coins. This was enough to mint 3 billion cash. In jiaqing 5 [1800], the Board of Revenue set a quota for the provinces of 2 billion cash.[28] According to

[24]Liang Qichao's list of the production of Copper Dollars by year is as follows:

Year	Amt. of Copper (dan)	Copper Dollars Minted (in thousands)
guangxu 30	255,771	1,741,167
31	749,000	4,696,920
32	213,673	1,709,384
33	356,400	2,851,200
34	178,500	1,428,000
TOTAL	1,753,344	12,426,671

[25]"Plan for Minting Coins Presented to the President."

[26]"Memorial Requesting Imperial Orders to Open Mines So As To Encourage Minting Silver Dollars."

[27]Yan Zhongping, *Investigation of the Qing Dynasty Yunnan Copper Administration*, pp. 24, 89-94.

[28]Zhang Jiaxiang, *History of Chinese Monetary Systems*, Vol. II, p. 96. The following gives in tabular form the quantity of cash the Board of Revenue determined that each province should mint in jiaqing 5 (unit: strings of cash):

the "Coinage Regulations" compiled in jiaqing 7 [1802], the entire country was to mint 6 billion coins per annum. Even during the tongzhi period, when fewer coins were minted, it is said that annual production was still 2.4 or 2.5 billion cash.[29] This could, however, have merely been the hoped for production figure, and not that many were actually minted. Most of those minted were 10-cash coins, each of which was used as the equivalent of a 2-cash, and so we should divide the total by five.

If we assume 3 billion cash per year, then over the several centuries of the Qing Dynasty, they must have turned out 800 billion cash. If we deduct half this amount to cover reminting, years when fewer were minted, and buried coins, there would still remain 400 billion cash.

However, by no means all of the copper cash in circulation during late Qing were Qing cash. There were also some old coins from earlier dynasties and foreign coins. The proportion of the total such coins constituted varied by locality. In my home town of Yantian, Xixiang, Anfuxian, Jiangxi, I can say that during the early years of the Republic, only Qing coins were used. There was no small number of Shunzhi and Kangxi large coins, and to collect a full set (twenty kinds) of Kangxi coins was not at all difficult. Qianlong, Jiaqing and Daoguang coins were also very numerous. In some places in Nanxiang, one might come upon Five-grainers and Inaugurals, as well as Japanese Kan'ei coins. However, pre-Qing coins had never been numerous among the coins circulating in Jiangxi. As early as qianlong 36-37, they only constituted one or two out of a thousand.[30]

There were other places where the percentage of old and of foreign coins was much larger.[31]

Province	Amount Minted	Province	Amount Minted
Beijing	899,856	Shaanxi	87,360
Zhili	60,666	Shaanxi suppl.	43,204
Jiangsu	111,804	Sichuan	179,259
Jiangxi	41,928	Sichuan suppl.	14,868
Zhejiang	129,600	Guangxi	24,000
Hubei	84,000	Yunnan	94,860
Yunnan	84,924 suppl.	Guizhou	94,860
Shanxi	17,472	Hunan	47,880
Ili	1,122	Guangdong	34,560
TOTAL			2,052,223

[29]In tongzhi 4 (1865), the quantity of standard coins produced was as follows (E. Kann, in his *The Currencies of China*, 3rd Japanese edition, p. 54, quoting the figures of S. W. Bushell):

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Province	Locality	Factory Name	Annual Production (Cash)
Zhili	Beijing	Treasure Spring	899,856,000
Zhili	Beijing	Treasure Origins	449,928,000
Zhili	Baoding	Treasure zhi	60,756,840
Shanxi	Taiyuan	Treasure jin	17,472,000
Jiangsu	Suzhou	Treasure su	111,992,052
Jiangxi	Nanchang	Treasure chang	42,037,992
Fujian	Fuzhou	Treasure fu	43,200,000
Zhejiang	Hangzhou	Treasure zhe	129,600,000
Hubei	Wuchang	Treasure e[wu]	84,420,000
Hunan	Changsha	Treasure nan	48,054,000
Shaanxi	Xi'an	Treasure shaan	94,589,040
Sichuan	Chengdu	Treasure chuan	157,733,333
Gungdng	Guangzhou	Treasure guang	34,560,000
Guangxi	Guilin	Treasure gui	24,000,000
Yunnan	Yunnan	Treasure yun	125,682,480
Yunnan	Tengchong	Treasure teng	44,886,600
Guizhou	Guiyang	Treasure qian	67,329,900
Guizhou	Dading	Treasure qian	22,443,300
Ili	Kulja	Treasure yi	1,122,000
TOTAL			2,459,663,537

There are some errors in the text of the table in the Japanese translation. For example the character *yuan* in the factory name Treasure Origins is written with the homonym meaning "first." The character *pu* (meaning ordinary) is substituted for the character *jin* (which looks very similar) in the name of the factory located in Taiyuan. The factory in Wuchang, Hubei was not called Treasure *e*, but Treasure *wu*. However, the biggest problem is over the authenticity of the figures. Bushell's figures were, naturally, quoted from Chinese sources, but someone knowledgeable about Qing cash cannot avoid being suspicious of this. Tongzhi coins are the rarest of Qing cash. There are a number of provincial mints cited in the table as turning out coins which no one has ever seen. It is possible that the figures in the table are ones proposed by the officials, but that owing to the high cost of production, a number of mints did not actually produce any coins. Those in circulation among the people were mainly old coins.

[30]*Spring and Spade Unified Record* (daoguang 5), prefatory chapter, "Enumerated Memorials," quotes the *Capital Gazette*, "Buying of Old Coins in Jiangxi Managed As in Su Province."

[31]According to what a friend from Guangdong says, of the

Generally speaking, the proportion of Vietnamese coins was very large in the Fujian-Guangdong region. In Amoy during the middle years of the guangxu period, Vietnamese coins constituted 40 percent of all copper coins in circulation. Qing coins were only a little more than half the total. The rest were Japanese Kan'ei coins, and old coins from Song and Ming times.[32] The situation was virtually the same in Fuzhou.

In Taiwan, Qing coins were 76.6 percent of the total, Vietnamese coins were 13.6 percent, Japanese coins were 5.5 percent, Song coins were 3.1 percent, Ming coins were 1.1 percent, and Tang coins were one in a thousand. It is said that in Jinan, Shandong the situation was almost the same.[33]

In the Jiang-Zhe region, however, Vietnamese coins were unable to circulate, and there were only a small number of Kan'ei and old coins.

During late Qing, Beijing only used 10-cash coins. Small 1-cash coins were not employed. One might find Vietnamese Guangzhong and Jingxing coins in neighboring towns and villages.[34]

From qianlong times on small coins constituted the majority of coins in Chongqing, Sichuan. Shunzhi and Kangxi large coins were relatively few. Intermixed with these were Kan'ei, Guangzhong and Jingxing foreign

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coins, as well as Five-grainers, Monetary-springs and Inaugural old coins.

Generally speaking, of the copper coins in circulation all over the country, probably 5 percent were foreign and old coins. There were also a number of private coins. Such private coins constituted a large proportion of the total during late Qing. If we assume they constituted 20 percent of the 400 billion cash total, then they would have amounted to 80 billion coins. Calculated in this fashion, then there must have been 500 billion copper cash in existence during late Qing, the equivalent of $373 million worth.

Finally, let us take a look at paper money. This is an extraordinarily troublesome problem, which causes quantity estimates to be very difficult to make. It would seem reasonable that there should be accounts for paper notes issued which we could investigate, but the entities issuing them during late Qing were truly like some multiheaded monster. Even if they had kept accounts, most of these have been lost. The complexity of the paper money problem is caused first of all by the multiplicity of issuing institutions. Both Chinese and foreign entities issued them. On the Chinese side, new-style banks, provincial official silver and cash houses, private money shops, silver houses, pawn shops, railroads offices and all sorts of commercial emporia issued paper money.

The second cause for such complexity was the large number of monetary units. There were copper cash bills, copper dollar bills, silver ounce bills and silver dollar bills. The copper cash bill category comprised a variety of ways to calculate the cash equivalent of a bill. There were full cash bills, 98 cash bills, 95 cash bills, capital cash bills and 10-cash cash bills. Copper dollar bills included 10-cash copper dollar bills and 20-cash copper dollar bills.

Silver ounce bills were denominated in various different local standards for the weight of the ounce. Shanghai used the standard dollar silver ounce, Beijing used the capital weight silver ounce, Hunan the provincial weight (or Hu weight) silver ounce, Tianjin the *huabao* silver ounce, Shaanxi the *yiping* silver ounce, and Jiangxi the 938 weight market silver ounce.

Silver dollar bills came in large and small foreign dollar denominations. In some places the former were redeemed in Eagles, in other places in Dragon Foreigns. I suspect one could never clear so tangled a set of accounts.

Late Qing was a transitional period in the circulation of money, during which a shift from copper cash to copper dollars was occurring, and so from copper cash bills to copper dollar bills. During guangxu 28 [1902] in Jiangxi, for example, the official coin office issued full standard coin bills, but 95 standard coins were the coins circulating on the market. As a consequence, the following year they issued 95 standard coin bills. In guangxu 33, the official silver and cash house issued cash bills, silver ounce bills and silver dollar bills.

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coins in his home town (in the southwestern part of Guangdong), the proportion of Song coins was very large. This was the case right into the republican era. Nor did they make much use of copper dollars. It is, however, possible that these Song coins were minted in Annam.

[32]W. J. Clennell, "Copper Cash Current in Amoy," *China Review*, XX, no. 5 (1892-1893). The article does not mention the exact percentages of the various types of coins. It only says that Qing coins barely exceeded half the total.

[33]Eizan-ro Shujin, "Gathering of Private Views on the Rectification of Taiwan Coins," *Kahei* magazine, no. 188, p. 17. This was the situation in Meiji 30 [1898]. The author believed this was representative of the general situation during late Qing. After this he made a survey in Jinan, where he found the situation essentially the same.

[34]Some foreigners say that a number of Ryukyuan coins were present in Beijing during late Qing. These statements are unreliable. Perhaps they mistook Guangzhong and Jingxing coins for Ryukyuan coins.

The third reason for such complexity lay in the differences in prices of different moneys. That money should itself have a price is a surprising thing, but during late Qing it was common for there to be changes in the exchange rates between various currencies. One might call these exchange rates, but everybody then looked upon these currencies as commodities, and talked about the price of silver, the price of foreign silver coins, the price of cash and the price of paper money.

For example, at the beginning of xuantong, the Guangxin [Broad Credit] Company of Heilongjiang issued over 30 million strings worth of cash bills, with 3 strings 840 cash worth of them equal to 1 small foreign dollar. Harbin's Jiangsheng Guangxin Company issued 60 million strings worth. In the Autumn of Republic 3, the amount of its issue was over 140 million strings, and 8 strings worth of bills were only worth 1 small foreign dollar.

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Figures have been published on the size of the paper money issues by the large national banks and the provincial official silver and cash houses, but the years covered by these statistics differ, and they are not entirely reliable.[35] I can only make some emendations to the foundation provided by these figures so as to make my own new estimate. Copper cash bills, for example, were mainly issued by the provincial official silver and cash offices and by private money shops and commercial emporia, but even figures for the official issues are not complete. The Heilongjiang Official Silver House and the Guangxin Company alone issued 100 million strings worth.[36] The Jilin Yongheng Official Silver and

[35]Zhang Jiaxiang's *History of Chinese Monetary Systems* contains some statistics on Chinese paper money, but not only are these not complete, a number of the figures are not

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reliable. There are also errors in the monetary units employed. Nor are the names of the issuing institutions always correct. I have here done all I could to correct these figures and the names of the issuing institutions to construct the following table, but can only offer it for further correction by readers. It cannot serve as a formal statistical table.

ISSUES BY LATE QING BANKS AND PROVINCIAL BODIES

Issuer's Name/Year	SilverOzBls	Silver$Bls	CprCshBls (in strings)
Great Qing Bank/xt 3	5,438,911	12,459,908	?
BnkofCommunications/R 1	1,102,164		
ChCommercialBank/gx 31	1,500,000		
Zhejiang Xingye Bank/xt 2	728,100		
Siming Commercial Bank/R 3	190,000		
Zhili ProvinBnk/xt 2	384,500		64,794
ManchuriaOff.Silver Hs/R 3	8,700,000		
Jilin Yongheng Off. Silver & Cash House /xt 3			78,958,364
Heilongjiang Off.Silv.Hs/xt 2	1,190,000		
Guangxin Company/xt 1			100,000,000
ShandongOff.Silv.Hs/gx 3	881,330		
Henan Yuquan Off.Silv.& Cash Office/xt 3	1,800,000	160,000	300,000
ShanxiOffCash Off./xt 3		60,000	
Bank of Jiangsu/R 1		500,000	
Anhui Guwan Off.Cash Off./after gx 32		400,000	300,000
Jiangxi Off.Cash Office/gx 29			400,000
Fujian Off. Cash Office/R 1		400,000	
Bank of Zhejiang/xt 1		600,000	
Hubei Off. Cash Office/lt.Qing		1,600,000	17,000,000
HunanOffCashOffice/gx 29	2,027,600	375,700	4,800,000
Shaanxi Off.Silv.&CashOff.			1,000,000
Fengtian Xingye Bank/lt.Qing		12,000,000	
GansuOffSilv&Cash Off/xt 2	173,000		59,000
Xinjiang Province City Off. Cash Office/lt.Qing	1,000,000	15,000,000	
Ili Official Cash Office			
Bank of Sichuan/xt 3			
Guangdong Off.Cash Off./xt 3		1,000,000	
GuangxiOff.Silv.&CashOff./R 2		2,187,600	
GuizhouOfficiaCash Off/Qing	554,055		
Rehe Off.Silv.& Cash Off./R 1		50,000	

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In the above table the Great Qing Bank issued copper cash bills, but the quantity was not specified. The Bank of Communications had issued silver dollar bills, but reckoned them in silver ounces. I have here commuted them into silver dollars at the rate of 0.72 ounce per dollar. The figure for the Manchuria Official Silver House is the total for silver ounce bills, large Dragon Dollar bills, small silver dollar bills and Eastern [i.e. Manchurian] cash bills. The latter refers to a string of 160 standard coins. Something over 4 strings worth of Jilin Yongheng Official Checks was equal to 1 silver dollar. The figure for Heilongjiang lumps together silver dollar bills and copper dollar bills. The Shandong figure amalgamates silver ounce bills and capital cash bills. The Rehe figure is the sum of the silver ounce bills, silver dollar bills and copper cash bills issued. In addition, for Jiangxi province the table only sets forth the figure for the guangxu 29 issue by the Jiangxi Official Cash Office. Actually, after it became the Jiangxi Official Silver and Cash House in guangxu 33, it issued silver ounce bills and silver dollar bills.

[36]Zhang Zongyuan (*The Evolution of Chinese Coins*) says

Cash House also had some 70 million strings worth. The provincial official cash offices of Henan, Hubei, Jiangxi and Jiangnan all issued cash bills. We may suppose that the other provinces also issued cash bills, particularly the urban money shops.

We cannot treat the cash bills of different provinces identically because the values they represented were not the same. For example, 4 strings 500-600 cash worth of Jinlin Yongheng official checks was only worth 1 small silver dollar in cash, so that if you wanted to commute it into standard cash bills, 1 string 300-400 cash worth would be equal to 1 silver dollar's worth of cash bills. Therefore, I suspect that 70 million strings worth would come to less than 20 million strings of copper cash.

We cannot, however, use the figures for Jilin and Heilongjiang provinces as a standard for making calculations about the cash bills of other provinces. This is because the paper money of Manchuria then was disproportionately large in amount compared to that of the other provinces, most of which was made up of cash bills. None of these Manchurian cash bills were redeemabe for copper cash, but rather were denominated in terms of small foreign coins. Hence whether to consider these copper cash bills or small foreign coin bills is a question not very easy to answer. I have here labeled them cash bills.

Of the other provinces, Hubei had 17 million strings of cash bills, and Henan only had 110,000 strings worth. If we estimate each province's issue at 3 million strings, then the national total would be 60 million strings. These were all official bills.

There were also private bills or private checks. By private bills I do not mean counterfeits, but bills from privately owned money shops and commercial establishments. There must have been no small number of such private bills, since they were found in large and small cities all over the country.[37] According to a Bank of China survey of Manchuria,[38] Fengtian province's 46 districts had over 5.48 million strings worth, or more than $3.11 million. This survey took place in Republic 8 [1919]. It is said that there was even more at the end of Qing. Hence on the average each district must have had 200,000-300,000 strings worth. The local notes of each of the districts of Jilin were at most 300-400,000 strings, and at least 200-300,000 strings, and the average must have been 300,000 strings. That would have made the total for the whole province 12.6 million strings, equal to 6.3 million strings of standard coins.

The other provinces employed metal money, and paper money bulked much less in their systems. If we assume that the private bills in the other provinces came to half the number in the districts of Manchuria, then each province would have had 3 million strings, and the national total would have been about 60 million strings. The large city private bills would have added another

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20 million strings, making the national total for official and private paper notes 130 or 140 million strings,[39] or $100 million. This would include copper dollar bills.[40]

There were fewer silver ounce bills, and there are no exact statistics for them. According to figures issued by various sources, they must have come to around 12 or 13 million ounces worth. There are obvious omissions from this figure. For example, the Chinese Bank of Commerce had issued silver ounce bills, but these were not included. The provincial official silver houses of Jiangxi, Hubei and Rehe also issued silver ounce bills, as did some private silver houses. Moreover silver ounce bills came in large denominations, and unlike cash bills and silver dollar bills, these large bills were not numerous. Therefore, there must have been at least 20 million ounces[41] of them in the whole country, or $27-$28 million. Some say[42] that aside from those silver

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that the Guangxin Company issued 100 million strings of cash bills. This was in addition to the Heilongjiang Official Silver House's capital cash bills.

[37] At the end of Qing, H. B. Morse surveyed foreigners living in various places in China about the money in circulation where they lived. Replies from Niuzhuang, Shaanxi, Gansu, Nanjing and Fuzhou all said that cash bills were in circulation. There were about 3 million strings worth in Niuzhuang, and there were no other bank notes. *Report on the Introduction of the Gold-Exchange Standard*, pp. 263-265.

[38] *Record of Survey of the Manchurian Economy*, compiled in Republic 8 [1919].

[39] The Republic 7 *Brief Report on the Monetary System* says that the cash bills came to 64,393,761 strings and 371,813,619 short strings.

[40] *Ibid.* says that the national total of copper dollar bills (commuted into 10-cash Copper Dollars) was 470,287,210 coins, and another 60,261,069 strings. The quantity of late Qing copper dollar bills was far from being this large.

[41] In the Japanese edition of his *The Currencies of China* (p. 145), E. Kann states that in February 1908 the Board of Revenue Bank's capital liability account listed an issue of paper money coming to 296,152,415 ounces. This entry might not refer only to silver ounce bills, but might total the value of various paper notes. Moreover, the unit is probably an error, because in two places below he uses the term *baiwan* rather than *yi* to mean 100 million as he does here.

[42] H. B. Morse's survey. Cf. p. 263 of the work quoted in note 4.

ounce bills issued by foreign banks, such notes never really circulated. These statements are incorrect.

More silver dollar bills seem to have circulated than silver ounce bills, but there were fewer of them than of the copper cash bills because except for those issued by the foreign banks, practically all of the paper notes issued by the Manchurian provinces were cash bills. it is said, however, that the Fengtian Xingye Bank issued over $12 million in notes at the end of Qing. I suspect the actual amount was not this great. Hubei also mainly used cash bills. None of the other provinces used only silver dollar bills. Naturally, the Great Qing Bank issued the most silver dollar bills, with over $12 million at the end of Qing. Though there were a number of other issuing institutions, there were substantially fewer of them than there were issuers of cash bills.

The silver dollar bills issued by several commercial banks at the end of Qing probably came to less than $2 million. The total of silver dollar bills of the provincial official silver and cash houses and the provincial banks was probably $8 or $9 million. Local money shops and silver houses, especially those in the bigger cities, also issued silver dollar bills, but not in large quantities. Hence the national total probably did not exceed $50 million. This figure includes small foreign coin bills.

There remain the foreign paper notes. These include paper notes issued by foreign banks in China and notes issued by foreign banks or governments abroad and brought into China, where they either circulated or could easily be put into circulation. There are no statistics for these, since there are only comprehensive statistics for the quantity of notes issued by foreign nations or banks, and these statistics run together those circulated in China with those circulated abroad. Foreign notes circulated only in China would have been a minority of the total amount.

Some have estimated that the number of paper notes which were issued by the eight foreign banks for circulation in China came to $30 or $40 million.[43] This figure cannot, however, represent the quantity of foreign notes circulating in China then. Take, for example, the notes of the English-registered banks. In addition to those issued in the Shanghai region, there were also

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Hong Kong notes circulating in Guangdong. Notes of the Japanese Mercantile Bank of Taiwan must have been coming into China during late Qing.

The most important sphere of operations for foreign paper money was Manchuria. Some have estimated that at the time of the Eight Power Intervention, Russia had invested between 500 million and 600 million rubles in Manchuria, most of which had probably been used to meet the expenses of the construction of the Chinese Eastern Railway. For this reason what the Chinese called Qiang Checks (i.e. ruble bills), circulated widely in Manchuria.

After the withdrawal of the Russian army in 1902, faith in the Qiang Checks was shaken, and their holders hurried to redeem them for cash. Their sphere of circulation contracted drastically after the Russo-Japanese War. In 1904, some 100 to 200 million rubles worth were brought to Shanghai, Tianjin and Yantai for redemption.[44] Thereafter, their circulation was limited to northern Manchuria, in places like Harbin, Heihe and Manzhouli.

Because their use was obligatory on the Chinese Eastern Railway, it is reasonable that there should still have been 200 to 300 million rubles worth of Qiang Checks circulating in Manchuria during late Qing. It is possible that the great majority of them were in the treasuries of those engaged in the silver and cash trade, where they served as a kind of foreign exchange reserve. Probably not many of them were actually in circulation. I estimate the total at $50 million.

Southern Manchuria used Japanese paper money, including that of the Bank of Japan and the Yokohama Specie Bank. It is said that at the time of the Russo-Japanese War the Japanese army alone issued $150 million in paper money for its use in China.[45]

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[43]Xianke, *An Outline of the Issue of Paper Money By the Imperialist Banks in China During the Last Hundred Years* cites the figures used in the first edition of my book, and makes mistakes with the Board of Revenue and Finance survey, saying its estimate is too high. Moreover, on pp. 57-58 he says that paper money issued during 1910 in China by foreign registered banks and foreign money circulating in China came to $35,370,279.50. This included the English-registered Chartered Bank of India, Australia and China and the Hong Kong & Shanghai Banking Corporation, the American-registered International Banking Corporation, the Japanese-registered Yokohama Specie Bank, the German-registered Deutsch-Asiatische Bank, the French-registered Oriental Remittance Bank, the Belgian-registered North China, and the Russian-registered Sino-Russian Daosheng. He also says that in 1912 the figure was $42,948,359.80, including notes from seven of these eight firms, the Oriental Remittance Bank not being included.

[44]Report of the U.S. Consul in Niuzhuang in 1904. Cf. the work cited in note 4, pp. 280-282.

[45]Hou Yuanpei and Wu Juenong, *Japanese Imperialism's Aggression Against China*, chapter 6.3. Imamura Tadao, *On China's New Currency Work* says that it was $140 million. Xianke, *An Outline of the Issue of Paper Money By the Imperialist Banks*

Later on they probably redeemed this paper with Yokohama Specie Bank notes, but not all of it was redeemed. A Japanese source says that in 1911 there was still around $2 million which had not been redeemed.[46] As a consequence of such a redemption one might expect the note issue of the Yokohama Specie Bank to have increased, but this factor is hard to isolate. Japanese bank notes circulating in Manchuria at the end of Qing also included paper money issued by the Bank of Korea and the Bank of Japan, but the quantity of this was not large.

The total figure for Japanese paper money would be $30 million, and the total for both Japan and Russia would be $80 million, but this component is the hardest to estimate. If one said it was twice this figure, it would not be an impossible estimate. The national total for foreign paper money must be more than $100 million. The national total for all kinds of paper money would be $270 or $280 million. This would be the value represented by the entire amount of paper money, and not its total face value.

ESTIMATED SUPPLY OF LATE QING CHINESE MONEY BY CATEGORIES

Type of Money	Quantity	Equiv.in Silver Dollars	% of Total
Silver Coins		1,297,000,000	61.85
Chin.Silv.$	$200,000,000	200,000,000	9.54
For.Silv.$	$500,000,000	500,000,000	23.84
Silv.dimes	$250,000,000	250,000,000	11.92
Silv.ingots	250,000,000 oz	347,000,000	16.55
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Copper Coins		522,253,731	24.90
Copper $	200 bill.coins	149,253,731	7.12
Copper cash	500 bill.coins	373,000,000	17.78
Paper Money		277,777,777	13.25
Silv.oz.bills	20,000,000oz	27,777,777	1.33
Silv.$bills	$50,000,000	50,000,000	2.38
Copp.cashbill	134,000,000str	100,000,000	4.77
Foreign$bills	100,000,000	100,000,000	4.77
TOTAL		$2,097,031,508	100.00

According to the above estimate, by the end of Qing, the money supply for the whole country was approximately $2.1 billion, or 2.8 billion strings of cash, or 1.5 billion ounces of silver. If we take the national population as 400 million persons, that comes to $5.24, or 3.77 ounces of silver, or more than 7 strings of cash per capita. What is worthy of attention is the following:

First, metal money was an overwhelming proportion of the total, at 86 percent. Paper money only constituted a little over 13 percent. This shows the backwardness of the Chinese economy. The position of silver was especially important. A rather large proportion of the metal money was, however, being hoarded, particularly in the farming villages. Even if silver ingots, silver dollars or copper cash were not hoarded, their velocity of circulation was very low. I suspect that a silver dollar only changed hands once a year in a farming village. Silver ingots barely took part in circulation at all. Even in big cities, they merely served as means for making large payments, and not as a general instrument for circulation. Most of them served as reserves backing paper money. Therefore the quantity of money truly in circulation was much smaller that the figure given in the table.

Second, foreign money occupied a very large proportion of the total figure, nearly 30 percent. This was a reflection of the colonial nature of the Chinese economy then. [It may simply mean that China's industrialization and hence substantial interaction with the world economy had only recently begun. That was the situation of the United States in the early nineteenth century when its money was also mostly foreign. EHK]

The quantity of a country's money is closely related to that country's level of economic development. Therefore, to study the quantity of money of a period is of help in studying that period's productive power. It is a reflection of that period's productive power, but we cannot solely rely on the quantity of money to reflect the time's productive power. We must multiply the quantity of money by the value of a unit of that money. And even this is only significant if compared with the situation during other periods or of other nations.

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The quantity of money at the end of Western Han was mainly composed of the 28 billion Five-grainers, as well as the privately minted coins and the Four-grain Half-ounces which I surmise continued to circulate. These two may be estimated at 7 billion cash, making the total 35 billion copper cash, or 35 million strings of cash. This is not counting 700,000 catties of gold. If we reckon the cost of rice at 650 cash per hectoliter, then 35 billion copper cash were worth a total of 53.85 million hectoliters of rice. On the basis of a population of 59.6 million,

in China During the Last Hundred Years says it was $190 million.

[46]Imamura Tadao, *On China's New Currency Work*, p. 325.

that makes 587 cash per capita, which was worth 0.9 hectoliters of rice.

The quantity of money during Tang prior to the An-Shi Rebellion may be estimated at 40 to 50 million strings. Prior to the kaiyuan period [618-713], approximately 100,000 strings were minted per year, making for a total of around 9 million strings. During the kaiyuan period [713-42], 200,000 strings were produced annually, for a total of 5.8 million strings. Annual coin production during tianbao [742-56] was 300,000 strings, with a total of 4.5 million strings. The quantity of private coins was probably not much different from the total for official coins, about 38.6 million strings. Old coins from previous dynasties may be estimated at 4 million strings, making a grand total of 42.6 million strings. At a rice price of 336 cash per hectoliter, these would be worth 127 million hectoliters of rice. Assuming a population of 52.9 million, there were 720 cash per capita, which was worth 2.5 hectoliters of rice.

The amount of money per capita for Western Han was not as much as during high Tang, and its value was lower. This demonstrates that production was better developed during Tang than during Han.

I have estimated the quantity of money during Northern Song's xining and yuanfeng periods [1068-86] at 200 million strings of copper cash, 20 million strings of iron cash, and 2.5 million strings worth of Exchange Notes denominated in iron cash. With 2 iron cash equal to 1 copper cash, and copper cash at 77 to the hundred, the total equivalent in full strings of cash was 147 to 148 million strings. Assuming 40 million strings of old coins surviving from previous dynasties, we get a total of 190 million strings. The average price of rice during xi'ning and yuanfeng was 1,000 cash per hectoliter, and so the total money supply was worth 190 million hectoliters of rice. Song Dynasty population records are obviously unreliable since they assume only two persons per household. If we correct them on the assumption there were five persons per household, and use the xining 8 [1075] figure of 15,684,529 households, we would obtain a population of over 78 million individuals, and there would have been over 2,400 cash per capita, worth 2.4 hectoliters of rice.

The late Ming money supply included both copper cash and silver. Silver amounted to 150 million ounces. The quantity of copper cash was far below the Northern Song level because Ming minted few cash before its last years. I estimate that official coins, private coins and coins from previous dynasties came to a total of at most only 50 million strings. This is because a large number of Song coins had been buried during times of disorder, a portion of them had been exported, and the majority of them were melted down and reminted during late Ming times. The price of silver then was 800 standard coins per ounce, but it was twice that for private coins. If we assume an average price of 1,000 cash per ounce, the total quantity of money was the equivalent of either 200 million strings of cash or 200 million ounces of silver. The cost of rice was 1.16 ounce of silver per hectoliter, and so the total money supply was worth 130

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million hectoliters of rice. With a population of 60 million [perhaps an underestimate. Some put it at 100-150 million. EHK], the amount of money per capita was 2 strings 500 cash, which was worth a little over 2 hectoliters of rice.

At the end of Qing the amount of money per capita came to something over 7 strings, which was more than for any of the other dynasties. At the end of Qing, the price of rice was 5,250 cash per hectoliter, and the per capita money supply was worth 1.33 hectoliters of rice. This was larger only than the Western Han figure. It was less than for any of the other dynasties.

COMPARATIVE MONEY SUPPLIES
OVER THE COURSE OF HISTORY

Dynasty	Money Supply (in strings)	Cash Per Capita	Rice Equiv. (hectltrs)
late W.Han	35,000,000	587	0.90
Tang, 713-756	42,600,000	720	2.14
Song, 1068-1086	190,000,000	2,436	2.44
late Ming	200,000,000	3,333	2.87
late Qing	2,097,031,508	7,326	1.33

These figures are not very precise. Even if they are roughly correct, those for each dynasty have their own idiosyncracies. For example, gold is not included for Western Han, but silver is for Ming and Qing. Although Western Han's gold was not like Ming and Qing silver, late Ming silver also differed somewhat from late Qing use of the metal. During late Ming, silver was used by weight. During late Qing it was used in the form of minted silver coins. Therefore, the late Ming figures ought to be discounted before they can be compared with those for late Qing and earlier dynasties.

Similarly with copper cash, their velocity of circulation could not have been the same over time. Even during late Qing, the proportions of the whole occupied by the differenct currencies changed almost

annually.

As for paper money, in guangxu 26 [1900], in Manchuria alone there were several hundred million dollars worth of foreign notes, but after several years the amount went down to a significant degree. The other categories of money could, of course, increase in response to this.

Also, as the reliability of population figures varies for different periods, the per capita money supply figures and their value in real terms are not altogether reliable. Aside from this, the late Qing per capita money supply commutation into rice figure is based on the cost of rice in Shanghai. This could have been twice the price level in farming villages. If that latter cost is used, then the per capita figure would be twice that given above, and that would not have been much lower than the late Ming figure.

Generally speaking, the quantity of money during late Qing was unprecedentedly large, but because of the fall in money's purchasing power,

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particularly the fall in price of silver, and because of the increase in population, the amount of money per capita did not increase in proportion. Indeed, in terms of its value, it actually decreased. That is to say, the quantity of money during late Qing was not too large, but rather was too small. The problem of money's scarcity could not, however, be resolved through increasing its quantity. It was necessary to increase production before it would be possible to increase the money supply.

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8.3 Monetary Studies

1. Monetary Theory

During the two to three centuries of the Qing Dynasty, European theories of political economy made a quantum leap upward, but during that time China remained very backward in such matters.

Even by Qing times a natural economy still held an important position in Chinese society, and intellectual life reflected this fact. Though Huang Zongxi (1609-1695) was not a pure objectivist, he forcefully stressed the importance of grain and cloth. His advocacy of the abolition of gold and silver in favor of copper cash has, however, something of a tinge of objectivism to it, since gold and silver more effectively represent the functions of money. He stated:

> There are seven advantages to abolishing gold and silver: The little people will have strength enough to supply themselves with grain and cloth, and so their families can easily have a sufficiency of them. This is the first advantage. If coins are cast to make up deficiencies with surpluses from elsewhere, those who cast them will not earn interest, and commodities will not be lacking or exhausted. This is the second advantage. If gold and silver are not hoarded, there will be neither excessively poor nor excessively rich families. This is the third advantage. Frivolous offers being inconvenient, people will find it hard to leave their villages. This is the fourth advantage. Officials will find it hard to surrepetitiously hide bribes. This is the fifth advantage. When thieves open chests to steal, their burden will be heavy, and they will be easy to trace. This is the sixth advantage. The way will be opened for cash coins and paper money. This is the seventh advantage.[1]

Practically all of this had been said before. He was not discussing money in its own terms, but from some other angle. And yet even so he did not advocate the abolition of money. Nor would he make any positive use of it. Rather he would passively resist it. Actually he would have been better able to reach his goal if money were abolished. Though he was concerned with the livelihood of the little people, and hoped to avoid the extremes of wealth and poverty, if these were not empty words they were empty thoughts. He wanted to keep the little people from being able to leave their villages, and yet this would have profited only the feudal landlords.

In fact he was speaking from the perspective of the feudal ruling class. His first sentence was "A latter-day Sage King who wishes to pacify and enrich the Empire must abolish gold and silver." He made this statement after recalling the history of the transition from a natural economy to a monetary economy. He initially cherished the memory of the ancient grain and cloth economy, but because it was too

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unsuited to the needs of the time, he had no choice but to concede the use of money. However, he hoped to use coins to ward off gold and silver. His reason for doing so was that gold and silver were entirely engrossed by rich merchants, large traders, border officials and crafty clerks. Landlords supposedly could not even think of doing so. Nor had the feudal rulers any way to exert control over these metals.

New World silver flowed into China on a large scale during the qianlong period, providing an additional stimulus to China's monetary economy. The newly risen commercial capitalists were supporters of a monetary economy. Perhaps we may say that Zheng Xie was their spokesman. Though he himself might not have been willing to acknowledge the point, he was unwilling to serve as a functionary of that feudal ruling class, and was even unwilling to leave Yangzhou, that most developed center of commercial capitalism. There he led the life of a seller of paintings. In qianlong 23 [1758], he found excuses to console himself by writing:

> Whenever anyone brings a gift of food, I would rather it were silver. What the gift-giver bestows may not be what the recipient likes. If ready silver is given, my heart rejoices, and the books and paintings are all fine. If presents are things wrapped with a cord, to return them for credit is like going back on one's word. Age and bodily frailty cannot compensate for gentlemen making useless statements.[2]

Though he was not being very serious, so blatantly materialistic an attitude toward money is rarely encountered in Chinese history. It may not, however, have been all that rare during the qianlong period, since Yuan Mei also wrote:

> In remote antiquity, the emperors and kings left words behind that in all human affairs place must be yielded to the haughty.[3]

The price of silver fell and the prices of goods

[1] *A Plan For the Prince*, "Fiscal Plans, 1."

[2] *Zheng Banqiao's Collected Works* (Zhonghua shuju edition), p. 193.

[3] *Song of Coins*.

rose during the qianlong period, but when people referred to prices they were often unclear about their relationship to money. For example, in qianlong 10 [1745], Yang Xifu wrote:

> The greater the number of households, the greater the amount of grain they will need, and so prices will also gradually increase.

He continued:

> How could fine goods be employed when one's virtue has not even been assured.[4]

This statement of his not only does not pay notice to the factors of production, it does not even refer to the monetary factor. Hence both theoretically and in terms of the actual circumstances of the time, it is flawed. Theoretically, of course a larger population would demand more food, but it could also produce more food, and demand more money. After the tianbao era [742-756] of Tang, the population fell,[5] and prices rose. After jianzhong times [780-784], the population increased,[6] and yet prices fell. These things occurred because of changes in production and in the price of money.

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One important reason for the rise in prices during the qianlong period was the fall in price of silver.

Those dealing with the coinage during early Qing were only concerned with maintaining a fixed exchange price between silver and copper cash. They paid little attention to the prices of silver and of copper cash themselves. At most they discussed the advantages and disadvantages of using coins and silver. To maintain the exchange price between the two they often changed the weight of the standard coin so as to make the copper cash rise and fall in parallel with silver. They wanted only to maintain a fixed exchange price between copper cash and silver. No one advocated maintaining a fixed exchange price between money and commodities.

The Governor of Shandong, Aliai, was perhaps the first the raise this demand. He called for decreasing or increasing the weight of the copper cash in parallel with rises and falls in the price of copper, so that the purchasing power of the copper cash would not change. This was an idea for "rectifying the copper cash system." In qianlong 13 [1748], he stated:

> Rice becomes expensive because births increase by the day. The pursuit of secondary activities becomes ever more common. The various textiles are spread thinner, and do not increase, but the price of coins increases, especially as compared with grain. . . . So as to compensate for this . . . first, the coin regulations ought to be changed. The coinage is to copper as the child is to the mother. If the price of copper is to be kept level, then coins must be made heavier. If copper becomes more expensive, the coins must be reduced in weight. . . .[7]

The number of men who discussed monetary questions during the jiaqing and daoguang periods gradually increased. There was a greater leakage of money out of circulation then. Silver tended to become more expensive, and copper cash cheaper, and this placed a heavier burden on the people, while making the government's fiscal situation more difficult. As a consequence some people began to advocate paper money.

The proposal of Cai Zhiding in jiaqing 18 [1813] was one example of this, but Wang Liu (1776-1843) of the daoguang period was an more important representative of this view. He wrote *Simple Words on Coins*,[8] in which he specifically proposed "circulating paper money, banning copper utensils, and minting large coins."

The paper notes would have seven denominations ranging from 1-string to 1,000-strings, and there would also be three denominations of copper cash, 1-cash, 10-cash and 100-cash. For transactions of 1-string and above, people would use paper money. For lesser amounts they would use coins. Silver would no longer function as money, but merely as raw material for ornamental objects.

The people would be permitted to exchange their silver with the government for paper bills. Those

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[4] *Qing History Draft*, 95, "Biography of Yang Xifu."

[5] In tianbao 14 [755] there were 8,914,709 households and 52,919,309 people (*Universal Record*, "Food and Money, 1"). In guangde 2 [764], there were only 2,933,125 households and 16,920,386 people (*Old Tang History*, 10, "Annals of Emperor Daizong").

[6] In jianzhong 1 [780], there were 3,085,076 households (*Old Tang History*, 12, "Annals of Emperor Dezong, first part"). During the changqing period [821-825], there were 3,944,595 households (*Universal Statutes*). The *Old Tang History* figures for household numbers at the end of yuanhe and the beginning of changqing are not complete.

[7] *Qing Emperor Gaozong Veritable Record*, 323.

[8] Wang Liu's original given name was Zhongliu, and some people write his later name, Liu, with the slightly different homonym used in Zhongliu. He published the single *juan Simple Words on Certificates* in daoguang 8 [1828]. Later he destroyed the printing blocks and rewrote the work, changing its name to *Simple Words on Coins*. This work may also have been revised, with the final version being carved on boards in daoguang 17 [1837]. There is also a *Continued Edition* and an *Additional Con-*

making such exchanges for paper money would be allowed a 10 percent premium for silver. Money shops handling issue of the paper notes would also be allowed a 10 percent discount. This was what Wang Liu called a 20 percent profit given to the people.

The 1,000-string and 500-string large Certificates would have aphorisms written on them by master calligraphers, making them look like hand scrolls, so that some people might treasure them as works of art.

At the time of issue of the bills, official salaries would be doubled, and once they were in circulation, salaries would be increased several fold again. Circulation of paper money lay at the heart of his plan. He enumerated a number of advantages to their circulation.[9] For example, foreign coins would disappear without their having been banned, the ca-

tinuation.

[9]The number of great advantages to circulating paper money cited by Wang Liu increased over time. In *Simple Words on Certificates* he mentioned twelve great advantages, but in the daoguang 17 *Simple Words on Coins*, "Discussion on Coins and Certificates, 1," he raises 22 advantages of circulating paper money. Elsewhere he says there are 30 great advantages. The 22 great advantages are as follows:

"Any other objects used as money are limited in quantity. Only certificates are unlimited in quantity. If one needs a million, then a million are made. The same is true of 10 million. Thus they constitute a source of wealth whose source cannot be blocked. This is the first great advantage.

"The sovereign right to profit from all goods is concentrated above, and distributed below, thus unifying the state. This is the second great advantage.

"The masses will be convenienced by the circulation of paper money. Foreign coins will disappear of their own accord, without their having been banned, thus avoiding the squandering of wealth abroad. This is the third great advantage.

"Seagoing vessels carrying raw and processed opium go off privately each year with tens of millions of Chinese silver. If we use paper money, then they will have no way to gain profit, and will stop this activity of themselves, thereby removing the misfortune of opium. This is the fourth great advantage.

"The people now mostly use cash bills and bills of exchange. Whenever a money shop closes down, none of its bills are any longer of use. If we now circulate our own certificates, then defaults by money shops can be abolished. This is the fifth great advantage.

"The masses suffer from the weight and constriction in supply of silver. Hence they are happy to use private bills. If we exchange these for public certificates, then we will be in accord with what the people's hearts desire. This is the sixth great advantage.

"Once paper money has been put into circulation, we can then ban the manufacture of silver utensils, and acquire copper at a substantial price. When the copper supply is large, we can mint coins of three denominations: 100-cash, 10-cash and 1-cash, and bring the art of coin making to its apogee. This is the seventh great advantage.

"The state land tax would be entirely collected in certificates, and so there would be no additional meltage and wastage to send off. ["Meltage and wastage" was the surtax charged to allow for the supposed extra expense caused by recasting the broken pieces of silver paid in as taxes before sending the silver to higher levels of government. It was in fact an arbitary surtax designed to supplement the earnings of local functionaries. EHK] This is the eighth great advantage.

"The inscription on a bill will clearly state its denomination. Even if someone desired to raise or lower its face value, they would not be able to do so, thus halting the depradations of corrupt clerks. This is the ninth great advantage.

"The certificate's value having been fixed, merchants will not be able to raise or lower it, and thus false impressions on the people's minds will be removed. This is the tenth great advantage.

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"Wicked people spread evil teachings, and nurture rebellious schemes, and do so entirely by entangling men's minds with hopes of financial profit. If the state is not lacking in wealth for its needs, and has a reserve for emergencies, then wicked schemes and rebellious ambitions will cease. This is the eleventh great advantage.

"Frontier quarrels invariably arise from struggles over silver. If that is now exchanged for certificates, there will be nothing for people to covet from each other, and thus frontier disputes will be eased. This is the twelfth great advantage.

"Whatever amount of silver exists in the Empire will all come in and be exchanged for certificates, and thus the silver may be offered for casting into utensils and plates. This is the thirteenth great advantage.

"Silver comes in various forms: pure silver, broken pieces and foreign coins. Paper money will restore uniformity, in accord with the customs of the Empire. This is the fourteenth great advantage.

"Rich familes who have been hiding silver in holes in the ground, keeping it from use for generations, will upon hearing of the change in the laws, exchange all of it for paper money, and thus eliminate this evil practice constricting circulation. This is the fifteenth great advantage.

"The styles of the bills ought to be changed to follow earlier practice, and they should be divided into several denominations. The large and small certificates should have maxims printed on them to encourage literacy among the people and thus forward in a small way the education of the people. This is the sixteenth great advantage.

"In places where the circulation of goods is impeded, paper money will be used to buy up goods. This must stabilize prices, an thus lead to the circulation of goods in general. This is the

lamities caused by opium could be eliminated, the depradations of corrupt functionaries could be abolished, border quarrels could be ended, prices could be stabilized, hydraulic works could prosper, land could be opened.

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I must point out that Wang Liu was a scholar who specialized in monetary problems, and that this was something rarely encountered in Chinese history. His plan was not something hastily written, but the result of more than thirty years of thought. His *Simple Words on Coins* was a revision of his *Simple Words on Certificates*, and he also brought out a *Continued Edition* and an *Additional Continuation* as supplements. He had studied the statements on circulating paper money since Song and Yuan times, and made these into "Earlier Discussions on the Rectification of Names," which he made a part of his book, and to which he added his own comments. He had also corresponded with famous scholars in and out of office, to explain or debate what he was advocating.

Among the measures he recommended there are some which look preposterous, or are the sort of self-deceptions which allow one to then deceive others. These were limitations imposed by the level of his knowledge, but he had thought things through carefully. He had not only considered a number of domestic issues, but had also given his attention to matters of foreign trade. He knew that paper money could only have efficacy domestically. The international currency would have to be silver. Hence he would permit merchants leaving the country to exchange paper money for silver. Upon their return, they would exchange their silver for bills. [In fact, Wang thereby anticipated twentieth-century mechanisms for control of foreign exchange, a real if dubious honor. EHK]

As a consequence, he virtually developed a completely fleshed out theory. He believed very deeply in this theory, and promoted its spread with a religious intensity. *Simple Words on Coins* was a very loosely organized book, but from beginning to end it was clothed in his advocacy. And so, rather than considering it a work of scholarship, it would be better to say that it was a partisan pamphlet. It is not very long, but made rather large waves in the world of economic theory of the time.

It is said that scholar-officials often treasured and preserved this book.[10] Obviously no small number of men approved of the book, including some at court,[11] but once they saw that Cai Zhiding had been dismissed from office, these men dared not openly support Wang.

A very large number of people also opposed him. Bao Shichen did not entirely agree with him. Xu Lian and his younger brother Xu Mei were altogether opposed to him. Xu Mei even wrote a 30,000 character *On Certificate Money* as an itemized rebuttal. Wang Liu considered his opponents to be laymen who held no responsibilities. In reply he asked:

> Those who manage public affairs in the prefectures and districts, the clerks who cannot transcend illegal practices, must have their salaries increased, for if their pay is not made more generous, how are they to have their burdens eased so that they can cease their wicked practices? As for the river

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seventeenth great advantage.

"There will be offices to manufacture certificates, and men to manage the work. Because there will be enough to meet fiscal needs, hydraulic works will prosper, and new land will be opened, thus broadening the paths of production. This is the eighteenth great advantage.

"Whenever it is necessary to mount relief operations or encourage construction, there will be no need to make use of contributions from rich households, and thus extortions by officials will be stopped. This is the nineteenth great advantage.

"The state having planned for great affluence, contributions having been permanently halted, then the obstacles on the road to purity in service will have been cleared. This is the twentieth great advantage.

"In matters of transport, river conservancy and salt, there are everywhere traces of accumulated abuses, but there are those who dare not discuss them for fear that there will not be enough money to meet the expense of their correction. With the circulation of paper money, there need be no concern over this, and thus the accumulated abuses in the myriad of activities can be eliminated. This is the twenty-first great advantage.

"In all matters involving taking things away from the people, the government can be stingy. In matters involving giving things to the people, the government can be generous. Thus a humane administration practicing a variety of activities can be carried on. This is the twenty-second great advantage."

[10] Xu Lian, *Ancient Balance Pavilion Posthumous Works*, "Discussions on Certificate Money," daoguang 26 [1846].

[11] In his own preface to *Simple Words on Coins*, Wang Liu writes: "I have placed it before the world, and the Policy Adviser, Mr. Gu Nanya, believes that it is an urgent duty at the present day for the Empire to get to discuss it. The Executive, Mr. Chen Shishi, says he is willing to see paper money circulate. The Minister, Mr. He Xiancha, has deeply assented to this theory. Ma Shen'an examined it, and considered the plan unusual and solid. Bao Shenbo [Bao Shichen. EHK] of the Ming Fu said it had no superior in finely judging matters so as to enrich the state and people. Wu Zhonglun, a brilliant economist, said it was obviously in the first rank of economics books. It may, therefore, be seen that under the vast Heavens, there is no lack of men who have heard of my theories and assent to them as comrades."

> conservancy work and the expenses for sea dykes, how is the deficit in their financing to be overcome? . . . If one tries to think of some alternative to certificates as a strategy for rationalizing the finances, can the agricultural land taxes be increased? Can the excise taxes be added to? Can mining taxes be raised? Can contributions be relied upon? In carrying out the northwest hydraulic projects, can one avoid spending the requisite capital? In using the sea transport of the southeast, can one avoid worrying about what comes after?[12]

If he had merely proposed some measures to effect a monetary reform, then it would not be worth our while

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here to get deeply enough into it to introduce a critique of his work. What he advocated, however, was linked to theoretical questions. He treated the circulation of paper money as a kind of universal panacea, just as had Guo Zizhang during the Ming Dynasty on the subject of circulating coins. Each supposed that their remedy could solve all problems of their times, could profit both state and people, enriching both state and people.

Wang believed that Ming fell because of the abolition of paper money. He believed that circulation of paper money could cause no harm to anyone, and that it could be profitable for everyone. His faith in paper money very much resembled that of John Law in the eighteenth century. If he had known that his contemporaries, the French St. Simonians, had the idea of uniting the people to exploit the planet, he would certainly been able to tell them that circulation of paper money could realize that idea. He wrote:

> If paper money is circulated, then between Heaven and Earth, there is no profit greater than this.[13]

He added:

> Raise the power to profit of the Empire and entirely place it in the grasp of the Superior. Afterward you may bestow grace on all the people within the Four Seas.[14]

It is obvious that Wang Liu's explanation of the basic nature of paper money was not a profound one. On the one hand, he did not deny that paper money had no intrinsic value. Unfortunately, he also said that it was an independent source of profit that was inexhaustible. Actually, however, since paper money had no intrinsic value, then it must be a reflection of the value of other real forms of wealth. If these real forms of wealth do not increase, then no matter how much the quantity of paper money increases, the real wealth for which it stands cannot have increased, and so the amount of real wealth which each unit of paper money represents will decline as the quantity of money increases.

If, when the issue of paper bills is increased, the amount in each person's hands increases in the same proportion, then prices will increase by the same amount, and no one will be harmed, but no one will profit either. If not all prices increase in proportion, then some people will profit, and others will be harmed. There is no change that can profit everyone. [Peng here reflects the key insight concerning money of the Austrian School. EHK]

Wang Liu himself believed that his methods would profit both state and people, but the first people to gain benefits would have been the officials who received salary increases. Those who would receive the greatest benefit would after all be the rulers who held control over money. For the people to exchange their silver for paper money would yield them no profit to speak of. Of course if the paper money circulated smoothly, the monetary system could become more uniform, and foreign silver dollars might perhaps be eliminated. If, by circulating paper money, progress got under way, and production was increased, this would not be without benefit for the people, but this was only a hope and not a sure thing. Wang Liu seems to have realized this, but his ideas were confused. He wrote:

> Only if certificates are circulated can the state have all the wealth of the masses of the Empire. Moreover, everyone will immediately obtain a profit of 20 percent. This is a plan

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> to make a miraculous and everlasting source of wealth.[15]

If the wealth of the masses of the Empire was going to entirely revert to the state, how could these masses immediately obtain a 20 percent profit? Was this some sleight of hand trick? He even says that "Though I speak of 20 percent, actually it is possible that the people will get a profit of 100 percent." This second form of profit would have been

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[12] Wang Liu, "Letter to Chen Fuya Discusing Paper Money." Cf. *Hezi Garden First Drafts* (daoguang year dingyou [1837], Yihai Hall Collection edition).

[13] Wang Liu, "Letter to Bao Shenbo of the Ming Fu Discussing Paper Money." Cf. *Simple Words on Coins*, "Letters in Reply to Friends."

[14] *Simple Words on Coins*, "Discussions of Coins and Certificates, 2."

[15] *Simple Words on Coins*, "Discussions of Coins and Certificates, 8."

nominal, an empty one. Only the first one would have been real. The more cool-headed Bao Shichen pointed out, "If you have all the wealth of the masses of the Empire, even though you have it in a principled way, to write about it is rather inelegant. It would be better to consider this further."[16]

Wang Liu was a nominalist. He not only considered paper money to be something useless, he also believed copper to be useless as well, something which could not feed the hungry or clothe the cold.[17] He was simultaneously also a quantity theorist. He had stated:

> That which makes goods expensive is the scarcity of goods and the plenitude of money. Now, because certificates would be exchanged for silver, money would not thereby be made plentiful, and goods would not thereby be made scarce. How could goods prices jump?[18]

He was here recognizing that money's value was determined by its quantity. That is why he says that so long as the quantity of paper money remains unchanged, its value can also remain unchanged, and prices cannot rise. He had also considered how much money China required then. Bao Shichen told him that annual state income was around 40 million ounces. He then stated that the quantity of certificates manufactured could be as much as the state budget for thirty years --1.2 billion ounces, or 1.2 billion strings. Bao Shichen said that was too much, and himself only advocated making twice the amount of the annual budget. Assuming 1 ounce as equal to 1 string, that would only come to 80 million strings.

This did not represent a difference between the estimate by the two of the amount of money in circulation in China, but rather a divergence between the two as to what should constitute money. Bao Shichen advocated using cash coins and paper money, but not silver.[19] He also states elsewhere that cash coins and paper should each constitute half of the money supply. Then the entire country's money supply would only be 160 million strings.

That would definitely have been insufficient. Wang Liu seems to have placed his main emphasis on paper money. The quantity he proposed was not too large, since his large certificate would be a kind of certificate of public debt, having something of the nature of a demand bond, and could probably not take much part in circulation.

Though Wang Liu was a nominalist, he was not a thoroughgoing one, since he still wanted to use coins. Moreover, he changed the title of his book from *Simple Words on Certificates* to *Simple Words on Coins*, and he acknowledged that "certificates really are supplementary to coins."[20] This amounted to recognizing coins as real, and certificates as empty; coins as primary, certificates as secondary. Furthermore, paper bills could

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be exchanged for hard money. If this was indeed the case, he cannot be said to have been [or remained] a full-blown nominalist, and the system he advocated would still have been just a variant of a copper cash standard. Of the three coins he called for, the large coins would not have been full value money, but the small coins would have been. He would have limited cash holdings to less than 1,000 strings, presumably per household.

Normally, of course, not every household would have a store of copper coins, nor would it have the ability to keep one, but if paper money were to depreciate in value, then it would be necessary to do so, the ability to hoard coins would be present, and such hoards would have to consist of small coins. The whole country at that time contained some 80 million households.[21] That would have required 100 billion strings. If popular faith in the paper money had been only slightly shaken, they could have taken advantage of the method of redeeming them for ready cash to return all of the paper notes to the state treasury.

This was something that Wang Liu had not anticipated. He must have have been certain that such a phenomenon could not have occurred. He surely believed that the quantity of copper cash required would not have been large, and this is the flaw in his theory. He had written to Bao Shichen:

> Once certificates are in use, we wish them to be heavily demanded by the people. Why might we suspect that certificates will be heavily demanded, and coins lightly demanded? Certificates will be what is normally used. Coins will be used for small change. The procedure will be simple to apply, easy to carry out. There is no need to be constrained by

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[16] "Letter to Bao Shenbo of the Ming Fu Discussing Paper Money." Cf. *Simple Words on Coins, Continued Edition*.

[17] "Discussions on Certificate Money: Thirty Questions and Answers on Certificate Money." Cf. Zheng Zhenduo, *Selected Writings of the Late Qing*.

[18] *Ibid.*

[19] Bao Shichen, "Letter to Zhang Yuanfu." Cf. *Simple Words on Coins*, "Letters in Reply to Friends."

[20] *Simple Words on Coins*, "Table of Contents."

[21] *East China Continued Record* says that in daoguang 15-16, the population was a little more than 400 million. Assuming five persons per household, there would have been 80 million households.

> the Song theory that coins and Account Notes should each constitute half of the money supply. In particular, we need not add silver to the system.[22]

He did not realize that even if paper money could be circulated smoothly, demand for copper cash would remain very large, since everyday exchange would mostly be for amounts less than 1 string.

Though Wang Liu's opponent Xu Mei published a monograph of his own, it was merely a criticism of Wang Liu's proposals. He put forward no new theory of his own. Wang Liu lived during the period before the Opium War, and believed that issuing paper money could solve the difficulties which he observed then. Xu Mei's *On Certificate Money* appeared just after the end of the Opium War (1846), a period of even greater difficulties, but he said that paper money could not solve these difficulties. Since paper money was not profitable for the people, the state would be unable to reap the profits anticipated:

> If 90 or 100 percent of the people's silver is taken away from them, and they are given yards of paper in return, the state would indeed profit, but how could the people profit? Since the people would not profit from them, the certificates would certainly not circulate, and the 90 or 100 percent profit will definitely not be obtained.[23]

This reveals very clearly the exploitative character of the paper money system Wang Liu so energetically advocated. Xu Mei analyzed the relationship between the quantity of paper money and its price. He discussed the expenditure methods the government should follow in its fiscal policy:

> . . . Only by increasing the number of certificates would it be done. If they are not increased, then there would not be enough to meet state needs. If they are increased, then the certificates in the Empire will indeed be sufficient for that purpose,
>
> **[905]**
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> but if more are put out, then certificates will be lightly demanded, and there will still not be enough to meet state needs.[24]

This is the conclusion he reached from summarizing the experience of the Song, Yuan and Ming Dynasties in the circulation of paper money. He pointed out the contradiction between the development of fiscal policy and the stabilization of paper money. If paper money is not increased, the government cannot meet the fiscal demands on it. If its issue is increased, the red ink can be erased temporarily, and superficially it appears that the state's requirements can be met. If, however, the amount issued exceeds the quantity needed for the circulation of goods, the certificates will fall in value, prices will rise, and the consequence will be that there will still, as before, not be enough to meet state needs. His "if more are put out" must be explained as meaning if more are put out than the amount normally needed.

Xu Mei's elder brother, Xu Lian, seems also to have been a bullionist. He believed only that the quantity of paper money could be reflected in its purchasing power, but that this was not the case for gold and silver:

> For all other commodities used as money, changes in their demand [literally, lightness and heaviness] occur. Only for gold and silver is this not so. . . . There have been changes in their supply down through the ages, but the heavy demand for these two commodities has not changed since antiquity. A trifling amount is [not] considered too little to bother with. Millions or tens of millions is not considered too much. As for pieces of paper money, if piled up by the millions, they are cheap; if piled up by the tens of millions, they are still cheaper.[25]

He added:

> If more certificates by the million or tens of millions are issued to the Empire, then the Empire will demand them lightly. If more gold and silver by the million or tens of millions are issued to the Empire, the Empire is certain not to demand them lightly. And so it can be seen that the level of price of commodities is determined by the commodities' intrinsic values, and is not something that men can reverse.[26]

This attitude is almost identical to that of Aristotle. Aristotle believed that the value of other commodities could fall if their quantity increased, but that silver used as money could not fall in price when its quantity increased because no matter how much there was of it, people would still want it. Xu Lian believed that paper money lacked intrinsic value, but that gold and silver did have intrinsic value, and that this value was not influenced by their quantity. He does not mention, however, how gold and silver acquired their value.

Though Wu Jiabin was not necessarily a bullion-

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[22]Wang Liu, "Letter to Bao Shenbo of the Ming Fu Discussing Paper Money."

[23]Xu Mei, *On Certificate Money*, "Enumeration of the Profits From Certificates, Discussion 1."

[24]*Ibid.*, "Manufacture of Certificates, Discussion 7."

[25]Xu Mei, *On Certificate Money*, "Enumeration of the Profits From Certificates, Discussion 1."

[26]*Ibid.*, "Manufacture of Certificates, Discussion 1."

ist, he placed extraordinary emphasis on copper cash. In fact, because he placed so heavy an emphasis on copper cash, he did not hesitate to oppose the use of silver. He said that ordinary people could exchange their surplus grain and cloth for the goods made by artisans by means of copper cash. If silver were required, it could be bought with copper cash. He advocated maintaining the status of copper cash as full value money. In daoguang 25 [1845], he stated in his *Discussions of the Coin Laws*:

> I say that in using coins, their weight ought to be used in regulating them. The weight of the coins cast ought to be determined by the price of copper. If coins are cheaper than copper, then there will occur the misfortune of private destruction of coins. If coins are more expensive than copper, then there will occur the misfortune of private coining.

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In every age there had been people who expressed the same idea, but what these earlier thinkers had mainly expressed was the notion of sparing neither copper nor labor. None of them had expressed themselves as clearly as had Wu Jiabin. He clearly stated that a coin's nominal value and its intrinsic value should match. This thesis shows that he believed that Chinese copper cash, at least those of his own time, had nominal values which did not correspond to their actual values.

This is a complicated problem, one very difficult to clarify in a single sentence: The question of whether or not Chinese copper cash were a full value money down through the ages. It is also problematical whether it is even worthwhile raising this question, given the handicraft manufacturing methods prevailing under a feudal society. Taking into account such factors as the cost of the minting process itself, the material even in gold coins sometimes does not correspond to their nominal values.

Ma Ang opposed nominalism from the angle of the origins of money. China's Legalists or nominalists had generally treated money as something made by kings or as something determined by laws. Though some had said it originated with the merchants, they did not focus directly on the doctrines of the Legalists in raising this point. Ma Ang was the first to do so. In his "Theory That the System of Ancient Money Spades Began With the Merchants of Various Regions During the Spring-Autumn and Warring States Eras," he stated:

> The molding of copper into money began in the Spring-Autumn Era. It was not begun by the rulers of states, but by commoner merchants. The people found it convenient, and because convenient, circulated it. The rulers issued no orders prohibiting its private casting. Thus, prior to Qin, it was circulated and cast by the people, and not by order of the rulers.[27]

There were other quantity theorists during the daoguang period, Zhu Zun and Wei Yuan, for example. In daoguang 26 (1846), the Censor Liu Liangju memorialized memorialized setting out a method for establishing uniformity between silver and copper cash. The government called on the governors-general to memorialize on the subject. Zhu Zun sent up a communication which said:

> Goods are made cheap by a dearth of coins. If coins are few, they are heavily demanded. If they are heavily demanded, then cast more of them, and distribute them to cause them to become lightly demanded. Goods become heavily demanded because coins are many. If coins are many, they are lightly demanded. If they are lightly demanded, then make laws to gather them in and cause them to become heavily demanded. The alternation of lightness and heaviness of demand, of constraint and of loosening, belongs to the officials, and the sovereign power is held by the one above.[28]

These words had been uttered by men in every age.

Wei Yuan was a thoroughgoing quantity theorist:

> Commentators say that mulberry paper money circulated during Song and Yuan, but in both cases, though it circulated at first, in the end it became subject to abuses. Why was this? The multitude of goods mutually regulate each other through lightness and heaviness of demand. Should gold fill the Empire, and become as common as dirt, then gold and dirt will exchange at the same price. It was not that the goods of the Empire were expensive, but that mulberry paper money was in large supply. It was not that the amount of mulberry paper was excessive, but that the state was impoverished.[29]

This argument of Wei Yuan's closely resembles that of the Frenchman of the previous century, Charles Louis de Secondat

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Montesquieu (1689-1755). Montesquieu had said that if, since the discovery of the West Indies, the gold and silver of Europe had increased twenty fold, then prices should also have increased twenty fold.[30]

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[27] *Money Spade Inscription Investigations*, "Theories."

[28] *Qing History Draft*, 208, "Biography of Zhu Zun."

[29] *Yuan History Newly Compiled*.

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[30] *De l'esprit de lois* (1747).

Wei Yuan was not, however, merely a quantity theorist, and did not concede that the inflations of the past had occurred because too much paper money had been issued. He said that the state's poverty was their cause. This was a defense of the ruling class's inflationary policies. Of course if production had grown sufficiently, the quantity of goods would have been able to match even so great an increase in the money supply, and the rise in prices would not have been able to occur. On this point at least his words were not without reason.

Though Xu Lian and Xu Mei opposed circulating paper money, they did not oppose nominalism in principle. It was not until the xianfeng period that Wang Maoyin (1796-1865) clearly pointed out the errors of nominalism.

Wang Maoyin was no opponent of paper money. While serving as Circuit Investigative Censor of Shaanxi in xianfeng 1 [1851], he put forth "A Memorial Requesting Circulation of Certificates and Setting Forth Ten Requisites For a Certificate Law," in which he called for issuing 10-ounce and 50-ounce denomination paper bills. He would only have used paper money to supplement silver, and would not abandon silver in favor of paper. He also wanted limits imposed on the size of a paper money issue, saying "circulate them gradually; limit them with a system." He wrote:

> There is no fixed amount of certificates, and so issuing them without limit seems to offer a source of great profit. It is not understood that if their issue is excessive, their value will cheapen excessively.[31]

At the beginning of xianfeng 3 [1853], giving as his reason that "silver bills cause losses for merchants; silver houses cause losses for the state," he opposed the issue of paper money. This would have been paper money not redeemable for cash. In the 11th month, the government was going to begin casting large coins with face values of 100-cash, 500-cash and 1,000-cash. Most people then believed that so long as a high face value was established for a coin, no matter how much its weight was reduced, its purchasing power would not be affected. He criticized this idea as follows:

> Those who argue this way also say that once the state has established a system, then if a coin is given a face value of 100, then it will be 100. If it is given a face value of 1,000, then it will be 1,000. Who would dare to disobey? This is a sincerely held view, but though the officials can determine a coin's value, they cannot limit the values of goods. The people would not dare to use a coin with a face value of 1,000 as a 100-cash coin. They would not find it difficult to price at 1,000 a good with a value of 100.[32]

This passage distinguishes very clearly between money's face value or nominal value and its purchasing power. What Wang Maoyin means by the value of a coin is its face value. By value of a good he means the price of a commodity or the coins' purchasing power. Though the government can determine the nominal value of money, it cannot determine its purchasing power. This is a correct view of things.

These are the most important of those who discussed monetary theory prior to the Opium War. There was not much that was original in them. For example, concerning

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money's origins, there were two thories. One held that it was set up by the officials. Lu Zhi, Yang Yuling and Su Che had held this view. Lu Zhi said money had been made by the officials. Yang Yuling said that it had been systematized by the monarchs. Su Che said it had been made by the state. All had the same idea.

The other theory held that money had originated in the exchanges of merchants. Sima Qian and Ye Shi held this view.

No one, however, had contrasted these two theories, analyzed them, or gone deeply into them. Proponents of the origins through legal determination theory did not criticize the origins through exchange theory. Nor did the exchange theorists explicitly oppose the legal determination theory. The two were like the well water which does not intrude into the river water --each was content to mind its own business. For several millennia each spoke for himself, and took no notice of the other's ideas. Only Ma Ang of the Qing Dynasty made the attempt, but he did not go deeply into the problem.

As for the problem of the relationship between the purchasing power of money and its quantity, ever since the *Guan Zi* had stated "when goods are numerous, they are cheap; when few, they are expensive," for more than two thousand years those who approved of this statement could do no more than repeat it. He Shangzhi of the Southern Dynasties said: "If money's quantity is great, then goods are heavily demanded." Liu Zhi of the Tang Dynasty was also unable to transcend the idea that if something is numerous it will be lightly demanded, if scarce it will be heavily demanded. Li Gou of the Song Dynasty also stated: "If coins are numerous,

[31] *Memorials of Expectant Executive Wang*, 1.

[32] *Ibid.*, 6.

then they will be lightly demanded," and "if coins are few, they will be heavily demanded." Yuan Xie said of paper money, "if it is numerous, it will be cheap; if scarce, then it will be expensive." Xia Yuanji of the Ming Dynasty also said, "if certificates are many, then they will be lightly demanded; if scarce, they will be heavily demanded." Right on down to Zhu Zun of the Qing Dynasty we keep on seeing these same old words.

During this period of more than two millennia, there were also some views arrived at independently. For example, Liu Zhi of the Tang Dynasty raised the question of the relationship between the purchasing power of money and the size of the population. Shen Gua of the Song Dynasty had an idea concerning the velocity of circulation of money. Xu Heng of the Yuan Dynasty proposed that monetary inflation was a debt owed to the people. Chen Zi'ang of the Ming Dynasty denied that paper money was money. Aliai of the Qing Dynasty advocated stabilizing the purchasing power of copper cash. All of these were merely flashes of illumination, and none of them captured general attention. No one erected an organized theory on the foundations set down by his predecessors.

So far as monetary theory was concerned, China remained in a state of arrested motion for two millennia or more. Not only was Chinese monetary thought not high in character, it was not quantitatively wide.

What was the reason for this? Conservatism in thought, intellectual inertia, the rulers' failure to promote progress, the slighting of economic problems by the scholar-officials were all factors. I suspect, however, that these were all superficial causes, because Europe during the feudal age was also like this. It was not until the beginning of the capitalist age that the study of monetary theory began to progress there.

The real reason for China's lack of progress was that monetary problems are not of central importance in a feudal society [as Marxists use that term. EHK]. The livelihood of the scholar-official class was not greatly threatened by monetary depreciation. The foundation of their livelihood lay in the land, and the greater part of the gain from land
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was not in money.

Capitalist society replaces landlords with capitalists as the rulers. The income of capitalists is entirely in money, and monetary problems come to be seen as the central economic problems. What causes changes in the purchasing power of money is a question of the first importance for capitalists. Hence they need scholars to study these questions.

2. *Late Qing Monetary Thought and the Monetary Reform Movement*

Chinese intellectuals gradually came to be concerned with foreign affairs after the Opium War. Particularly after the first Sino-Japanese War of 1894-5, the old theories could no longer fit the new complicated situation. Capitalist culture and scholarship began to be introduced into China. Among those who exerted themselves along these lines were Huang Zunxian, Yan Fu, Kang Youwei, Zheng Guanying and Liang Qichao. These men had all gone abroad, and some had even received their educations in capitalist nations. Yan Fu, for example, was among the first to have gone abroad to study. They all wanted to introduce the capitalist system to China.

Huang Zunxian (1840-1905) was an early representative of this group. He had lived in Japan, and had come into contact with the new ways. At the beginning of guangxu he wrote a *Japan National Record*[1] It contained a "Treatise on Food and Money," which in its discussion of monetary questions expressed his approval of paper money. He spoke of the advantages of paper bills:

> During Tang there were Flying Tickets. During Song there were Certificate Vouchers. Now there are banks and coin shops scattered among the marketplaces, and people clamor to exchange their precious things for empty pieces of mulberry paper. Those who carry on trade within the Four Seas carry lengths of such tickets, and though they be ten-thousand *li* across the seas, they rely exclusively on these to obtain what they desire, with there being no difference from what would be the case if they had carried specie with them.

He added:

> Of late, goods have been used excessively and wastefully. The value of coins has been such that they have become more lightly demanded by the day. The quantity of coins has become greater by the day. Lightly demanded and numerous, it has become difficult for them to reach afar. Their fineness has varied, as has the quality of their minting, and their weights. When the people have exchanges to make, cheaters take advantage of such differentials to market their counterfeits, thereby making convenient use of gold and copper increasingly complex. The substitution of mulberry paper money enables the substitution of the light for the heavy, the simple for the complex, and so people will compete to take advantage of its convenience. Even the capital

[1]The *Japan National Record* was written at the beginning of guangxu [1875], and was reprinted by the Zhejiang book Store in guangxu 24 [1898].

of a man of middling means is sufficient to set up a business in the market to exchange silver for paper money, and so how much more sufficient is the strength of the state for doing so. Would not the state be as superior in this as a duck is in taking to water?

As for the characteristics of paper bills, he says that mulberry paper money might serve as a substitute for specie, by which he meant that paper money should not be used as specie.

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Evidently what he wanted was an exchange ticket or warehouse receipt, and not a paper money. In other words, he did not consider paper money to be true money. Hence he called for 100 percent specie backing for it:

If there is gold, silver and copper corresponding to the mulberry paper in circulation, then the latter is a convenience for the people. If, lacking gold, silver or copper backing, it rests on some empty promise, and is manufactured recklessly and without limit, it is easy to see the abuses that will arise.

Among those late Qing intellectuals who had contact with foreign affairs, I suspect none had a deeper understanding of monetary questions than Yan Fu (1853-1921). He wrote no specialized books or essays on money. His views are scattered within the notes to his translation of *The Wealth of Nations* [translated with the Chinese title *Yuan Fu* --The Origins of Wealth].[2] We learn from these notes that he had read the important contemporary English studies in economics. He was not in complete agreement with the views of Adam Smith. At times he even puts forward supplementary ideas of his own.

For example, in his notes to the section "On the Origins of Money," he points out the four advantages of metal money: portability, incorruptibility, divisibility and value which does not abruptly change. Of course he did not think these up on his own. They had been stated by other contemporary English economists. He believed that increased output from the mines would make it difficult to preserve the fourth advantage. This comes out in his view concerning the value of money and commodities. He believed that the value of goods was entirely determined by the relationship between supply and demand. Therefore he did not altogether approve of Smith's labor theory of value:

Smith takes the labor of producing goods as their true value. The height of the value depends on the difficulty and amount of the labor. Though his words are plausible, as the saying goes, even the wise are not always free from error.

An object has no fixed value; its value is solely dependent on the interplay of supply and demand. If supply is small and demand great, it is hard to obtain, and hence is expensive. If supply is great and demand is small, it is easy to have, and hence is cheap. If something is hard to obtain, it does not necessarily contain a great deal of labor. If it is easy to own, it does not necessarily contain little labor.

One *mu* of land in a remote location could not be sold for a price of several pieces of gold, but if it was in the middle of the capital city, people would compete to buy it even at a price of 10,000 in gold. How could labor make a difference in this case?

The fruit from a tree, if it faces the sun and so becomes large and sweet, will fetch a good price. Fruit which is in the shade, and hence is small and sour, will be rejected by people. What difference can labor make in this case?

Value, therefore, is a straightforward matter. [This is a neat pun. "value" and "straightforward" are homonyms in Chinese, both pronounced *zhi*. EHK] Two nominally similar things are matched and numbered. If it is only a matter of the labor they contain, then things stand in isolation, and their value would not vary over time. This is why no later scholars have followed Smith's theory on the true value of goods. (Notes to "On the Difference Between the True Value and Market Price of Goods.")

Such a point of view was probably influenced by the thought of the epoch after David Ricardo. Actually, labor value theorists do not deny the influence of supply and demand.

Yan Fu believed that money was merely a symbol of value, and was not in itself intrinsically valuable:

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Money is what is used to name wealth, but is not true wealth. If the link between that which is nominal wealth and that for which it is exchanged is lost, then these three articles are no different from so many parcels of dirt. (Notes to "On the Origins of Money.")

Hence in discussing money's value, he comes close to quantity theory. In his theory of its intrinsic nature, he belongs among the nominalists. Nevertheless he provides a deeply penetrating explanation of the true significance of changes in price. He knows that to look solely at the quantity of money is of no particular significance. You must compare the people's income with the prices of articles of daily necessity:

For example, we may discover that during early Ming times, the price of a ton of iron was £6 in England, and the price of

[2] *The Origins of Wealth* was translated in guangxu 27 [1901]. Quotations here are based on the 1933 Commercial Press edition of *Collected Famous Translations of Yan*.

a ton of lead was £5. Now the former costs £5, and the latter £20. This, however, is only to speak in terms of money, and not in terms of real value. If you wish to obtain the real value, then you must learn that during the last 500 years English wages expressed in wheat have allowed the people's livelihood to steadily improve, and because of the steady increase in the quantity of gold and silver, prices have increased nine fold. Using this as the basis for evaluation, although iron has diminished in price by just £1, its current price is only one-tenth its original level. Although lead is four times its previous price in terms of iron, in real terms it is cheaper by one-fourth than its former level. Therefore, those who look only at the nominal situation and forget the reality, are not worthy to speak with concerning planning for the state. (Notes to "Explaining Wages.")

He also wanted to employ various doctrines to regulate the people's income and tax burdens so as to stabilize their standard of living. He believed that both China's land taxes and official salaries at that time were irrational. Food prices had increased, but official salaries had not changed. How then could men be held responsible for maintaining their incorruptibility in office?

The state has maintained the Yuan and Ming system of salaries. Times are different, and the world has changed. It has already been 500 years, and the use of this intermediary has not changed. [Yan Fu uses the term "intermediary" --*yizhong*-- to refer to the intermediary of exchange, in this context meaning money.] Therefore, in discussing proclamations on official pay, if today's officials are to be incorrupt, it must not be a matter of depending solely on the men. Nevertheless, if we now speak of establishing good order, to not begin with the determination of the land tax and official salaries, will make it impossible even for a Sage to accomplish anything. (Notes to "On Money.")

His measures for determining the land tax and official salaries were to link them to a price index. Official salaries and taxes would rise and fall along with this price index. Though such a view would not have been considered unusual in England then, its introduction into China was very progressive. The Chinese intellectuals were then in the midst of a debate on the official salary system.

In addition he also had things to say about the inability to maintain a gold-silver bimetallic system and about the advantages of paper money.

It was in guangxu 21 [1895] that Kang Youwei (1858-1927) sent up his third memorial setting forth methods for rescuing the state. His first proposal was on paper money. He too was a proponent of issuing paper money. He believed this was a way to collect the wealth of the nation, and that in an emergency great amounts of money could be raised.[3] In guangxu 31 [1905], he wrote *A Rational Form of Wealth For Saving the State*.

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In it was a section "On Monetary Systems." In guangxu 34, the book's title was changed to *An Argument For a Gold Standard to Save the State*,[4] and it was published. This was a work of about 70,000 characters, which can only be said to have dealt with monetary systems. It was not a work on monetary theory. Kang devoted more space to historical narrative than to theoretical analysis, but he did touch upon some theoretical questions.

For example, the first subheading, "Theory That Monetary Systems Come Out of the Inability to Complete Exchange of Goods in the Market," discusses the question of the origins of money. Kang Youwei obviously did not not believe that money was the creation of the monarchs or of the laws, but rather that it was produced spontaneously:

Those who made exchanges in the market were, on the smallest scale, single individuals who were unable to complete their business, and on the largest scale, were those carrying out the business of the state. . . . However, goods were too various and heavy, and were inconvenient for what people felt appropriate. Moreover, goods were often coarse and heavy. To reckon equivalences between them was certain to be difficult to accomplish. If it was desired to divide them, it was not possible to do so. And yet it was also not possible to give up equality of exchange. Thus it was necessary to think of how to obtain a substitute article to use as an intermediary of exchange. If an intermediary substitute good was possessed, one could assure both sides in an exchange equal returns, which was something especially desired among men. And so money arose. As men became more numerous and wiser, as exchange became more complicated, it became necessary to create new methods for profitable use by the former peoples, and under no circumstances could use of money cease.

He believed that money arose as a medium of circulation and measure of value. His statement that its use "could not cease" undoubtedly referred to its use being a result of natural law, a matter of necessity. He also discussed the nature of paper money. He knew that paper money represented gold, silver, copper and iron cash, that metal money was "real metal," while paper money was "nominal metal," and that the reason why people trusted paper money

[3] *Record of Four Private Memorials*.

[4] *An Argument For a Gold Standard to Save the State* was published by the Guangyi Book Store in xuantong 2 [1909], 12th month. The author's preface states it was completed in guangxu 34 [1908].

was that it was backed by metal money. If the metal money was insufficient, the paper money could not be maintained. If there was no metal money at all, the paper money could not circulate. If the metal backing was abundant, then the quantity of paper money could be multiplied, just as a man's shadow could expand as his body became broader:

> The ancients used real metal in planning rationally for wealth, and so established limits. Those who nowadays plan for wealth are good in using empty metal, and thus have no limits at all. Nevertheless, there is nothing impressive about using the empty to back the empty, and so their money does not circulate. To circulate it must rely upon the real. To use the real for the real, provides no premium for expansion, and so the money supply cannot proliferate. Thus the empty must be utilized. Therefore it is the case that without the real, paper money cannot be established, and without the empty it cannot be circulated.

He added:

> Pieces of gold and silver are the substance. Paper money is their shadow. The shadow may be larger than the substance which casts it. The public debt is the extended shadow, and the banks are the spirit behind it. The banks use gold as their basis, to serve as their backing for the issue of paper money. The state issues instruments of public debt to the banks, and the banks give paper money to the state to buy this debt. The banks acquire the public debt to serve as the backing for paper money, and may issue paper money in exchange for real metal.

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This latter passage is simply an introduction to the methods of the Bank of England.

Kang Youwei was not the first to talk about banks. As early as xianfeng 9 [1859], Hong Rengan (1812-1864) discussed the advantages of setting up banks and issuing bank notes in his *A New Financial Policy*:

> This matter is of great profit to the merchants, the gentry and the people. It is more convenient than carrying wealth along in one's comings and goings. One may have 10,000 in metal on one's person without others realizing it. If it is deep in a river, then it is lost to one's self, but if it is deposited in a bank, the wealth still exists. Even if one encounters thieves, it would be hard for them to suddenly carry it off.

In guangxu 18 [1892], Zheng Guanying (1841-1918) wrote *Words of Warning to a Flourishing Generation*, containing two chapters on "Banks," in which he strenuously promotes establishment of banks. He enumerates ten advantages of having banks:

> The rise and fall of banks is implicitly linked to the basis of the state. Above and below, far and near, their voice reaches everywhere, gathering in the state's wealth, and accumulating the state's profit. The response is a vibrant one. A shortage of money does not appear. This is the first advantage.
>
> If the state has a great enterprise afoot, like building a railroad, establishing a shipyard or any of a variety of industries, it may by such means raise funds. This is the second advantage.
>
> If a nation has military or relief obligations, or the need to provide emergency aid which arises unexpectedly, with a single call, a way to manage the situation can be established. This is the third advantage.
>
> When the state borrows, it need not pay heavy interest. The banks themselves have fixed regulations. There are no abuses in having things go through their hands. This is the fourth advantage.
>
> If the state's debts accumulate steeply, and its repayments are not sufficient, it can remit funds to other places without drawing up bills as evidence for such remittance, and use the entire country as its collateral. This is the fifth advantage.
>
> All of China's affluent families, silver houses and money shops may temporarily be incapable of keeping circulation lively. The banks may have the power to move aside a number of obstacles so that trade in the market is not harmed, but rather is broadened. This is the sixth advantage.
>
> If the public funds of the provinces are deposited in banks, each of the Maritime Customs official silver houses will annually receive interest of several hundred thousand ounces, and when the funds are required, they will be paid out, just as though they had been kept in the treasury, except for the annual receipt of interest which can be applied to public purposes, and not be secretly taken over by profiteers. This is the seventh advantage.
>
> Officials will amass salaries honestly. The people will store up capital from their toil. Deposits will generate interest without any further worry. This is the eighth advantage.
>
> Chinese merchants who go abroad may remit funds. If corporations are founded, they will not fall under the control of foreigners. This is the ninth advantage.
>
> If there is not enough silver on the market, they can circulate bills of exchange based on their reserves to supply the deficit. This is the tenth advantage.

He had noticed that foreign banks were not under Chinese supervision, and that Chinese merchants were being discriminated against by foreign banks. This led him to still more forcefully advocate establishing banks:

> As of now, the silver bills used by foreign merchants do not have their backing verified by either Chinese or foreign officials. They are made solely at the whim of their issuers,

without regard to quantity. I have heard that over a million in Hong Kong & Shanghai Banking Corporation bills are circulating in Guangdong province, and that this bank has already obtained a book profit of over 2 million. Though it has Chinese merchants as shareholders, it has no business dealings with Chinese merchants. Even if borrowers have shares in substantial Chinese corporations, it does not accept these as collateral. It only accepts as collateral the goods or shares of foreign corporations. Western merchants exert the authority, and Chinese merchants lose their profit. Chinese merchants aid in the accumulation of capital, but foreign merchants receive the increase.

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Zhang Jian (1853-1926), in his book *A Fair Debate On Changes in the Laws* has two chapters on "Circulating a Gold Pound and Changing the Coin Laws" and "Establishing Banks and Using Paper Money."

Liang Qichao (1873-1929) wrote no small amount on money. In guangxu 23 [1897], he wrote an essay, "On Rises and Falls in Gold and Silver," which was chiefly devoted to a criticism of Yang Yizhi's "Memorial Requesting Manufacture of Gold and Silver Coins." In this essay Liang pointed out that China could not use a secondary money as an instrument for making international payments. This was correct. He also in passing raised the question of money's nature:

Now money will not feed the hungry or clothe the cold, but if one carries it, one may obtain clothing and food. It is really only a number which stands for clothing and food. If everyone so uses it, it becomes a true number. Such a substitute number [perhaps Liang's version of the French term *numéraire*, meaning "enumerator." EHK] must be extremely simple to exchange, light and convenient. Then, given human nature, people will accumulate ever more of it.

This passage is not very clear. His term substitute number would seem to mean something like an instrument for making purchases. But as he gives great weight to money's ease of exchange, lightness and convenience, evidently he gives precedence to its role as a medium of circulation. Though Liang liked to flaunt his scholarly rationality, his discourse has plenty of points of self-contradiction. For example, he denied that China could mint a less than full intrinsic value shilling to use for making foreign payments, but at the same time argued that the odd leftover amount in a large sum could be so used. Actually such a remainder could not be so used.

In guangxu 30 [1904], he wrote *The Chinese Monetary Question* solely to criticize the introduction to J. W. Jenks' "A Discussion of China's New Dollar Law." This critique was over 10,000 characters long, and mostly dealt with practical questions. In xuantong 2 [1909], he wrote "A Discussion of the Monetary System," "A Short History of the Reckless Minting of Copper Dollars By the Provinces," and "A Discussion of the Aftermath of the Memorials on Rules for a Monetary System and a Board of Revenue and Finance."

The abovementioned men stood in the first rank in the world of Chinese thought during late Qing, but if we wanted to find out from their writings and statements what insights they had on monetary theory, the task would be hopeless. They did not touch upon the highest and deepest theoretical questions. They did not even develop further those theories already present in China. What they accomplished was merely the preliminary labor of introducing some new knowledge on monetary system problems, such as the problem of what monetary standard to adopt, the problem of free coinage, the problem of the relationship between a primary and a secondary money, the problem of the law that a bad money drives out a good money, and the problem of the functions of money. In China's past, either these questions had not been raised, or they had not been raised clearly.

These men were merely attempting to introduce some common textbook knowledge from the capitalist nations of Europe, the United States and Japan. In fact, they themselves were not necessarily clear on these problems. Liang Qichao, for example, never went sufficiently deeply into either theoretical or practical questions.

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He knew that a nation could not use law to compel the circulation of gold and silver in the market, but he supposed the state could enforce a given gold-silver exchange price.[5] This was self-contradictory. In this respect he had evidently fallen behind Yan Fu.

The aforementioned reformers or innovators of that time in their discussions on money and credit merely wanted to introduce the capitalist money and credit system into China, so that China could adopt such a system. Hence most of their writings and discussions revolved around the question of the reform of the monetary system. They did not cry out in vain. Their proposals led in late Qing to the rise of a fervent monetary reform movement. A number of people did not stop at empty discussions, but directly promoted specific measures. Even the Qing Dynasty's government was driven to study the question of the reform of China's monetary system.

Reform of the monetary system did not just begin after the first Sino-Japanese War. Wang Liu had loudly called for reform even before the Opium

[5] "A Discussion of the Monetary System."

War. In xianfeng 3 [1853], the Reviewing Policy Advisor Zhang Xiangjin memorialized a request that gold implements long stored in the Inner Palace be minted into gold coins to be put into circulation throughout the Empire alongside silver. In xianfeng 4 [1854], 8th month, the Governor of Shaanxi, Wang Qingyun, advocated using all three metals, with gold and copper to supplement silver, since silver was scarce and expensive. He did not call for minting gold coins, but merely the circulation of pieces of uncoined gold, with 1 ounce commuting 20 ounces of silver. Later, the Acting Governor of Shaanxi, Dai Ling, also supported this plan.[6]

That, however, occurred during time of war, when the money in circulation was insufficient, and the intent was to use gold as a supplementary money, rather than to advocate a gold standard. The ideas behind these men's reforms were old fashioned, not differing much from the ideas behind early Qing or pre-Qing reforms. They cannot be lumped in with the late Qing monetary reform movement.

In the last years of the tongzhi period [early 1870s], a number of large European nations adopted the gold standard. Silver fell in price, Chinese money steadily fell in price against foreign money, and the foreign trade deficit grew year by year. In the view of people then, this was extremely unprofitable for China. For this reason the number of people calling for reform of the monetary system steadily increased. Especially in the aftermath of the First Sino-Japanese War, the burden of China's foreign debt and indemnity payments grew invisibly because its debts and indemnity obligations were expressed in terms of gold. Hence advocates of monetary reform all took adoption of a gold standard as their goal.[7]

In guangxu 21 (1895), the Prefect of Shuntianfu, Hu Yufen, proposed one of the Self-Strengthening Movement reforms. He advocated setting up offices in the ports of each province to mint gold, silver and copper coins, and that the Board of Revenue establish a modern bank to issue

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paper bills.

In guangxu 22 [1896], Sheng Xuanhuai also memorialized a request to reform the monetary system. He wanted to establish a silver dollar general office in the capital, with branch offices in other provincial cities, and begin to mint silver coins. Each of these dollars would contain 1 capital standard ounce of 90 percent fine silver. The government should then consider minting gold coins and small silver coins to circulate together with the large silver dollars. Use of Original Treasure small ingots would be banned. Modern banks would simultaneously be opened in the capital and in Shanghai.

A number of other people called for monetary reform, for example Yang Yizhi, Peng Gusun and Hu Weide, but none of them proposed concrete methods for carrying it out.[8] It was not until after the Eight Power invasion of China in guangxu 26 [1900], when an indemnity of several hundred million ounces payable in gold was assessed by the powers, and the price of silver fell still lower, making China's burden become still heavier, that it became indispensible to establish a way to stabilize the foreign exchange price of the nation's money. It was only then that various specific plans were proposed.

The first of these was in the *Simple Words on the Coinage* by the Expectant Daotai of Jiangsu, Liu Shiyan, which appeared in guangxu 29 (1903). He advocated the adoption of a gold coin standard, with the minting of $5, $10 and $20 gold coins, along

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[6] *Qing Dynasty Investigation of Literary Remains Continued.*

[7] *Ibid.*, "Investigation of Coins," guangxu 23 [1897] memorial of the Policy Counsellor Yang Yizhi: "A telegram has arrived from the Inspector of the River and Maritime Customs, Liu Qixiang, stating that on that day the English gold pound's value was equal to one [*sic*] Shanghai standard ounce and 2 shillings 4 pence. The next day, word was transmitted from He De of the Investigation of General Taxation Office, that recently the pound's value had increased from 7 ounces to a little over 8 ounces . . . Both of these statements indicate that the value of the pound has continued to increase. Thus China's tax income and expenditures have both suffered losses. The loss in paying off debts has been especially large. . . . In former years I have made calculations for each nation. . . . The coins of all nations can circulate, but only gold coins are found especially convenient. . . . During the tongzhi period, a pound was equal to 3.33 Chinese Shanghai standard ounces. In the Spring of guangxu 13, a pound was equal to 4.165 ounces. . . . Now a pound is equal to a little over 8 ounces."

In his memorial requesting minting of gold and silver coins, Mr. Yang supposed that the English shilling only weighed 0.15 ounce, and was equal in use to 0.44 ounce of uncoined silver. He supposed our country could mint 0.15 ounce of raw silver into a Chinese shilling of the same size and weight as the English shilling, and that used for purchase of ships and repaying indemnity it would be discounted as equivalent to 0.44 ounce of silver.

At the time, Liang Qichao raised an objection, saying that the English shilling was limited to making payments of 19 coins or less. For payments of 20 coins or more, the pound sterling was used. (Cf. "On Commercial Affairs," *Journal of Current Affairs*, 39.)

[8] *Qing Dynasty Investigation of Literary Remains Continued.*

with silver and copper supplementary coins, as well as the establishment of a national bank to issue paper money. The standard coin (meaning a $1 gold coin) would not need to be minted. It need only to have its value fixed as equal to 1 treasury ounce of silver. The $20 gold coin would weigh 0.62 treasury ounce, and be 903 parts fine.[9] He did not make clear what should be done if the gold-silver exchange price changed.

The second of these was "On China's Silver Price as a Determinant of its Gold Price," by the Inspector General of the Imperial Maritime Customs, Sir Robert Hart.[10] He advocated adoption of a gold exchange standard. The government would establish a central mint to turn out 1-ounce, 0.5-ounce, 0.25-ounce and 0.1-ounce silver coins, as well as copper coins to be placed into circulation. The standard gold unit coin would not need to be minted. It would only be necessary to maintain an exchange price of 8 ounces of the new silver coinage to 1 English gold pound. The silver coins might, however, be freely coined, so that this would become a bimetallic gold-silver coin exchange standard.

The third of these was the plan of Jenks. In guangxu 29 (1903), the United States Congress established an International Exchange Commission to

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[9]The contents of Liu Shiyan's *Simple Words on the Coinage* is as follows (*Qing Dynasty Investigation of Literary Remains Continued*):

1. Establish a three-level coinage, with gold as the standard, and a fixed exchange rate with the coinages of other nations.
2. The whole country's system of coinage must be under one institution. . . . An office should be established in the capital with a monopoly over the minting of the three levels of the coinage which would circulate in all provinces. The mints previously established in the provinces should cease operations simultaneously.
3. I request that there first be established an assay office next door to the mint in the capital, and that an excellent chemical analyst be invited to become its head. All coins minted would be required to have their fineness assayed by this office, and to prominently display its mark.
4. First negotiate a median gold-silver exchange price with each nation with which we engage in commercial intercourse. There will be a three-level coinage, with a unit of gold in the primary position. Under this gold standard, $1 must contain the equivalent in gold of 1 treasury ounce of silver. This is the most important consideration in fixing the gold-silver exchange price.
5. Set up a nationwide investigatory police force to guard against private coining.

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Appended was a description of the three-level coinage:

1. Gold coin 20-fold gold $20 0.625 treasury ounce, 903 parts fine, copper 100
   $10 0.312 treasury ounce
   $5
   Gold unit (This coin need not be coined.)

Silver coin 10% 0.5 ounce silver 0.2 ounce 0.1 ounce
white copper 5% 0.05 ounce
purple copper 2% 0.02 ounce 0.01 ounce
ordinary copper coins 0.005 ounce 0.002 ounce 0.001 ounce

2. Set a time limit to collect copper Circulating Treasure coins, and remint them into 0.001 and 0.002 ounce copper coins for popular use internally.
3. Issue paper money to stand in place of gold dollars:

a. Bills for everyday use in denominations of $1, $5, $10, $20, $50, $100, $200 and $500, to a total of $90 million.
b. Internal market exchange bills. c. Foreign market exchange bills. d. National savings gold bills. e. National debt bills.

4. Establish a national bank with local branches to put the new system of money into circulation.

[10]The content of Hart's proposal is as follows (Cf. Jin Guobao, *The Problem of the Chinese Monetary System*):

1. The central government to establish a mint under its own control to coin the new money; all the existing provincial mints to be closed, so that weight and fineness might become uniform.
2. The prices of the new coins to be set at treasury standard 1-ounce, 0.5-ounce, 0.25-ounce and 0.1 ounce, all to be silver coins. Copper coins to weigh 0.01 and 0.001 ounce. The exchange price between silver and gold to be permanently fixed. All new coins to be at the rate of 8 ounces to 1 English gold pound.
3. An experienced foreigner must be invited to head the central mint. All provincial minting machinery must be sent to this central mint.
4. The silver coins' fineness will be 90 percent for the 1-ounce and 0.5-ounce coins, and 80 percent for 0.25 and 0.1-ounce coins.
5. This new mint must permit the people free coinage. The old coinage may continue to circulate temporarily, but after a fixed date, it will no longer be allowed to circulate.
6. After this mint goes into production, foreign money and raw silver should no longer be permitted to circulate. Those holding raw silver must exchange it for new coins.
7. Foreign merchants will only be permitted to use the new coins. All foreigners holding gold coins must exchange them for the new money according to the legally fixed price.
8. Gold coins obtained in exchange should be kept on deposit as backing for repayment of foreign debts, and for reminting into gold coins.

study the stabilization of exchange rates between nations using gold and nations using silver. Jeremiah W. Jenks was one of these commissioners. In 1903 he wrote "A Detailed Discussion of China's New Dollar Laws" and "An Annotated Explanation of China's New Dollar Laws" in which he made a 17 point proposal.

He too favored a gold exchange standard, with an amount of gold equivalent to 1 ounce of silver as the monetary unit. The people might freely seek to mint gold coins in multiples of this unit. Silver coins would be minted simultaneously. A gold-silver exchange price ratio of 1:32 would be maintained. The government would establish a credit office in London to buy and sell gold bills of exchange so as to preserve this ratio. He called for the Chinese government to invite some foreigner to serve as officer in charge of the currency, vested with full powers. This

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aspect of his proposal was fiercely attacked in China, both at court and elsewhere. It was believed to be damaging to national sovereignty.[11]

The fourth of these was the proposal in guangxu 33 (1907) by the Ambassador to England, Wang Daxie, to adopt an empty or nominal gold standard, and to raise the face value of silver coins by 20 percent for use in making foreign payments. The Board of Revenue and Finance believed that Wang did not understand the fundamental principle behind money, and proposed four alternative procedures. A first alternative would have raised the price of the silver dollar by 20 percent, and then fix its price against gold. A second alternative would have first fixed the gold-silver exchange price, and then raised the price of the silver dollar by 20 percent. A third alternative would have used paper money in place of silver dollars after putting the second alternative into effect. A fourth alternative would have been to issue gold exchange paper money to sop up the silver on the market, and redeem these on demand with silver.[12]

Wang Daxie supposed that once a gold standard had been adopted, China could employ an overvalued silver secondary coinage to repay all indemnities and railroad debts.[13] Obviously, he was a nominalist, since he supposed that the price of money could be determined at the discretion of the government.

The fifth of these proposals for reform was Vissering's plan for a gold exchange standard. During late Qing, the government invited the Dutchman G. Vissering to make an inquiry, and he subsequently wrote "A Simple Discussion of the Reform of the Chinese Monetary System.[14] He advocated a three-stage reform. The first stage would fix a gold unit as the money of account, establish a bank to issue gold denominated paper bills, and accumulate a gold reserve. The second stage would determine token coins and the weight and fineness of a new secondary coinage. The third stage would graually call in the old silver coins, uncoined silver and standard coins.

These late Qing advocates of reform all in various ways wanted to adopt a gold standard. Why then was it finally decided in xuantong 3 [1910] to adopt a silver standard? Naturally, the reasons for this were many and complex. Opponents of a gold standard, like Zhang Zhidong, believed that it was because foreign prices and standards of living were high that foreigners could employ a gold standard. The poor people of China only spent 10 or 20 cash per day on food and drink, and even the coastal cities used silver. Gold's price was too high for it to be suitable for China.[15]

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[11]For Jenks' 17 point recommendation, cf. *Gold Standard in International Trade: Report on the Introduction of the Gold-Exchange Standard into China, the Philippine Islands, Panama, and other Silver-Using Countries and on Stability of Exchange* (1904). Among the most ardent opponents of Jenks' proposals were Liu Shiyan and Zhang Zhitong. In guangxu 30 [1904] Liang Qichao wrote the *The Chinese Monetary Question* as an introductory critique of this work.

[12]*Qing Dynasty Investigation of Literary Remains Continued*, "Investigation of Coins."

[13]*Ibid.*, guangxu 33 [1907] Board of Revenue and Finance memorial: "The aforesaid high official originally memorialized: 'The general tendency is for the nations using gold to daily increase in number, and for the price of gold to daily rise. Therefore, states using silver must change over to use of gold. Japan is the latest nation to adopt gold. Its ratio of gold to silver

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is only 1 to 28. Its silver coins are 20 percent higher in market price than the equivalent weight in uncoined silver. If we take the Japanese silver coins as our model, and reckon up the amount our state must pay out in foreign indemnities, railroad debts and for military expenditures, then we can save 20 percent on all these, which would annually come to 17 or 18 million in silver. Because the Chinese population is 400 million, we should mint 800 million silver coins. Since the silver coins would be higher than uncoined silver by 20 percent, if we mint 100 million silver coins annually, then we can earn a seignorage of over 14 million. Since 800 million would be the permitted quantity of silver coins, 20 percent of that would be the quantity of paper money, and a seignorage of 14 million can be obtained for that too.'"

[14]*Chinese Currency*.

[15]In guangxu 30 [1904], 7th month, Zhang Zhidong's "Memorial Against an Empty Gold Standard" stated: "When we investigate the flourishing state of the commerce of foreign

On the surface, this statement was very reasonable: The Chinese price revolution was still in progress. In reckoning their everyday expenditures, the people had only raised themselves up from the standard coin to the copper dollar. At most they had shifted from copper to silver. Opportunities for using gold were quite rare. However, a gold standard does not require the use of gold coins. The aim of a gold standard is stability of foreign exchange, and not to have people use gold coins.

West Asian nations like Persia were using gold coins during China's Spring-Autumn era (sixth century B.C.), and China itself had for the most part used gold as a basis for calculations from Warring States times through the two Han Dynasties. The standard of living of the Persians and Chinese during those times could not have been very high. England

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adopted a bimetallic gold and silver standard in Southern Song Emperor Lizong's baoyou 5 (1257), but most Englishmen would go a lifetime without ever seeing a gold coin. Adoption of a gold standard would merely have nailed the value of Chinese money to the value of gold. The people could have continued to use silver coins or copper dollars and copper cash without necessarily raising their standard of living.

Not only did opponents of a gold standard then not understand monetary theory, even its advocates were all amateurs. The gold unit advocated by Liu Shiyan was after all based on the silver ounce, and he believed that this was the most crucial point. He seems to have had the idea of maintaining the gold-silver exchange price so that silver coins would become a true money. How can one call this a gold

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nations, we see that their prices are high, and their people well off. For their daily expenditures even a century ago they mostly employed silver or gold and silver together. For the past century the European nations solely employing gold have begun to gradually increase in number. For the past thirty years, each of these nations has gone over solely to the use of gold. Their merchants daily grow more numerous, their expenditures daily grow broader, their goods daily more expensive. The price of one thing, the expense of a single meal are rarely just a few foreign silver dimes in cost. A median person's daily needs are no less than 1 foreign silver dollar. Therefore it is convenient for them to employ gold.

"This is not the case for China. Our people are poor and our goods are cheap. Laborers obtain tiny wages. The mass of the people eat meagerly. Hence daily necessities are reckoned in petty cash. Each poor person daily consumes no more than 10 or 20 cash. A person of middle standing daily consumes only 60 or 70 cash. . . . The great ports on the seacoast and on the Yangtze still use uncoined silver and silver dollars, and the local money of the interior whether the business engaged in is large or small always reckons in terms of copper cash. Even for exchanges among great clans, prices are reckoned in uncoined silver, but use copper cash as their standard money.

"In general, Liang-Guang, Yunnan, Guizhou and the ports near the mouth of the Yangtze use silver for 70 or 80 percent of their business and copper cash 20 or 30 percent of the time. Ports upstream on both sides of the Yangtze use silver and copper cash in equal amounts. In the districts of the interior on both sides of the Yangtze, silver is used 10 percent of the time and copper cash 90 percent of the time. In the provinces on either side of the Yellow River, 99 percent of the time copper cash are employed, and silver only 1 or 2 percent of the time. Considering China as a whole, silver and copper are still in joint use, and places using copper are ten times more numerous than those using silver. Generally, state budgets in China are reckoned in terms of silver. The people still mostly express prices in copper cash.

"Though foreigners label China a silver using nation, it is actually still a copper using nation. . . . Evidently the situation in China is such that if it is desired to circulate gold coins, not only is there no gold to mint, but even if we had the gold, there would be no obligation to do so. . . . In my humble opinion, at this time we have only got the two moneys, silver and copper, in hand which we have previously used, and we should seek a strategy for smoothing their circulation. Afterward, we can seek to fix a silver-copper exchange price, and set a limit to the number of cash an ounce of silver is worth. . . . After twenty years, . . . if there is indeed a need to add a gold coinage, we can then consider methods for making the attempt. . . . After fifty years, . . . when China has become a silver using nation, we can then surely add a gold coinage as well." (*Complete Works of Duke Zhang Wenxiang*, 63, "Memorials, 63, "Memorial on the Inappropriateness of Empty Determination of a Gold Price and Change to Use of a Gold Coin.")

Qing Dynasty Investigation of Literary Remains Continued, guangxu 33 [1907]: "Once Jenks advocated a gold exchange standard, supporters of that position arose one after the other. Zhang Zhidong memorialized to fervently oppose it. Liang Qichao condemned it in bare but eloquent words. Considered dispassionately, though its opponents were not willing to accept it, the situation within which China found itself was such that the test could not be lightly attempted either. The gold exchange standard would require taking up the obligation of keeping up the value of foreign exchange certificates. Advocates of this system recognized this cost, and said the profit from the rise in price of the silver coins would be sufficient to cover this. They did not realize that our nation's silver coinage had not yet been unified, that the practice among our people of using raw silver and copper dollars was of long standing, and could not easily be changed over the short run. This supposed profit was theoretical in nature, whereas as the foreign exchange deficit was not something that could be avoided."

standard? Wang Daxie supposed that an overvalued silver secondary money could be used to pay foreign debts, which is a really fantastic notion.

As for the foreigners, though they were knowledgeable on monetary questions, they harbored evil intentions, and nourished the idea of committing aggression against China. That is why Jenks wanted China to invite a foreigner in to manage China's currency system. This was the most important object of Zhang Zhidong's vehement opposition. Even a gold exchange system itself evoked Chinese suspicion, because all of the places which were then adopting a gold exchange system were colonies.

Though these aggressors had some grasp of monetary theory, it was only book knowledge, and not practical knowledge. Some of them had examined the circumstances in China, but only superficially so. Jenks, for example, had merely collected the opinions of some foreign residents in China, such as American diplomats resident in China, foreigners holding positions in the Maritime Customs, and the reports of some foreign missionaries. He made his report to the U.S. Congress on the basis of these opinions.[16] What he had obtained was merely some scattered and fragmented technical material. He had no comprehensive understanding of Chinese society. He even harbored the improper aim of turning the Chinese monetary system into an adjunct of his own country's monetary system, and intentionally muddled several technical questions so as to cover up such political ambitions.

As for the Chinese scholars, they had no profound understanding of monetary problems. Having examined some foreign phenomena superficially, and having been taken in by the plans of those would-be aggressors, they changed them into systems of which they were excessively credulous. They expended a great deal of ink debating the questions of the monetary unit and the kinds of coins to be used, supposing that determining on a monetary system was enough in itself to enrich a nation. A number of people supposed that reform of the monetary system was one way to increase annual income. They believed that the quality of a monetary system lay in the unit and kinds of coins selected. This was to turn things upside down. They

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did not know that the key to a stable monetary system does not lie in the size of the monetary unit, nor does it lie in the kinds of coins, but in the fiscal policies adopted and in general economic stability. If you do not pay attention to political and economic factors, you will not have a stable economic foundation. Different people will make isolated proposals, but none of them can do anything to resolve the problem.

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3. Monetary History

There were notable developments in scholarship during the Qing Dynasty. Some have called the more than two centuries of the Qing Dynasty China's literary and artistic renaissance. [It was Liang Qichao who characterized mid-Qing as China's literary renaissance. EHK] In the area of scholarship at least, this can be affirmed.

We can take the textual verification movement as representative of Qing Dynasty scholarship. The textual verification school had an especially intimate relationship with historiography, and so had a stimulative effect on the discipline of history.

Most historical works after Tang were compiled in official bureaus. Such official histories were often not up to the level of those written by individuals, but of these official histories, the *Ming History*, compiled during early Qing, was comparatively good. This was no accident. However, the section on coins and certificates in the *Ming History* occupies not quite half a *juan*, and contains a total of less than 4,000 words. Evidently, monetary history was not taken very seriously at that time.

An Office of the *Three Encyclopedias* was established during the qianlong period, and it compiled the *Three Encyclopedias Continued* and *Imperial Dynasty Three Encyclopedias*. These advanced the study of monetary history a step. In substantive terms, these works made no original discoveries, being entirely composed of material copied out from the original *Three Encyclopedias*, except for supplementing the original works with later historical materials.

The *Universal Statutes Continued* had three *juan* on "Coins," running from Tang to Ming, with a total of 27,000 characters. The *Qing Dynasty Universal Statutes* has one *juan* on "Coins," running from the beginning of Qing to the pacification of the Muslim

[16] Cf. *Gold Standard in International Trade: Report on the Introduction of the Gold-Exchange Standard into China, the Philippine Islands, Panama, and other Silver-Using Countries and on Stability of Exchange, Submitted to the Secretary of State, October 22, 1904, by the Commission on International Exchange* (Washington, D.C.: Government Printing Office, 1904), pp. 41-282.

frontier during the qianlong period, for a total of 10,000 characters. The *Universal Record Continued*'s section on coins runs from Tang Emperor Muzong's changqing 1 [821] to late Ming, for a total of 2,709 words. The *Qing Dynasty Universal Record* section on coins has around 6,000 characters. The *Investigation of Literary Remains Continued* has a 5 *juan* "Investigation of Coins," running from Southern Song Emperor Ningzong's jiading 7 [1214] to the end of Ming, containing about 64,000 or 65,0000 characters. The *Qing Dynasty Investigation of Literary Remains* has a 6 *juan* "Investigation of Coins," holding 80,000 characters.

Evidently each of these books has as detailed a treatment of coins as the original works on which they were modeled, but the period encompassed by the *Three Encyclopedias* of the Qing Dynasty are of comparable length, and their contents are both complex and simple. One need only study the *Investigation of Literary Remains* category to gain an approximation of the contents of the others. The value of the historical materials they contain must be acknowledged, but in that respect the *Compendia of Statutes* or *Abstracts of Laws* of the several dynasties have the same kind of value.

Of private writings, there are the "Treatise on Food and Money" in Wan Sitong's (1638-1700) *Ming History Draft*, the "Treatise on Food and Money" in Wei Yuan's *Yuan History Newly Compiled* and the "Treatise on Food and Money" in Ke Shaomin's *New Yuan History*, all of which have sections on coins. In this field, however, there is nothing in particular worth mentioning. The *Yuan History Newly Compiled* and the *New Yuan History* are simply not as confused as the official histories, and that is all. They are without any creative

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developments.

With the flourishing of the textual verification movement during Qing, scholars did not much care to write books. Instead they preferred to compose essays in the form of reading notes. Such essays dealt with all sorts of topics, frequently including monetary history, as for example Gu Yanwu's (1613-1682) *Record of Daily Knowledge* and Zhao Yi's (1727-1814) *Notes on the Twenty-two Histories*. These two men used historical material to verify their opinions, and this indeed represented progress over the empty narratives of the Ming writers. The flaw of the textual scholars lay in the fragmented nature of their work, their lack of fully formed views, and their inability to get to the heart of a problem.

Even in terms of their use of primary sources, we cannot say that they collected all the relevant detail. For example, we have essays from both Gu Yanwu and Zhao Yi solely devoted to the gold question. The section on "Gold" in *Record of Daily Knowledge* gives only a few examples to prove that Han mainly employed gold, and that after the Xiao-Liang Dynasty gold was rarely seen in history. As an explanation for this, Gu merely quotes a statement by Du Gao to the effect that during Han times there were not yet any Buddhist temples, and so gold was very cheap. Obviously Gu Yanwu also believed this explanation. He hardly offers any explanation of his own, except that to his conclusion he adds the sentence: "Alas! How remote was the time when it was the thing to be frugal!" This seemingly was the point of that 1,000-character note.

The section on "Han's Abundance of Gold" in the *Notes on the Twenty-two Histories* is substantially the same. Zhao Yi gives a rather larger number of examples of gifts of gold during Han than does Gu Yanwu, but he is still merely picking up whatever comes to hand, and has exerted no special effort to go beyond that. As for the reasons for the growing scarcity of gold in later days, he first says that the gold producing areas were becoming played out, and next says that after the spread of Buddhism into China, images came to be gilded. Like Gu Yanwu, he does not realize that the weight standards of Han were not the same as those after Tang. Neither of them realized that 60 or 70 chests of Wang Mang's gold only amounted to one-third of the same nominal measure of Liu Jin's gold.

Of course when scholars collect material, they cannot get hold of all of it. Primary sources are inexhaustible. Other scholars or men from later times can very easily add new items to the store. The problem lies in the conclusions reached. If a very small number of pieces of evidence can lead to a correct conclusion, that shows the writer's perspicacity as an investigator. If the conclusion is incorrect, then no matter how abundant is the material, the value of the work cannot transcend the value of the material itself. If it is only because of the insufficiency of the material that an incorrect conclusion has been reached, then it is necessary to seek out still more material.

After the qianlong and jiaqing periods, the textual verification school became interested in money. It devoted more energy to study of the coins themselves, and scholars became unwilling to work solely from documentary sources. As a consequence, the accomplishments of the Qing Dynasty in numismatics far exceeded

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its accomplishments in monetary history.

After the Opium War, a section of the intelligentsia gradually lost faith in everything about their own country, and began to devote attention to things

foreign. At first, this involved technical matters, like firearms, steamships and railroads. Slowly it broadened to culture in general. These men became intoxicated with Western studies and wished to use Western learning to reform China's contemporary situation. Few inquired into the history of China, since it was only when they still believed in their own country, when they were still proud of everything about it, that they could imagine how their own ancestors managed to keep things going under painful circumstances to leave behind them this heritage. Since they now felt themselves to be inadequate in all respects, they could only feel that the past was dead, and they turned their backs on it. Who would want to study it?

Under such circumstances, as the power of imperialism grew broader and more onerous, historiography, which had since antiquity been especially well developed in this country, instead became a dead end. Eventually, it even became necessary to depend on translations of foreign books for information on various aspects of this country's cultural history.

After the First Sino-Japanese War, those interested in monetary questions came to believe that Japan's strength came largely from its strengthening of its monetary system, and this led to the rise of a monetary reform movement in China. This was not without its good aspects. After a long period of self-intoxication, it was necessary to take this opportunity to draw in a breath of fresh air from the outside. Naturally, there remained a minority who maintained an unsubmissive attitude toward the foreigners so as to preserve the self-respect of the nation, and remained in all respects self-satisfied. So complacent and conservative an attitude was utterly unable to solve these problems.

In the course of their study of foreign countries, the Westernizers could discover that there had been foreigners who had felt an interest in Chinese history. J. Edkins, for example, had written a book on Chinese monetary history.[1]

There were several monographs on monetary history during late Qing, such as Jiang Fu's (1866-1911) *Chinese Monetary History*, Liu Yinglan's *History of the Evolution of Chinese Money*[2] and Liang Qichao's "A Short History of the Reckless Minting of Copper Dollars By the Provinces." Jiang Fu was a specialist in bronze and stone inscriptions and not an economist. I have only seen quotations from his *Chinese Monetary History*, and have not seen the entire work. Perhaps it belongs within the sphere of numismatics. Liu Yinglan's *History of the Evolution of Chinese Money* was printed in Japan in xuantong 3 [1910]. I have no details on its contents. Liang Qichao's "A Short History of the Reckless Minting of Copper Dollars By the Provinces" was written in xuantong 2 [1909]. It was a monograph on monetary history.

Evidently this sort of book was still in an embryonic state. No one had any idea of what monetary history ought to include. Some conservatives adopted the style of the sections on coins in the traditional treatises on food and money.

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Those who were a bit more progressive discussed the question of monetary systems to some extent. A very few could synthesize historical monetary problems with contemporary economic problems and the question of the people's livelihood in a way which was both analytical and broad in scope.

[1] J. Edkins' works on Chinese monetary history are *Chinese Currency* (Shanghai, 1901) and *Banking and Prices in China* (Shanghai, 1905). The former work contains 151 pages, divided into five chapters: 1. Chinese Currency; 2. Bronze; 3. Silver; 4. Gold; 5. Concerning the Eighteen Works on Chinese Currency. Though the entire work is arranged chronologically, it is not an organized historical work, but rather is a collection of 130 essays. S. W. Bushell and Terrien de Lacouperie also studied Chinese money, but their focus was on coins. Morse's writings also touched on Chinese monetary problems.

[2] Japan: Shukosha edition, xuantong 3 [1910], in 2 *juan*. Cf. Zhao Fengtian, *A History of Economic Thought During the Last Fifty Years of Qing* (Harvard-Yenching Institute, August 1939), Volume II, chapter 8, "Increasing Annual Revenue."

4. *The Development of Numismatics*

Though numismatics appeared very early in Chinese history, no pre-Song works have survived. Even Hong Zun's *Record of Coins* is very short, containing in all only between 20,000 and 30,000 characters, and 90 percent of which consists of quotations from his predecessors. His own notes only come to some 2,000 characters. He himself had only collected some 100 coins.

There were no particularly important developments during Yuan and Ming either. This state of affairs was maintained right down to early Qing, when there were still some books on coins that were so purely fictitious, as to be absurd. For example, at the beginning of the shunzhi period [1644], there was Zhu Duoli's *Ancient and Modern Coin Catalog*

and during the kangxi and yongzheng periods, Zhu Feng's *Ancient and Modern Record of Queries*. Even the several works produced during early qianlong times were rather brief. For example, Zhang Duanmu's *Register of Coins* could only serve as a continuation of the *Record of Coins*, supplementing that work with additional material which had appeared since Hong Zun's time.

In qianlong 15 (1750), Liang Shizheng received an imperial commission to lead the compilation of a *Register of Coins*, and completed the task within a year. This was the first official book on Chinese coins. It was 16 *juan* long, and recorded 567 coins, but the last two *juan* were entirely devoted to tokens and charms. Qing Dynasty numismatists have had for this *Imperially Sanctioned Register of Coins*

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only words of high praise, with no one daring to raise any criticism of it.

Actually, it is a book without the least value. The compiler himself said that for the section on high antiquity the theses of the *History of the Circuits* had been adopted, but criticized Hong Zun's *Record of Coins* for naming coins which may not have originally existed. And yet the credibility of this work falls short of that of the *Record of Coins*. Aside from the one improvement of attributing the Hanxing Cash to Li Shou, all the other errors are preserved, and new ones are added, as for example reading the *Yi* Four and Six *huo* as *tiancan* and explaining the character *sheng* on Southern Song coin tokens as an official title, supposing them to have been minted by the Three Offices [*sansheng*] --the Secretariat, the Chancellory and the Department of Ministries.

Its illustrations were said by the compiler to have been drawn from items stored within the Inner Court. Among the contributers were painters like Dong Bangda and Qian Weicheng, who should have been capable of capturing a likeness, but the literatus painters of Ming and Qing introduced distortions into their paintings and did not seek to depict a likeness. Probably because they were very far removed from the original coin, they depicted the character *yuan* ring coins as having square holes.

At about the same time, there was a work, *Investigations of Coins*, of unknown authorship, and only 40-50,000 characters long. Though an improvement over the *Register of Coins*, its contents were for the most part copied from historical works or coin catalogs. It placed its treatment of ancient coins after its treatment of coins by historical period, which upset the clarity of organization of the entire work. Moreover, it identified knife and spade coins with the legendary Three Emperors and Five Rulers, viewed the ant-nose coins and Bright Moon coins as charms, and listed the character *yuan* coin, *baohuo*, Yongguang, general circulation Spring Money and Taiping Xingbao coins as of unknown date. The work is said to have originally been illustrated,[1] but the woodblock edition[2] contains no illustrations.

Nevertheless, development of the school of textual verification during the Qing Dynasty could not but have some influence on Chinese epigraphy and numismatics. Textual verification studies began during the shunzhi [1644-1662] and kangxi [1662-1723] periods, but numismatists for a time remained outside its sphere of influence. They retained the subjective intuitionist attitude toward scholarship of the Ming Neo-Confucians: They did not consider the coins themselves to be important; they did not seek truth in practical facts; they were not serious or faithful to reality, but merely understood how to copy things.

By the qianlong [1736-1796] and jiaqing [1796-1821] periods, textual verification gradually spread more widely into the world of scholarship, and historiography, philology, restoration of ancient books, law systems, and epigraphy began to uniformly become better developed. Numismatists frequently participated in such work. In fact, there were Qing epigraphers or textual verification scholars who were also numismatists. This was true of Zhang Tingji, Chen Jieqi and Wu Dacheng. Those who specialized in coins no longer relied on empty conjectures in doing their research, but instead sought out the coins themselves. Hence their accomplishments were greater. Jiang Deliang, Weng Shupei, Chu Shangling and Ni Mo were among the earliest of these.

Jiang Deliang (alternate name Qiushi, 1752-1793) was born and raised in a Yangzhou intellectual family, which originally came from Anhui. He ranked second on the list in the Palace Examination of qianlong 45 (1780), and later served as a censor. He was a painter of flowers, but loved to study coins even more. He was also an excellent philologist, and so

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made a definite contribution to the deciphering of coin inscriptions, as for example of the *ming* knife, the *huoren* small spade, the *lin* and Two-*zai*. He wrote a *Coin Register* in 24 *juan*, which had illustrations as well as text, but was not published, and the manuscript for which has not survived.[3] Ni Mo had

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[1] Ni Mo, *Ancient and Modern Coins Outline*, cites a manuscript copy in the Pan Yi Hall, and says it was illustrated, but that these illustrations were not copied into the printed version.

[2] Commercial Press Compendium of Collectanea edition.

[3] *Ancient and Modern Coins Outline* says Jiang Qiushi's

borrowed it for several months for examination, recorded its table of contents in his *Ancient and Modern Coins Outline*, and also quoted some of its text. In addition to getting some translations from ancient text orthography right, it was unusual that Jiang linked the term *qian* to an agricultural tool. Of course there are some errors even in his translations, as in reading Anbang as Anyi. He was also taken in by some forgeries, like the *ci* spade, the character *yang* Inaugural, the Mingde Original Treasure, the Shunzhi reverse *chuan* and *wu* coins. The *juan* on "Western Coins" in this *Coin Register* is the earliest record of modern foreign coins by a Chinese.

Weng Shupei's (alternate name Yiquan, 1765-1809) *Collected Investigations of Ancient Coins* is the Qing Dynasty's most important numismatic work. It may also be said to be a work of general nature. Its author expended several decades worth of intellectual energy to complete this 200-300,000 character book, which raised Chinese numismatics to a new level. The book is divided into eight *juan*, the first six providing an historical narrative about coins running from high antiquity down to the Ming Dynasty. The seventh deals with foreign coins and those of unknown date. The eighth deals with commercial tokens, charms and suppressed coins.

Still in manuscript form at the time of the author's death, it was edited by Liu Xihai during the daoguang period, and then placed before the numismatic world. The book's strongest point is its abundance of material. The author copied out material on coins from ancient works, relying especially on the material preserved in the *Yongle Encyclopedia*. Of course this was only the labor of gathering source material, but performing that job is one of the important tasks of science, and one which may not be stinted. Next in importance, Weng was the first person to devote effort to the variant forms of coins. This was his personal contribution. If his written sources were copied from books, material on variant forms could only be obtained through study of the coins themselves. Evidently he placed equal weight on books and the coins themselves. It is no wonder that the numismatic world viewed *Collected Investigations of Ancient Coins* as a comprehensive summary of all known by numismatics.

Collected Investigations of Ancient Coins does, however, have its flaws. First, Weng recorded too few knife and spade coins, and in dating them he adhered to the old catalogs, and so had them begin with Suirenshi, the legendary ruler who discovered fire. Weng states that the ancient catalogs made this claim, and that they might not have been entirely without a basis for making it. So conservative a mode of thought was also manifested in the way he treated commercial tokens, charms and amulets. He clearly understood that these things were not coins, and it was only because the old catalogs down through the ages had recorded them that he retained them. Actually the whole organization of the book was identical to that of other coin catalogs.

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though Weng's research methods were relatively progressive, they were not completely so. He said that his method for studying Northern Song matching sets was "to distinguish their inscriptions, forms, color, substance and sound, and make fine distinctions in terms of these five qualities." In fact this was his method for investigating coins in general. He has here omitted one crucial factor, the weight of a coin. In *Collected Investigations of Ancient Coins*, the main thing was to discuss a coin's inscription and size, its weight being viewed as relatively unimportant. Particularly for the knives and spades, he almost never records weights.

This flaw is not found merely in this work. What is more important is the influence it had on later works. Because Weng Shupei was so revered by later numismatists, the research methods he promoted were also taken seriously. Later numismatists solely concentrated on inscriptions, form, color, substance and sound, and also neglected the weight of coins. Dai Xi even considered it pedantic to study coins' sizes and weights. Actually, however, the *Collected Investigations of Ancient Coins* does not entirely omit discussions of coins' weights.

Third, though the book contains 200-300,000 characters, most of it is material copied from earlier writers. The author's own notes only come to 80-90,000 characters, and most of these are devoted to descriptions of variant forms, but since there are no illustrations, they make for rather dull reading. Of course methods for photo offset printing of photographs were not available then, and Weng himself had said that illustrations were hard to reproduce in a printed book. Their absence must, nevertheless, be

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Coin Register had 24 *juan*. The first *juan* dealt with Qing Dynasty coins. The second through the fifth were on ancient knives and spades. The sixth through the seventeenth dealt with coins from Zhou through Ming by period. The eighteenth was on unusual items. The nineteenth was on miscellaneous items. The twentieth was on tokens, the twenty-first on counterfeits, the twenty-second on foreign coins, the twenty-third on Western coins, and the twenty-fourth on coin molds and paper money. The work was fully illustrated, and there was an analysis of each item. Ni Mo also states that after Jiang Deliang's death, the manuscript was given by Song Baochun (Zhishan) to Chu Shangling's elder brother, Pengling, to publish, and that it was later lost.

considered a flaw. Aside from enumerating variant forms, Weng provides no particularly good analysis, nor does he make any discoveries. Neither did he establish a nomenclature for variant forms.

In his preface Weng also emphasized the expensiveness and scarcity of ancient money, and provided serveral money prices of goods. Unfortunately he did not develop his investigation of coins' purchasing power further. That numismatists do not concern themselves with money's purchasing power is common both within China and abroad, but it ought not to be this way. In fact only numismatists hold the objects most necessary for studying money's purchasing power. This cannot be considered a flaw in *Collected Investigations of Ancient Coins*. We cannot make so high a demand of a person from that time. Basically, money can be investigated from two perspectives, the cultural and the economic. Numismatists tend to emphasize the cultural angle and neglect the economic one.

Chu Shangling (alternate name Weiyuan) was from Laiyang in Shandong. He said that he had spent forty years collecting and studying coins, and wrote *Record of Auspicious Metal I Have Seen*, in sixteen *juan*. The blocks for it were carved in jiaqing 24 (1819), and it was printed the following year. It was fortunate that he was able to supervise the publication of his own work, which neither Jiang Deliang nor Weng Shupei had managed to do.

Chu's book had 1,210 coin illustrations and a text

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of over 70,000 words. Its greatest contribution was to place the knife and spade coins in Spring-Autumn and Warring States times, and disprove the attribution of them to the age of the Three Emperors and Five Rulers as was done in the old days.

Chu Shangling had progressed to the study of excavated coins. The methods he used were fundamentally scientific. Some of his judgments are very plausible. His quotations from Liu Shilu (Qingyuan) are mostly plausible. Though Liu Shilu's essay *Decipherment of Xia Ransom Metal Inscriptions* is not worth summarizing here, some of his better ideas have been preserved in *Record of Auspicious Metal I Have Seen*.

Nevertheless, this book is not without shortcomings or errors. It is arranged chronologically, but the first *juan* on Zhou official coins includes three *baohuo*, a *dong Zhou*, a *yuan*, a *chang yuan yi suo*, none of which (except for the *dong Zhou* ring coin) are Zhou coins. He places the shovel-shaped coin after the flat-handle spades, even though he acknowledges that "from the fineness of its copper, and its seal script inscription, it would appear to precede the aforementioned spades."

Some of his errors are perpetuations of those made by his predecessors, as when he takes the *baohuo* for a coin of King Jing of Zhou, the Yong'an iron coin for a coin of Juqu Mengxun of Northern Liang, a Small-spring Value-one for a Goose-eye cash of Emperor Fei of Liu-Song, Wang Mang's Spade-spring for a coin of Emperor Wu of Liang, a Tianfu Tranquil Treasure for a coin of Shi-Jin, a Taiping Xingbao for a Liao coin, a Zhiping Sagely Treasure for a coin of Xu Shouhui, and a Tianding Circulating Treasure for a Dali state coin. He even accepts some coins which simply did not exist, such as a Five Phoenix.

Not all of his coin depictions are based on the coins themselves. For example, of Wang Mang's ten spades, he does not depict the "7" on the Adult-spade-seven-hundred in its archaic form as "TT," and does the same with the "9" "TTTT" on the Secondary-spade-nine-hundred.

Nevertheless, the *Record of Auspicious Metal I Have Seen* has still not lost its high numismatic repute. It is very difficult for a numismatic work to be entirely without error. The errors he carried over from his predecessors are still less his responsibility, since a single person cannot resolve all suspect or difficult points.[4]

Ni Mo (alternate name Yucun, 1750-1825) was from Anhui. He passed the Metropolitan Examination in jiaqing 4 (1799), and served as a district magistrate. He was born before Jiang Deliang and Weng Shupei, but his work as a collector and student of coins was influenced by the two of them. His *Ancient and Modern Coins Outline* in 34 *juan* is almost identical in its topical arrangement to Jiang Deliang's work. Its arrangement is very confused.

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[4]Ding Fubao states that the essence of Jiang Deliang's *Coin Register* is extracted and recorded in *Record of Auspicious Metal I Have Seen*. (Cf. *Encyclopedia of Ancient Coins*, "Introduction.") This caused Chu Shangling to hide the truth to avert suspicion. Ding Fubao was probably basing this inference on the words of Ni Mo. He himself had never seen Jiang's book. How could he tell that Chu's book had selected the essence from it? Jiang Deliang died in qianlong 58 [1785], while *Record of Auspicious Metal I Have Seen* was revised in jiaqing 5 [1800], so in chronological terms the latter could have taken material from the former, but the latter does not have the *huoren* spade, it reads the character []a as [],b and does not have an Anbang knife. Nor does it contain the errors found in Jiang's work. For some common translations, like *ganjing*c and *lu*,d Chu Shangling quotes Liu Shilu, unless this is an intentional cover up. Actually, Chu Shangling was not very fond of copying material, whereas Ni Mo did like to do so. The tables of contents and arrangements of the Chu and Jiang books also differ. Chu omitted Qing coins and Western coins. It appears that this case is worth further inquiry.

Its two main divisions are into text and coin illustrations. The first *juan* concerns material on the early Qing coinage, such as material on the price of coins, private minting and melting down, the price of copper and coin policies. The *juan* from number 27 on deal with the origins and circulation of paper money, catalogs down through history, coin systems over time, an appendix on ancient coins, names of ancient and modern coin collectors, and a summary of the *Coin Outline*.

All of this is copied from old written sources or from Weng Shupei's *Collected Investigations of Ancient Coins*. Much of it is outside the scope of numismatics, but has value as primary source material. The first 26 *juan* contain coin illustrations, but also include coin molds and various amulets, the Horse coins and various rare and unusual ancient objects.

The coin illustration portion also includes simple
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captions, which mostly add nothing new. Knives and spades are mostly explained according to the old theories. He found making mistakes and accepting counterfeit coins hard to avoid, as for example, taking the Yong'an iron coin for a Western Xia coin, and mistaking both the Southern Tang large Inaugural and the Min Inaugural for Tang coins. He also records fake coins, like the Hundred Metal, the Dading equals-hundred, Six-grainer, Taihe Monetary Spring, the character *yang* Inaugural, the Kangding Original Treasure, the Xianchun reverse 9 and reverse 10, the Taiping Original Treasure, the character *qin* Hongwu coin, and the One-hundred Cash Diminished Coin Token.

In general Ni Mo's work was not as not as good as *Record of Auspicious Metal I Have Seen*, but it includes over 4,000 illustrations, and so variant forms are rather numerous. There are 195 *ming* knives, including one Qi *ming* knife. The Korean Changping Circulating Treasure is present in over a hundred forms.

Also worthy of note are the Western coins among the foreign coins, in which respect Jiang Deliang's work was being imitated. Gold, silver and copper coins are included, with silver coins the most numerous. There are Spanish King Charles silver dollars, Doubloons, Horse Swords, U.S. silver dollars, as well as a number of early German silver dollars. There are also some brand labels from ingots, which were then accepted according to their weights. There are Spanish and Portuguese gold coins, as well as Dutch ducatons. Most of the copper coins are Russian. *Ancient and Modern Coins Outline* was completed at the beginning of daoguang [1821], but was not printed by Ni Mo's descendants until the guangxu period [1875-1908]. The printing block carver did not understand foreign writing, and so Western coins were often printed with their inscriptions reversed, making them hard to read.

The most important numismatists during the daoguang period [1821-1851] were Cai Yun, Dai Xi, Liu Xihai and Ma Ang.

Cai Yun's (alternate name Tiegeng, 1764-1824) *Habitual Conversations*, in six *juan*, was completed in daoguang 1 [1821].[5] The text, which is not illustrated, makes substantial use of textual verification methods, is not a fully worked out and organized piece of writing, but rather takes the form of notes from reading. Its contents include discussions of weight standards, spade coins, knife coins, ring coins and round coins. His use of textual verification is not limited to the coins themselves, but also includes statements on coins in ancient literary works.

Some of his analyses are creative, as for example concerning the Western Han Five-*fen* and Three-*fen* coins, which he does not explain in terms of their own sizes or weights, but through comparison with the Twelve-grainer (i.e. Half-ouncer). This is very perspicacious. Of course it is inevitable that there are also places where his explanations are arbitrary and far-fetched. For example he explains both the word *bu* in the *Book of Odes*' "holding a *bu* to trade for silk" and the *Mencius*'s "spades [*bu*] which are in hamlets without men" as metal moneys rather than as meaning cloth. Another such example is his interpretation of the inscription on the Demon-face coin as the character *jin*, as in the Central Chinese state name of Spring-Autumn times. He rather idiosyncratically rebaptizes it as Jin money.

Dai Xi's (alternate name Chunshi, 1801-1860) *Collected Words on Ancient Coins*[6] was completed in daoguang 17 [1837]. It too took the form of reading notes, but Dai made a great effort to be interesting. The writing was lively and some of his explanations are worth noting. For example, he says that "because coins in collections can fill in the gaps in history, they are precious. Therefore, unusual coins which can be verified rank first; those which cannot be verified rank next; amulets rank last."[7] Though

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[5] At the end of the book is a postface by Guo Quan and Lu Jun, dated daoguang dinghai (7th year) [1827], Summer, 5th month.

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[6] This book of Dai Xi's originally existed only in a manuscript copy. It was written out by him personally in the thin-gold calligraphic style, and probably was illustrated. The presently existing woodblock edition was not printed until tongzhi 11 [1885] from the copy made after his death by Bao Kang and Hu Yizan, and which was edited by Wu Dacheng.

[7] *Collected Words on Ancient Coins*, 3, "The Great Qi Cir-

the unverifiable coins of secondary importance
[933]
are worthy of discussion, it ought to be said that the importance he ascribes to the debased amulets is correct. At least this is the case when speaking of money.

He was the discoverer of the famous Great Qi Circulating Treasure, and was the first to record the Wanli Mined Silver, but his powers of judgment and observation concerning coins were not necessarily higher than those of men in general. He treated the Great Qi Circulating Treasure as though it was a coin of Huang Chao, and did not notice that its construction resembled that of the Great Tang Circulating Treasure. He also mistook such thin and small Annamese coins as the Jianwen Circulating Treasure, Tianshun Circulating Treasure, Chenghua Circulating Treasure and Hongzhi's Treasure for Ming Dynasty coins.

Since late Qing, numismatists have often linked Liu Xihai's (alternate name Yanting) *Ancient Spring Collection* with Weng Shupei's *Collected Investigations of Ancient Coins*, but this is inappropriate. The only similarity between the two is that neither was circulated in print. Weng's book had a text, but lacked illustrations. Liu's book had illustrations, but lacked a text. There are over 4,600 illustrations in *Ancient Spring Collection*, including several dozen coin mold illustrations. The importance of the coin illustrations to numismatics is evident. Liu Xihai had collected coins for forty years, and had a number of fine specimens. This was especially true of his Song iron coins, which are not found in the old catalogs. The coins included in *Ancient Spring Collection* were not limited to items from his own collection, but included the holdings of various collectors of the time.

However, just as Weng Shupei said,

> he merely made rubbings of their inscriptions, and set them out in fascicles, but had not one word of redaction. His reward was to get to examine other collectors' holdings. There were no small number of things to give pleasure to the eye, but this was not to make a book. It merely matched the general run of printed catalogs of recent generations.

Weng Shupei was here not speaking of *Ancient Spring Collection*, but his words would have been an appropriate criticism of that work as well.

Liu Xihai had revised *Collected Investigations of Ancient Coins*, and it must contain nearly 10,000 characters worth of his notes. Judging from these notes, we can only say that Liu Xihai was a collector. His discussion was limited to matters concerning the exchange and sale of coins, as for example in what month of what year and from whom he had bought a certain coin, or that a certain coin was in the possession of such and such a man. None of this contained anything of importance for numismatics. His other work, *Verses on the Admirable Shade Pavilion Discussions of Coins*[8] in two *juan* cannot be said to have been a numismatic work either. Though a quotation from some written source is placed after each poem, including some from Weng Shupei, no textual research was performed, nor does it contain any original ideas.

He breaks up the character for "ax" into "metal" and "money," and reads the inscription "weight one ounce twelve grains" as "weight one ounce thirteen grains." His illustrations include one of a character *yang* Inaugural, and among his coin molds is a Qi knife bronze mold, both of which are unreliable.

Ma Ang's (alternate name Bo'ang) *Money Spade Inscription Investigations*, in four *juan*, was printed in daoguang 22 (1842). It is a monographic treatment of knife and spade coin inscriptions, and is not a genuine numismatic work, but the inscriptions on knife and spade coins are something that numismatists should investigate, and so everyone ranks it alongside other numismatic works.
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Evaluations of this book differ. Some say that it falls short because of its dubious explanations.[9] Others say its author was better than the average for his generation, that he was broad in learning and seminal in thought, and could speak for a whole school of thought.[10]

Ma Ang did indeed take his own road, and he did make some discoveries, but his conclusions were often too clever by half, ending in a blunder. Most people supposed that one of his contributions was to assign the coins to the states which minted them, but actually Chu Shangling had already spoken of this before him. He said that Chu Shangling had been insufficiently precise, but Ma's own errors arose precisely from his interpretations of inscriptions.

He said that the ancient cowry money was a minted money rather than natural cowry shell, and believed that the ancient form of the character for cowry, [],[e] was a combination of the characters

culating Treasure."

[8] *Verses on the Admirable Shade Pavilion Discussions of Coins* appeared after *Ancient Spring Collection*. There is a postface by Zhang Kaifu, dated daoguang 18 [1838]. Its blocks were carved in xianfeng 5 yimao [1855].

[9] Bao Kang, *Examination of Explanations of Ancient Cabinets of Coins*.

[10] Luo Zhenyu, *Song Cottage Daily Notes*.

meaning "half" and "ounce." He said that the Demon Face coin was minted by the state of Qin, and its inscription combined the three characters meaning "equals half ounce." He also stated that the ancients made 6 grains equal to 1 *jin* [meaning metal], and that the term *jin* in ancient documents, like the term *yi*, meant a weight of 6 grains. He interpreted the archaic character []f as [],g and []h as [],i meaning "jointly." The Anyang knife becomes the Yanyang knife, the Construct the Nation knife becomes the Communicate to the Nation knife, the graph []j becomes [],k the *yihuo* becomes the *yanhuo*, Ge City becomes Hu City, Taoyang becomes Miyang, Zhongdu becomes Zhongwu, Yu 1-ax becomes Wei ax 1 *jin*, *jing* 1 ax becomes Zhao ax 1 *jin*, the character []l becomes [],m and []l half becomes [].n

There were a number of other numismatic works during the first half of the nineteenth century. Wu Wenbing's *On Coin Illustrations* of jiaqing 5 [1800] had six *juan*, and Qu Mufu's *Record of Coins Supplemented* of jiaqing 11 [1806] had twenty *juan*. The latter of these was a supplement to Hong Zun's *Record of Coins*. Before long, Qu went on to compose *Record of Coins Continued Compilation* in twenty *juan*. There was also Sheng Zilü's *History of the Springs*, in sixteen *juan*. I do not know in what year it was written. The woodblock illustrations in these works were not faithful to reality, and their contents were not remarkable, mainly having been copied from other works.

Meng Yigang's *Spring and Spade Unified Record* came out in daoguang 5 [1825]. It set out a group of forged Tang and Song Treasure Certificates.[11] It was wildly inaccurate and incoherent, and has badly deceived later writers. He bragged that he had "seemingly had miraculous aid." He mistook a Japanese *Shinko kaiho* for Tang Emperor Zhongzong's Zhou Interegnum Empress Wu coin, also without evidence. He was, however, the first to record the character *xi* and character *gong* Kangxi coins, along with their Manchu inscriptions. He also mentions the Great Qi Circulating Treasure, saying it was a coin of Huang Chao's Qi state. If the publication date of Meng's book is reliable, then this citation is even earlier than the one in *Collected Words on Ancient Coins*.

The development of numismatics after the middle of the eighteenth century was linked to the excavation of coins from the earth. There is not much recorded on excavation of coins in China before the Qing, because previous numismatists did not pay much attention to this source.

It was not until the development of textual verification studies that researchers began to pay attention to the coins themselves, rather than to empty talk. The reason Chu Shangling's *Record of Auspicious Metal I Have Seen* has value is precisely because it was just at that time that excavated coins were becoming very numerous, and he realized that inscriptions and provenances of coins could be determined on the basis of places where they were excavated.

For example, prior to Yuan and Ming, the hollow-socket spade

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had never been mentioned by anybody, but the number excavated during the qianlong and jiaqing periods steadily increased. On the basis of their copper content and inscriptions, Chu Shangling determined that the hollow-socket spades were all earlier than the flat-handled spades, and since many of them were being unearthed in Zhongzhou rather than elsewhere, with some also being unearthed in the area to the right of the mountains near Zhongzhou, he decided that they were Wei coins. Because the *pingyang* small spades were excavated along the Changzi-Dunliu circuit, he decided they were cast by Pingyang in the state of Zhao. The *zhongdu* small spades were also excavated along a line from Xiangyuan to Dunliu on the right of the mountains, and so he decided they were Jin spades.

Chu Shangling said that all the Qi knives came from his home town, and so he decided they formed the Qi monetary system. He also listed the five excavations he had personally witnessed. The first of these occurred in qianlong 51 (1786), when over 100 items were unearthed at Zhaowangzhuang,

[11] The book contains illustrations of such things as Emperor Gaozong of Tang's Great Tang Treasure Certificates in 1-string and 10-string denominations; Emperor Wuzong's Great Tang Legal Tender Treasure Certificates in ten denominations from 1-string to 10-strings; Emperor Xuanzong's Great Tang Army Record Treasure Certificates, in denominations of 10-cash, 100 and 1-string; Emperor Yizong's Great Tang General Circulation Treasure Certificate 10-string and 100-string denominations; Emperor Zhaozong's Great Tang General Circulation Treasure Certificate 5-string, 50-string, 55-string and 100-string denominations; tianyou year-period Great Tang Convenience the People Treasure Certificate 1-string, 10-string, and 100-string denominations; Emperor Jingzong's Great Tang Treasure Certificate 10-string and 100-string denominations. There are also a Great Zhou General Circulation Treasure Certificate and a Great Song Convenience the People Treasure Certificate.

The author was probably cheated by forgers over all these notes, but later men have been induced to believe in them, as, for example, Wang Xiaotong's *History of Chinese Commerce* and E. Kann's *Chinese Paper Currency*, both of which quote Meng.

south of Changyang city. Most of these were three-character knives, but some had four characters. The second excavation occurred in jiaqing 6 (1801), when several dozen Jimo knives were excavated at the old city of Gaoyu, northeast of Jimo. These included several Anyang knives. The third excavation was in daoguang 1 (1821), when several dozen Qi knives, including several Jimo and Anyang knives were unearthed at Yanjiacun west of Songyang city. The fourth excavation occurred in daoguang 2 in Taishangzhuang, east of Jimo city, where several dozen Jimo knives were unearthed. The fifth excavation was in daoguang 3, in Zheshangzhuang, southeast of Changyang city, where several hundred Qi knives turned up.

In the course of thirty odd years, there were five excavations within a hundred *li* radius of his home town of Laiyang, Shandong. He also states that occasionally *chengbo* knives showed up among these. These are all highly valuable excavation reports. Hitherto some people had believed the *ming* knives were turned out by the Lü dynasty of Qi, but since a full thousand of them were unearthed at this time from an abandoned well and a crumbling wall in Yizhou, in the Hejian region, and Chu Shangling had never seen any turn up in his home town region in Lü territory, he decided they were Yan knives.

Dai Xi mentions the excavation during the qianlong period of a Taiping Hundred-cash and a Dingping one-hundred in Linping, Zhejiang.[12] Before then, these two coins were very rarely seen. As a consequence, people had to depend on Gu Xuan's thousand year old description of these two coins as having some sort of tortoise reverse, some sort of wave-like line. After this unearthing of two pots of them, these two kinds of coins spread throughout the southeast, allowing Weng Shupei to describe them on the basis of personal observation. However, the ones Weng saw were not good specimens, and so his description was inexact.

The Xiaojian Four-grainer of Liu-Song was also once scarce. At the end of daoguang a jar of them was unearthed in Piling.[13] This coin then spread everywhere. Lü Quansun collected several hundred of them, and made rubbings of 54 variant forms. He bound these into a fascicle and in xianfeng 2 [1852] presented this to Chen Jieqi. This was the source of the presently existing *Rubbings of the Xiaojian Four-grainers Unearthed At Piling*.

From xianfeng on, the chief numismatists were Tang Yuhun (alternate name Xiyuan), Li Zuoxian (Zhupeng) and Bao Kang (Zinian).

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Tang Yuhun wrote *Collected Investigations of Coins* and *General Investigation of the Standard Coin*. The latter was a part of the former, and was solely devoted to the monetary system of the Qing Dynasty up until the daoguang period. It has both text and illustrations. The author states that the illustrations were based on rubbings, but the Qianlong Treasure Tibet coins from Tibet are copied as thin, square-holed round coins, and their inscriptions are incorrect.

Li Zuoxian's *Ancient Money and Exchange* was carved onto printing blocks in tongzhi 3 [1864]. As it assembled nearly 6,000 coin illustrations, which exceeded the number in *Ancient Spring Collection*, it was taken seriously by both contemporaries and later generations. Some even consider it the most important Qing Dynasty numismatic work. This is too high an evaluation. It is hardly worth mentioning so far as its text goes. In addition to some short explanations attached to the illustrations, most of the first four *juan* were copied from other books.

The important point about this book is the relatively large number of illustrations it contains, but that it is no higher in substance than its predecessors is evident from its contents, from the presence in it of forgeries, and from the technique of its printing block carving. It contains some other unverified items irrelevant to coins, unusual objects which have been altered, amulets formally made, charms, amulet astrological tokens, religious medals, designs without inscriptions and *damage* coins. These comprise almost one-fourth of the illustrations.

Of the genuine coins illustrated, a number are minor variants. For example, there are over 300

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[12] *Collected Words on Ancient Coins*, "Taiping Hundred-cash, Dingping one-hundred" article.

[13] Bao Kang, *Examination of Explanations of Ancient Cabinets of Coins*: "The Xiaojian Four-grainer has on one face a leek-leaf script inscription, and on the other a small seal script inscription. They were extremely difficult to obtain. Those interested in coins all said that just one of them would cost 20-30,000 cash. At the end of daoguang, a jar of them was unearthed by Nan Zhonghu. Yao Xian obtained several hundred of them, and gave them away as gifts. All sizes were mixed together. Some had one side's inscription in reverse order, some read from the left, some from the right, and some had one character right side up and one upside down. Some had one side with horizontal inscriptions above and below the hole, and some with the inscription on either side of the hole. Some had one side upside down, and one side in the standard form. Others had both sides in the standard form, with four stars, four rings, or four ring marks. The inscription Xiaojian appears in four variant forms: identically on both sides, in reverse order, horizontally, and in standard form. The inscription Four-grains also appears identically on both faces, or repeated above and below the hole. There

ming knife reverses, occupying four or five *juan*, and many of them are duplicates. Though there are some small variations in calligraphy among them, pre-Qin knives and spades were not inherently uniform.

This book also contains no small number of forgeries. Among the knife coins, for example, it has character nine and Qi *huo* knives. It has square-holed round coins like a Weight Twelve-grainer, a Taiyuan Monetary-spring, a Tianyou Original Treasure, a Deyou Original Treasure, a Jingyan Circulating Treasure, a Qianheng Circulating Treasure (Liao) and a Taiping Original Treasure. None of these ever existed, but the author accepted them without suspicion. He took the character nine knife as a unique specimen, and was quite pleased with himself about it. There were a number of year-periods during Ming when no coins were minted, but he filled in the gaps with fakes, among which were Annamese coins. Imitations and recut coins are still more numerous.[14]

Because of the praise it received at the time of publication from his friends, posterity has not distinguished between the good and the bad in it, and so this book has caused great harm. The notable point about its illustrations is the relatively large number of variant forms, something worthy of welcome by scholars, but this book was printed from carved woodblocks, and the coin illustrations were not well cut, not even being up to the level of earlier works. Important distinctions of detail as well as the artistic quality of the coins were lost.

For example there are circles on the reverse of the Construct-the-Nation knife, and there were two forms of the edge design on its obverse. Most have continuous edge border lines, but some have broken lines. Because Li Zuoxian and the woodcarver did not pay attention to this point, these differences are not reflected in the two examples of the Construct-the-Nation knife in this book. Some inscriptions on Chinese coins have artistic value, but in this book all inscriptions are carved

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identically. Li Zuoxian also wrote a *Continued Coin Discussions*, which not only did not contain anything original, but was not even willing to absorb other people's good ideas. For example he denied any connection between the hollow-socket spade and actual spades used as coins. He also disagreed with the decipherment of the characters for ax and *qiong*.

Bao Kang's (alternate name Zinian, 1810-?) writings were *Examination of Ancient Cabinets Compiled Drafts*, *Examination of Explanations of Ancient Cabinets of Coins*, *Large Spring Illustration Record* and *Coins and Exchange Continued*. *Compiled Drafts* is made up entirely of essays written as colophons, as well as complimentary verses composed as prefatory material for other men's works, and is of no great value. *Examination of Explanations* is very similar to Dai Xi's *Collected Words on Ancient Coins*, and deals with things he had personally seen and heard, as well as old customs and traditions concerning romantic incidents. *Large Spring Illustration Record* includes the large coins of the xianfeng and tongzhi periods, along with Xinjiang coins and Qing Dynasty local mint coins. *Coins and Exchange Continued* is a continuation of Li Zuoxian's *Ancient Money and Exchange*.

Bao Kang has been taken more seriously, simply because his powers of discrimination were better than average. He was proud of this himself. And yet he expressed no suspicion of the character nine knife, and he said that the character *yang* version of the Huichang Inaugural was the most scarce variant. Evidently his judgment was not without flaw. His research methods and the contents of his books were old fashioned. He took the Treasure *de* Office Xianfeng coin for a coin produced by the Hunan Changde mint, and mistook the place name Ye'erqiang [Yarkand] for Wushi. He was the first to record the character *yong* Longfeng Circulating Treasure (in *Coins and Exchange Continued*), but he supposed it to be an imitation of Han Lin'er's Longfeng coin. However, right up to the present, no one has learned the origins of this coin. Its inscriptions bears some points of similarity to Hongwu coins, but its level of manufacture is not up to that level.

Coins continued to be unearthed in very large numbers after the daoguang and xianfeng periods, but finds of hitherto unknown coins grew ever fewer. As a consequence, later numismatists could only perform piecemeal supplementary work. There were some specific discoveries, but no epoch-marking works were written. Hu Yizan (alternate name Shichā) and Wu Dacheng (alternate name Qingqing) are representative figures of that period.

There were three types of Qing Dynasty numismatic works.

One type was the general history, presenting a complete narrative running from ancient times to the time of writing, and which sought to make a complete selection of materials. Weng Shupei's *Collected Investigations of Ancient Coins* was of this type. Of the pre-Qing coin catalogs and treatises, most belonged to this category, differing only in their degree of complexity.

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are as many as 54 unique variants."

[14]Zheng Jiaxiang, "False Specimens in *Ancient Money and Exchange*," *Encyclopedia of Ancient Coins*, "Introduction: Counterfeit Coins," points out numerous recast and recut coins.

Another type was the historical monograph or monograph on a single dynasty, like Tang Yuhun's *General Investigation of the Standard Coin*, which deals only with Qing coins up to the daoguang period. Other monographs dealt with one type of coin, as did Bao Kang's *Large Spring Illustration Record*, which focused only on large coins. Still others had a particular point of emphasis, as did Ma Ang's *Money Spade Inscription Investigations*, which dealt solely with the inscriptions on knife and spade coins.

The third type of work took the form of reading notes, and dealt only with what a particular individual fancied, and made no attempt to organize the material, as for example, Cai Yun's

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Habitual Conversations and Dai Xi's *Collected Words on Ancient Coins*. Cai Yun went more deeply into textual verification than did Dai Xi. *Collected Words on Ancient Coins* was written in a more lively style than *Habitual Conversations*. Since it sought to be interesting, it concentrated on historical anecdotes, but like a great many other such works, its contents were fragmented, and did not constitute a well-articulated whole.

In any event, the very fact that Qing Dynasty numismatic works could be divided into such categories is itself a sign of progress. The second category in particular revealed the presence of a tendency toward specialization which was giving numismatic studies ever more depth.

I must point out that these men of the first three quarters of the nineteenth century were all from official circles, and all could also paint and compose poetry. They were often acquainted with each other. Even those who were not acquainted, could take advantage of their common tastes to become known to each other. Those who lived in the same area frequently met to show off their new acquisitions, have discussions, or exchange rubbings, making this a flourishing age for numismatics. Such circumstances had not been present in earlier times, and they had a very great stimulative effect upon numismatics.

This class of men wrote books not for profit, but rather produced them as a form of recreation. To some extent their writings served as gifts for their friends, and so the books often contained praise for each other's work. The collection and exchange of coins played a large role in their lives. That is why even if they had other formal professions, they were still willing to exhaust all their energies in the study of coins.

Such enthusiasm, added to their wealth and the leisure they enjoyed, should in principle have raised this science to a very high level, but because their research methods were still not entirely scientific, because their knowledge was insufficiently broad, and their logic was insufficiently strict, a great many of their conclusions were misleading, and their accomplishments fell short of the ideal. They even committed some unnecessary errors.

Of course mistakes in textual verification and wrong conclusions were sometimes unavoidable, and may be forgiven. The coin catalogs frequently contained fakes. Hardly a single catalog was able to avoid these. It was merely a question of how many such errors a catalog contained. In this respect, the later ones generally were superior, not only because methods had improved, but because reference materials were becoming ever more numerous. Hence we should remember the difficulties faced by our predecessors.

Nevertheless, some errors should have been avoidable. For example, the officially-compiled *Imperially Sanctioned Register of Coins* interprets the character *sheng* on the coin tokens circulated in Lin'anfu during Southern Song as an abbreviation of *Zhongshusheng*, or Secretariat of the central government. This shows that these academicians thought only about serving as officials and were unwilling to keep up with their studies. Actually, surviving Song Dynasty written sources contain numerous references to the "reduced hundred" [*shengmo*]. To cite another example of needless error, Tang Yuhun had clearly never seen the Qianlong Treasure Tibet coin, but he insisted on providing a grotesque picture of it in *General Investigation of the Standard Coin*, and actually labeled it as having been drawn from a rubbing. Obviously he had an insufficiently strict attitude toward scholarship.

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That period was not entirely lacking in criticism and countercriticism. For example, Chen Jieqi criticized some of the inscription decipherments in *Ancient Money and Exchange*. Li Zuoxian also got into some debates, and published Chen Jieqi's critiques along with his own in *Continued Coin Discussions*. This was a good custom. This excellent custom was one reason why Qing Dynasty numismatics enjoyed so notable a degree of development.

Nevertheless, Chen Jieqi was, after all, primarily an epigrapher, and so he used copies of the inscriptions on knife, spade and ring coins. Decipherment of these texts was his first priority. Recording of weight standards was his second priority. Illustrations were his third priority.[15] Such standards might not have been entirely appropriate even for bronze utensils, and were unsuitable for coins. However,

[15] *Continued Coin Discussions*, "Eastern Zhou Coins."

Bao Kang in *Continued Compiled Drafts* says that to discuss weight standards, one must determine which coins were the first to be minted, since as minting goes on, the coins become lighter and smaller. This was altogether inferred from examination of texts on weight systems, and cannot be said to have been a balanced view.

Qing and pre-Qing coin catalogs were all illustrated with woodblock prints, which invariably diverged from the forms on the original coins. This was an obstacle to the study of small variations. Ni Mo's *Outline of Ancient and Modern Coins* has a section on "Western Coins." Because the carver did not understand foreign script, he almost entirely miscopied the original shapes, and there is no way to make them out from the illustrations. Li Zuoxian's *Ancient Money and Exchange* suffers from the same limitation.

As a consequence, once photo offset printing became available, the woodblock coin catalogs of the old days became almost entirely dispensable.

Of course Qing Dynasty works on numismatics were not limited to those mentioned abaove. For example, the very title of Liu Shilu's mid-century *Decipherment of Xia Ransom Metal Inscriptions* is itself an error. Zhang Chongyi's *Coin Record New Redaction* contains a number of counterfeits. In addition, *Record of Spring Treasure Seen* was mainly copied from other books.

A number of book titles are listed by most coin catalogs, but they do not evaluate their contents, merely feeling obliged to record any they have heard of. Hence a number of books without any value have continued to be introduced, but not criticized. This sort of situation has not been limited to numismatics, but was a universal phenomenon in Chinese scholarship of the past: There has been a love of enumeration, without weighting, exercise of selectivity, or critical analysis. A work of great value has frequently been treated as being of the same importance in history books as an utterly valueless book, and has occupied an equal amount of space.

The development of Qing Dynasty numismatics cannot be separated from the large number of collectors and their energy. Some collectors kept in touch with the authors of books proposing thoeries about coins. They participated in research and debates on the subject. Some of them had a degree of scholarly attainment perhaps not inferior to that of men who had written books. It is merely

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because they did not write that they are unknown to posterity. Their contributions were often contained in the works of their friends. For example, the inscriptions *lishi*, *qiong* and *chun* were deciphered by Hu Yizan. Chen Jieqi said that the character nine knife was a complete fake. The character *yi* was recognized by Liu Xinyuan.

Though numismatic books were very numerous during the Qing Dyunasty, a number of numismatic questions remained without explanation. For example, not a single person did a thorough job of studying the Chongzhen coins of the Ming Dynasty. At most they were content to set out the various reverse inscriptions, but they did not seek to explain what they each actually meant.

Modern Chinese historical researchers tend toward the two extremes, and to not see the middle. Numismatics shares this trait. Most people either like the near contemporary gold, silver and copper coins and paper money, or they like ancient knife and spade coins. The great majority of objects between these two times are not taken up so enthusiastically. In particular, there are very few who specialize in the study of Ming Dynasty coins. If numismatics is truly to be studied as a science, then attention must certainly be paid to those weak segments before this science can gain full and evenly balanced development.

a.閎 b.黄 c.甘井 d.潞 e.[illegible] f.杏 g.合
h.杏甘 i.合屈 j.8 k.王 l.閔 m.閔 n.閔伯

8.4 Credit Institutions

1. Silver Shops and the Pawnbroking Trade

As was the case for monetary theory, China's credit institutions fell behind those of Europe during the Qing Dynasty.

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The banking systems of the European nations all formed during these several centuries. The first bank of issue in modern times, the Bank of Sweden, was established in shunzhi 13 (1656). The Bank of England was established in kangxi 33 (1694). This was the first large scale modern bank. John Law set up his bank in France during kangxi 55 (1716). In qianlong 30 (1765), Frederick the Great established the Imperial Family Bank in Berlin. Even the newly-created United States established the first Bank of the United States in qianlong 56 (1791).

In pre-guangxu [pre-1875] China, however, the whole of the credit trade remained in the hands of a large number of small-scale old style financial institutions, such as pawn shops, money shops and draft banks.

Silver shops remained rather important during Qing, because most cash and kind taxes were mainly collected in silver, and silver came in non-uniform fineness and weight. As a consequence most of it had first to be given over to the silver shops for melting down and casting into ingots before it was paid in to the tax collectors. Some silversmiths surrepetitiously added weights to the steelyard, and there was much blackmail and extortion going on. Sometimes, when village and township tax silver was forwarded to the prefecture-district level, they had the silversmiths recast it into large ingots before forwarding it to the provincial governmental offices. This provided yet another opportunity for skimming off profit. Hence the authorities frequently prohibited the practice.[1] The first silver coins made in China were minted by silversmiths.

The main business of the silver shops remained the hammering out of utensils and jewelry. Sharing the gold and silver business with them was a kind of silver furnace which specialized in melting down and casting silver ingots. These firms may be said to have evolved out of the silver shops. Later, when the financial market became developed in Shanghai, the position of these silver furnaces became very important. In places lacking public assay offices, the assaying of the fineness of silver was undertaken by the silver furnaces.

The term silver furnace was already present during the Ming Dynasty,[2] but they became more numerous during Qing.[3] Sometimes they were also

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[1] *Imperial Dynasty Investigation of Literary Remains*, 15, "Coins, 3": "In yongzheng 2 . . . the Secretary of the Board of Punishments exhorted the court in a memorial which said, 'Payment of all cash and grain taxes is allowed by regulation to be made in silver. The quality of the silver used in trade among the people is not necessarily of standard fineness, and must be given over to the silver shops for melting down before it is brought to the tax counter. When the official silversmiths melt it down, they are exacting over its fineness, and engage in constant extortions. Each has his own seal whereby he may be recognized. After the silver has been commuted and sealed at the prefecture-district level, it is again given to the silversmiths for resmelting into large ingots before it is released to the provincial civil government office. If the silversmith does not see his seal, in his report to the officials he insists that the fineness is low, and the responsibility for making up the deficiency is laid entirely on the original taxpaying household. This has become a heavy and wasteful burden upon the people. Henceforth it is requested that a severe prohibition be placed upon this abuse by silversmiths of taking the fineness of silver as a pretext to practice extortion.'"

Imperial Dynasty Universal Record, 83, "Outline of Food and Money, Taxes, first part": "In kangxi 39 there was established the rotating credential method. . . . Within the *jia* unit, the headship rotates, and the incumbent has the taxpaying households themselves seal their payments and put them over the counter. It is not permitted for the head of the *li* and the silversmith's employees to do this." *Ibid.*: "Prior to this, the meltage and wastage surcharge was higher in Sichuan than elsewhere. During the yongzheng period, the amount was continuously reduced. The officials were not satisfied with a moderate level, and because they surrepetitiously added to the weights on the steelyard, 100 ounces had to be more than 0.1 ounce heavier, and the tax-collecting clerks and the silversmiths who resmelted the silver aggressively fished for illicit profits."

East China Continued Record, Qianlong, 8, qianlong 3, 12th month, bingshen, proclamation: "Hitherto in Sichuan the meltage and wastage surcharge has been heavier than in other provinces. . . . Now it has been heard that the meltage and wastage surchange in the aforesaid province has not been diminished, and it is not just that the officials have craftily sought after private profit by surrepetitiously adding weights to the steelyards so that sometimes 0.1 ounce is added to each ounce. Those clerks who receive the taxes and the silversmiths who resmelt the silver, are also aggressively fishing for profit. As a consequence, the harm the little people suffer from this extortion is not small."

[2] Wen Bing, *Minor Information on the Heroic Emperor*, 5: "In tianqi 11 [*sic*], 4th month, the Governor of Zhending, Li Mo, wrote to the inspecting officials about incidents of 'extraordinary greed,' saying . . . 'and Guo Qigu was ordered to demand 3,000 ounces from the generals and officials of each garrison. Each first sent 500 ounces. Only the fire work garrison general, Wang Zhenzhong, stubbornly refused to respond . . . and sent a single silver *ruyi* sceptre from the silver furnace . . ."

called furnace houses, and there were both official and private furnaces. Official furnaces needed permission of the Board of Revenue to be established, but toward the end of the dynasty such limitations were loosened. These establishments simultaneously also engaged in the coin trade, and issued paper money.[4]

Some of the furnace houses also engaged in the credit trade. For example, the Yingkou [port of Niuzhuang. EHK] silver furnaces were originally in the business of minting Original Treasure ingots for people. After Yingkou was opened as a commercial port, trade developed, standard coins proved insufficient to meet the demand for money, and use of silver increased. Because the broken pieces of silver that merchants normally received were of non-uniform fineness, and so were not convenient to circulate, the merchants sent most of them to the silver furnaces for casting into Original Treasure. Later, as the number of people making such requests increased, and there was no time to meet the demand, the silver furnaces would receive the broken pieces of silver, deduct a meltage and wastage and handling fee, and commute the rest into Ying Treasure, for which they would issue a receipt. Such receipts
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circulated on the market like paper money or checks. Some merchants made a point of depositing pieces of silver with the silver furnaces, setting up a steady relationship to take advantage of the convenience provided. Even if he did not have ready silver involved, the merchant might ask the furnace house to set up an account, and issue such vouchers anyway, thus turning the silver furnace into a genuine credit institution.

By guangxu 9 (1883), the silver furnaces of Yingkou had established a guild, and fixed the first day of the 3rd, 6th, 9th and 12th months as the days for clearing accounts. This was called the *mao* period. Later, at the time of the First Sino-Japanese War, at the time of the Boxer Rebellion, and at the time of the Russo-Japanese War, they were severely shaken, and a number of them closed their doors,[5] though at the end of guangxu some 33 such firms remained. After the largest of them, the Dongheshun, closed its doors in guangxu 34 [1908], it was not long before the Xiyishun and Houfahe had also closed down, and from then on, the silver furnaces went into decline.

The pawnbroking business still occupied a very important position during the Qing Dynasty. In shunzhi 9 (1652), it was ruled that each provincial pawnshop was to pay an annual tax of 5 ounces of silver, and the Beijing pawnshops were to pay a tax proportioned to their sizes.[6] The pawn shop tax was

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[3]*The Scholars*, chapter 6: "That Thirdson Zhao [Zhao Laosan] who ran the rice shop was mistaken for the Zhao Laohan of the silver furnace. Actually he couldn't even come up with a plate."

[4]Xu Ke, *Minor Qing Certificates*, "Agricultural and Commercial Category," p. 46, "Furnace Houses": "Furnace houses are also called silver furnaces. They solely cast horse hoof silver. The capital, Tianjin, Shanghai and Hankou all have them. They also simultaneously engage in the coin trade, and issue paper money which circulates in the cities. These are comparable in strength to the money shop bills. When silver coins came into circulation, the business of the furnace houses decayed."

[5]Zhang Jiaxiang, *History of Chinese Monetary Systems*. Xu Ke, *Minor Qing Certificates*, "Agricultural and Commercial Category," p. 66, "Evolution of the Yingkou Silver Market": "Yingkou's furnace silver is close-account silver. It is so named because the furnace houses are close-account institutions. When the port of Yingkou was first opened [in 1858], commercial exchange used nothing but ready silver measured by the Ying weight standard. Thereafter, the market became ever more active, and the volume of goods imported and exported steadily increased. The demand for ready silver exceeded the supply. There was no surplus for circulation, and so this furnace silver was circulated as a substitute. It was merely fixed that on the first of the 3rd, 6th, 9th and 12th months every year, the accounts would be closed, and all paper would be liquidated for ready silver. This was called the *mao* period. When the *mao* came, all those with furnace silver would bring it in for redemption into ready silver. Merchants said this arrangement was convenient, and as it extended over time,
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it became a custom. When small silver coins came into general use, the Ying financial market shifted over to them. Small silver coins gradually became more numerous, and physical treasure silver correspondingly became scarcer. When the *mao* period came, and the furnace silver notes were exchanged for ready silver, they could not but follow the trends of the times and make the shift as well. Thereupon it was fixed that a furnace silver ingot weighing 53.5 ounces, would when the *mao* came, be exchanged for small silver coins to the amount of $81.

At the time of the 'Boxer Bandits' uprising of guangxu year gengzi, and the Russo-Japanese battles of year jiachen, the Fengtian commercial establishments frequently closed their doors, and all trade was harmed by the furnace houses using this as a pretext to manipulate things as they pleased. When the *mao* expiration date arrived, and they were unable to convert their paper to ready money, the credibility of furnace silver was gradually lost. Although eventually adjustment was made, in the end it could never return to the fixed price of $81. Nevertheless, one ingot's worth of furnace silver retained a market price of between $60 and $70 in small silver dollars."

[6]*Imperial Dynasty Universal Record*, 82, "Outline of Food and Money, 3, Taxes," first part.

renewed at a rate of 5 ounces per establishment in kangxi 3 (1664).[7] The anuual tax payments by pawn shops might reach more than 110,000 ounces,[8] so there must have been over 20,000 pawn shops in existence. The province with the largest number was Shanxi, which had 4,695 firms. Guangdong came next, with 2,688. Zhili was third, followed by Fujian, Gansu and Guizhou.

At the beginning of Qing, pawn shops were sometimes still called release shops [*jiepu*].[9] From kangxi times on, most were called pawn shops [*dangpu*],[10] or pledge shops [*dianpu*].[11] The term most commonly used for pawning things was *diandang*.[12] From jiaqing on, sometimes the practice was called *dianya*.[13]

QUANTITY OF PAWNSHOP CAPITAL OVER THE COURSE OF HISTORY

Dynasty	Capital Required For One Pawn Shop
Song	300-500 strings[14]

[7] *Ibid.*, 90, "Outline of Food and Money, 10, "Circulating Checks."

[8] *Great Qing Collected Statutes Elucidated*, 245, "Ivory Check Guild Pawn Shop Tax." The tax paid, arranged by province in descending quantity of tax paid, is as follows (the Jilin and Sichuan figures include the ivory tax):

Shansi	23,475 oz.	Zhili	9,835
Guangdong	13,440	Fujian	8.630 (including Taiwan)
Gansu	8,125	Shengjing	2,197.5
Guizhou	8.001	Yunnan	2,012
Shaanxi	7,410	Jiangxi	1,675
Jiangsu	6,665	Sichuan	1,485.8
Zhejiang	5,360	Guangxi	985
Anhui	4,435	Hunan	690
Shandong	4,370	Jilin	456.5
Henan	2,775	TOTAL	112,042.8 oz.

[9] *Dessicated Words of the Old Man of the Wilderness* (written during the kangxi period), chapter 28: "When a couple of days had passed, and after they had gone up to the tomb, Elder Aunt and Third Aunt were jointly managing the accounts, and all came to pay up their accounts, even on the tickets issued by the release shop, which required over 480 ounces of silver."

[10] *Rain Flower Fragrance* (written during the yongzheng period), Type 28, "Another Buddha Song": "There was a Xu Changnian who ran a pawn shop at the Great East Gate of Yangzhou. . . . Though he had wealth amounting to several tens of thousands, he was most greedy and most stingy." *Story of a Stone*, 48: "Within there was a certain Zhang Dehui, who since his youth had been in charge of the Xiefan Pawn Shop. He had some 2,000 to 3,000 in gold to make a living with." *Ibid.*, 57: "Suddenly Xiangyun was seen walking up carrying a pawn ticket in his hand. . . . Daiyu glanced at him, but did not recognize him." *Ibid.*, 81: "Mrs.-Wang said . . . 'That fellow, what's-his-name, Pan Sanbao, had a house that he sold to the pawn shop diagonally opposite. This house had increased in value several fold. Pan Sanbao wanted more for it, but why should the pawn shop have been willing to go that far?" *High Grade Treasure Inspection* (written during the daoguang period), chapter 13: "This Lord Pan was called Pan Qiguan. He was a rich old man of the capital, whose family was worth a million. He ran three silver houses and two pawn shops. . . . He was originally from Shanxi." *Smiling Grove Broad Record* (written during the guangxu period), "We Don't Recognize the Goods": "A Huizhou man ran a pawn shop. He redeemed goods only when the right ticket was presented. There was a fellow who brought in a single thickness quilt [*danbei*] to pawn. He set it down on the ticket as a leather gong [*piluo*], and gave 500 cash for it. Some one brought in a *sheng* pan-pipe to pawn. He set it down as a striped bamboo wine jar, and gave 800 cash for it. Someone brought in a *di* flute to pawn. He put it down as a silk lined musket, and allowed 200 cash for it. . . ." *Notes on the Current Shape of Official Life* (written at the end of guangxu), chapter 11: "And he said that Lord Zou went off carrying a bundle of clothing, walked into a pawn shop, put it on the counter, and unwrapped it for Chaofeng to see. He was only willing to pawn it for 400 copper cash."

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[11] *East China Continued Record*, Qianlong, 117, qianlong 58, 6th month, bingzi, proclamation: "Shulin has memorialized that he has examined the magistrate of Lishuixian, Chen Huanggan's report that a person of that district, Tao Renguang, was disobedient to his clan ancestors, and while a clerk in Tao Yuchun's pledge shop, stole goods and absconded with them."

[12] *The Scholars*, chapter 26: "This person was a daughter of the Inner Bridge Hu family. The Hu family were in the office of the provincial civil administration. At first they married her to to a Wang Sanpang, who was in the pawn broking business in Anfeng." *Contending Spring Garden*, chapter 7: "Molun said, 'How could I have dared to sell it!' Having said this, he went out the door. He was carrying this pair of gold bracelets, which he took there to pawn. He got less than two-thirds of their value, exchanging them for some 70 ounces of silver . . . and wrote a false pawn ticket."

[13] *Xinzheng Former Collection*, latter part, "Ten in Gold to Gain Office": "During the jiaqing period . . . Yang Ganma's business had not been good for years. . . . His capital was exhausted. The shop manager demanded his subsistence silver very urgently, and so he arranged his garments, and went out the door, intending to pawn [*dianya*] something to pay the man off. No sooner had he gone in the door of the pawn shop, than a man sitting in a glassed-in sedan chair came up . . ."

[14] In his *Critique of the Five Dynasties History New Redaction*, Chubo [or Nakabo, or perhaps Nakagure. EHK] Yozaburo

Ming	1,000 oz. (small pawn shop)[15]
	2,000 oz. (urban release pawnshop)[16]
	3,000 oz. (populous region, small shop)
	10,000 oz. (pop. reg. large shop)[17]
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Qing, qianlong	1,000+ oz. (village, market town)[18]
	4,000 oz (middling city, small shop)[19]
	80,000 oz.[20]
xianfeng	20,000+ oz. (Beijing, small shop)
	30-40,000 oz. (Beijing middling shop)
	40-50,000 oz. (Beijing large shop)[21]

The scale of the pawnbroking business became larger than before during the Qing Dynasty. We can tell from contemporary fiction that the capitalization of pawnbroking increased from dynasty to dynasty. [Cf. above table.]

The scope of the business of pawn shops broadened as their capitalization increased. They not only made loans, but also accepted deposits. At the beginning of Qing this was called interest-producing silver. Because of an earthquake in Ningxiazhen in qianlong 3 [1738], the following year the government issued orders abrogating the 8,570 ounces of interest-producing silver pawn shops were due in areas that had suffered from the disaster.[22] In qianlong 16 [1751], Kaihua, Yunnan established two interest-producing pawn shops, apparently using government capital.[23] In these cases, however, the term interest-producing pawn shop does not refer to pawn shops which accepted deposits, but means that such pawn shops produced interest (actually, a profit) in the course of their business.[24]

In some places the authorities employed public funds to set up pawn shops. For example, in qianlong 24 [1759], the Governor of Guangxi, Ebao, proposed employing the 41,000 ounces of silver for reward and supply of Guangxi soldiers to open pawn shops, and fixing a 20 percent profit to be received from them, which was done for more than three decades.[25] This shows how exploitative these businesses were. Surplus funds from the Shanxi provincial

states that capital of 300-500 strings of cash was required to open a release treasury.

[15] *Rousing the Age Marriage Affinity*.

[16] The capitalization of the *jiedangpu* pawnshop of Ximen Qing's family in *Golden Lotus*.

[17] *Bean Shed Words of Leisure*, number 3, Wang Nian wanted to use 3,000 ounces to have his son go to Pingjiang to open a small pawn shop. His son said that it would take 10,000.

[18] *East China Continued Record*, Qianlong, 117, qianlong 58, proclamation: "A village or market town pledge shop's capital is only something over 1,000 metal, and what Tao Renguang has stolen is more than 300 ounces."

[19] *The Scholars*, chapter 52, "And it is said that this Mao Two-beards had in former years run a woolen yarn shop in Hang city with a capital of over 2,000 ounces. Later he deposited it with the firm of Hu Second Lord's son, and earned another 2,000 in silver. He moved to Jiaxingfu and opened a small pawn shop."

[20] Heshen had owned pawn shops in Tongzhou and Jizhou, but the sources differ on the capital involved for each. The "List of Heshen's Family Property Investigation Copy" included in *Historical Compendium of Chinese Domestic Disorders and Foreign Disasters* states: "Ten silver houses had a capital of 600,000 in silver. Ten pawn shops had a capital of 800,000 in silver." That would make the average per shop 80,000 ounces. Chen Qiguang's work of tongzhi 11, *Commonplace Studio Jottings* (cf. *Jottings and Novels Outlines*) makes it "Seven pawn shops have a capital of 800,000 ounces of silver." *Yongtan Notes*' estimate of an average of 300-400,000 ounces per firm is probably too high.

[21] Cf. memorial of Zhang Xiuyu.

[22] *Qing Emperor Gaozong Veritable Record*, 88.

[23] *Ibid.*, 399, qianlong 16, 9th month, the Kaihua, Yunnan garrison head, Zhang Lingxia, memorialized: "Two more interest producing pawnshops have been established in Kaihua. Because it was originally fixed that 1,100 cash would be equal to 1 ounce of silver, the amount coming in and going out was not at the same level as the market price. I feared that if there was a deficiency in the commutation rate, people would not pawn articles for cash. The soldiers and civilians were not happy about going to pawn things. It reached the point where interest was not being levied. Now the exchange rate is over 2,000 standard coins to the string. Silver goes out and silver comes in. Coins are given out in exchange for pledges, and are taken in for their redemption. The original capital is not in danger."

[24] *Ibid.*, 1168, qianlong 47, 10th month, proclamation: "According to He Gucheng's memorial, Chen Huizu handed over to Yi Qisou and Shen Zhaolun 30,000 ounces of silver, and had them open a pawn shop to produce interest."

[25] *Ibid.*, 595.

treasury deposited with pawn shops could earn interest of more than 10 percent.[26] Sichuan also had officially run pawn shops.[27]

There is one article in the indictment of Heshen brought down at the beginning of jiaqing which speaks of him lending over 100,000 to the pawn shops and coin shops in the neighborhood of Tongzhou so as to produce interest.[28]

The lending of funds here was actually the making of deposits. It was merely because the deposit trade had never since antiquity become well developed in China that the term deposit was not widely used. [The characters in Balzac's novels, set in Paris during the 1820s through 1840s, also often refer to deposits as lending money to merchant banks. EHK] Basically there is no great distinction between the making of deposits and the making of loans. These are two labels for the same kind of credit exchange. Nor were these practices limited to formal credit institutions. Ordinary commercial establishments also frequently accepted deposits.[29] During the daoguang period, a local government deposited 600,000 strings of cash in tax receipts in pawn shops to produce interest.[30]

The issue of credit money by the pawnbroking trade was probably common. When they accepted a pledge, they would not pay in ready cash, but in cash bills which could be redeemed for ready cash at any time. Pawn shops whose credit was good, could, of course, have the cash bills they issued circulate on the market. They might also issue silver bills. Silver bills might at first have been a kind of cashier's check, a dated bill redeemable for cash on a fixed date.[31] It would be issued at the request of the depositor. Later, the depositer could directly sign it, and transform it into

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[26] *Ibid.*, 517, qianlong 21, 7th month, the Governor of Shanxi, Mingde, memorialized: "We find that in Jin province the pawn merchants are rather numerous. They are also good at arranging transport. I request that surplus funds in the official treasury be loaned to the merchants in the amount of 80,000 ounces, for an interest rate of 10 percent. After five or six years, in addition to return of new

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and old capital, interest could be added to the capital in the amount of over 70,000 ounces of silver. Each year interest of over 8,600 ounces could be produced. This would be sufficient to handle soldier relief measures for the entire province. . . . There was obtained an edict assenting to the practice." *Ibid.*, 1176, qianlong 48, 3rd month, another proclamation: "Fundamentally, public funds in the provinces ought not to be handed over to the pledge merchants to produce interest, but We have heard that merchants are happy to borrow official funds, because they can be had for less than the interest rate of 30 percent that prevails among the people."

[27] *Ibid.*, 735, qianlong 30, 4th month, the Governor-General of Sichuan, He'ertai, memorialized: "Wedding and funeral gift silver for the soldiers of Sichuan . . . has formerly been under supervisory officials . . . [I] memorialize requesting that all Sichuan province garrison funds which have been lent to merchants at interest be collected back, with the original capital restored. In Chongqing and Luan[?]zhou there had not been any private pawn shops, and so the garrisons ran their own, producing interest to fund rewards. These have been ordered run as of old. . . . The capital of over 41,900 ounces in these two places only produces an annual profit of 5,300 to 5,400 ounces. This is not much compared to the copper cash mints. . . . It would be best if the official pawn shops set up by the garrison personnel were closed. The capital of these pawn shops . . . estimated at over 19,000 ounces, would be handed over to the coin offices, to await minting when a *mao*'s worth was accumulated. . . . An edict was obtained accepting for action all that had been advised."

[28] *Yongtan Notes.*

[29] Yuan Mei, *What the Master Did Not Talk About*, 12, "Silver Over the Course of a Generation Returns to Its Original Master": "Three days after being told about the birth of this child, he dug into the earth to bury the placenta, and found this gold. As he had no employment for it, he handed it over to a cloth shop to draw interest, which it has been doing for the past five years." *What the Master Did Not Talk About Continued*, 1, "Fu Botan's Righteous Dog": ". . . and he took out the scroll to show him, saying, 'This sum has been deposited with a certain guild. If you take this scroll there, you can obtain it." *Qing Emperor Gaozong Veritable Record*, 1446, qianlong 59, 2nd month, proclamation: "Nomusan was Joint Deputy Controller [of Jilin]. According to the present investigation into the sources of his abundant wealth, in addition to his houses and land, Nomusan also has 1,000 ounces of silver on deposit with a hat store, and 2,000 ounces of silver in a coin store. He had entrusted to Meng'e 1,000 ounces to be deposited with a pawn merchant, and 500 ounces with a miscellaneous goods shop."

[30] *East China Continued Record*, Daoguang [period], 58, daoguang 28, 7th month, renzi, proclamation: "Previously, according to the Censor Yang Tongru's memorial . . . after the former merchant Lu He finished the work, on the basis of that memorial, he took 600,000 strings of tax receipts, and handed them over to the pawn shops to produce interest, which was used for annual repairs. Now, as he has the responsibility for ordering the various officials to pay for the repairs, this sum of cash is not to be employed again for such expenditures."

[31] *Dessicated Words of the Old Man of the Wilderness*, chapter 27: "The bookkeeper said, 'If we give it to him now, I fear he will go back on his word. I'll accompany him to a release shop, and have them issue a silver bill to give him. We'll wait until the funeral is over to give him the silver. All our troubles will end when the main trouble ends."

an ordinary check.

At the time of the struggle over the price of coins during early Qing, on several occasions the government wanted to make use of the pawn shops to stabilize the price of coins. This was advocated by Tian Mao in his "Petition on Leveling the Price of Coins" of qianlong 2 (1737). In qianlong 9 (1744), E'ertai's "Eight Article Petition on the Circulating Coinage" also sought the cooperation of the pawn shops.

At that time there were some 600 to 700 pawn shops of different sizes in Beijing and its suburbs. Some were owned by officials, and some were run by merchants. Most of their transactions involved copper cash. Therefore it was thought to increase their capital by having them send copper cash they absorbed to official bureaus for issue.[32] At that time the money shops seemed to be standing in opposition to the government. They government said they wanted to rig the price of copper cash. By contrast, the pawn shops would become semi-official credit institutions. We can also say that the pawn shops represented the feudal official class's interests, and the money shops at that time were the representatives of the interests of the mercantile class.

The pawn shops cooperated with the government, and practiced exploitation of the people. This exploitation lay not only in the taking of heavy interest profits, but also in the performing of corrupt practices. A number of pawn shops used two steelyard scales. The one for accepting silver used heavy balance weights. The one for outgoing exchange used light ones. Therefore, they preferred to use silver when taking in pledges, and did not like to use coins, since it was easier to play tricks over fineness and weight when using silver.[33]

Fiscal difficulties during the jiaqing period evoked recommendations that five year loans be made from the pawn shops. Though this plan was not put into effect,[34] obviously the pawnbroking

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[32] *East China Continued Record*, Qianlong, 20, qianlong 9, E'ertai's petition on circulating the coinage's second and fourth articles are as follows:

"2. We should estimate the loan capital and the amount of cash coin they take in and put out for each of the pawn shops of the capital. It has been found that inside and outside the capital there are official and private, large and small pawn shops totalling 600 to 700. The quantity of cash coins they receive and pay out is most numerous. If our aim is to level down the price of coins, if each pawn shop borrows official funds for its capital, and pays in coins for sale on the market, then when the pawn shops increase their capital, they will daily put an additional number of coins out onto the market. The two will reinforce each other. We must have each of the pawn shops of the capital, whether official or private, have a generous amount of capital for each pledge, sending them 3,000 ounces of silver to handle at their discretion. These ounces of silver will be retained as capital, and each day they will pay in 24 strings of standard coins to the official coin offices. Each string of standard coins will have 10 cash added for office expenses. These coins will be sold for silver which the pawn shops will take back to serve as capital. As for the small pawn shops, their capital will be of various amounts. Those who wish to borrow silver will be permitted to apply at the coin office to do so. Investigation clearly shows that at present there is a framework for the capital, and an estimate will be made for lending it. The cash coins which they pay in, and the coins sold will be easily exchanged for ounces of silver. The procedures will be the same as for the large pawn shops. If we lend to the large and small pawn shops a sum of capital equal to about 500-600,000 ounces of silver, they could each day handle several thousand strings of cash. This would require the establishment of public offices to hold them, and the despatch of officials to manage them.

"4. The pawn shops in the capital city which are holding cash coins ought to estimate their number and send them to the offices for issue onto the market. It has been found that there are 600 to 700 pawn shops in the capital district. They have the largest number of coins on deposit during the interval between Fall and Winter. Although these funds constitute the working capital of the pawn shop, they are for the temporary relief of the little people. But if the amount of money accumulates in excessive quantities, it is unable to circulate and be transformed into something convenient for the people's use. At present if the price of cash coins is high, we must establish official coin offices to level its price, and when these are first established, the coins they mint are still unable to fill the gaps. When things are pawned for the Winter in pawn shops, they are kept idle. We should mobilize the large and small pawn shops inside and outside the capital, whether official

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or private, and have each large pawn shop put out 300 strings of standard coins, and each small pawn shop put out 100 strings of standard coins, each to send these sums to the official coin office for its personnel to issue. For this silver will be continuously exchanged in return. If half this amount is sent to the offices for sale, each pawn shop will continuously deliver enough to make up the amount. If a small pawn shop is temporarily unable to meet its quota, quantities of 100 strings will be sent one after the other until the amount is made up. If they have already borrowed capital from the office, the previous amount need not be sent over."

[33] *Qing Emperor Gaozong Veritable Record*, 352, qianlong 14, 11th month.

[34] *East China Continued Record*, Jiaqing, 37, jiaqing 19, 2nd month, wuwu, proclamation: "The Senior Academician and Board of Revenue Discussant, Zhu Li, memorialized to request that the pawn shops of Jiangsu and other provinces make loans at interest of 20 percent of their capital to run for five years. . .

trade was still an important credit institution, and that scheme foreshadowed the Qing court's later mobilization of public credit.

After the opening of the five Treaty Ports, urban commerce underwent further development, and pawnbroking advanced further to become split up into different grades. There had been distinctions before, such as the one between large and small pawn shops, but later on each of these grades of pawn shop had its own special name.

The largest were called *dianpu*. Not only was the capitalization of a *dianpu* large, but the length of time for which they would make a loan was also long, generally running eighteen months. Their interest rates were relatively low, and they set no limit on the number of articles that could be pawned.

The next largest were the *dangpu*. If a *dangpu*'s financial power was insufficient, it could politely decline to take an article in pawn. Third were the *zhipu*. Smallest were the *yadian*. The *yadian* had the shortest term of loan, generally from six to eight months. The interest they charged was the highest. Specific details of their operations varied by locality, and even the above labels were not entirely uniform from place to place.

There were probably around 200 pawn shops in Beijing during the guangxu period. They were all stripped bare during the Eight Power Expedition into Beijing. Even their doors, window shutters and foundation bricks were all carried off.[35] In Shanghai alone, according

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to an investigation made in guangxu 31 (1905),[36] in the north and south markets and in the International Settlement, there were over 150 pawn shops.

There was also an institution called a printing office [*yinju*], which was fairly similar to a pawn shop. It must have been linked to the *yinzi* or seal shop of the Ming Dynasty. Perhaps it had something to do with *yinzi* cash. *Yinzi* cash was a form of usury which had flourished since the beginning of Qing times, and resembled the "lamb interest" of the Yuan Dynasty. The printing offices made loans of relatively small amounts running from 1 string to 2 or 3 strings of capital cash. Someone known to the lender had to act as guarantor of the loan, which was calculated by the day or by the month.

According to what the original memorial stated, the pawnshop proprietors are mostly from old official and eunuch clans, and all have hearts willing to requite their obligations. This statement is an especially empty and exaggerated one. Certainly official and eunuch families are among those making a living this way, but this business for the most part is made up of intermediaries in the market. If you force them to do what they do not wish to do, and make excessive use of them as the state's tools, then there will be too much seeking out of profit."

[35]Zhong Fangshi, *Notes of Events of Year Gengzi* (Academia Sinica, Institute of History, Publication Number 3), 7th month, 27th day: "All 200 of the capital city's pawn shops and its more that 300 coin shops were looted by the bandit gangs connected with the foreigners until nothing remained." *Ibid.*, 8th month, 3rd day: "Inside and outside the city there remained only two pawn shops, one in Donkey Foal Lane and one in the Mule Market. Today, these too were looted by local bandits." *Ibid.*, Yang Diangao, *Notes of the Great Events of Year Gengzi*: "From the 17th on, the capital district was in an uproar. . . . The pawnshops in the western half of the city were all . . . by local roughnecks, and local poor people looted until they were empty. . . . The pawn shops of the eastern city and inner city . . . were all plundered by the Boxers, our retreating army, foreign soldiers and local bandits in succession. They left not a thing behind." *Ibid.*, "Of the more than 200 pawn shops inside and outside the capital, not a thing remained, even of the doors, window shutters and foundation bricks. There were less than ten firms not looted or only half looted. The firm in Crowded-bright Lane was guarded by a man with a repeating rifle on its roof . . . and so escaped plundering. The Huifeng company in South Willow Alley spent 4,000 ounces on insurance, but on the 24th was looted empty anyway."

[36]"The Shanghai Pawnbroking Trade," *Shanghai Yearbook* (Republic 24 [1935]).

2. *Money Shops and Silver Houses*

The scale and nature of the business of the money shops underwent expansion during late Ming and early Qing. They took advantage of the wild expansion of private coining to fish for profit.[1] They even hoarded standard coins,[2] and manipulated

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[1]*Imperial Dynasty Investigation of Literary Remains*: "Shunzhi 14 . . . a ban was placed on private coining of copper cash. . . . Those in the shops engaged in the sale of coins who mix in private coins are to be given 100 strokes of the bamboo, and are to be transported to Nanyang military station."

[2]*Ibid.*, 32, "Investigation of Market Purchases": "In qianlong 3, the Censor Tao Zhengjing offered an itemized memorial on reform. Hereafter shops accumulating coins will have no one to form agreements with, and will find themselves in an odd position. He requested that a dozen broker officials be established as was formerly done . . . and if the shops again accumulate cash, the previously set out prohibitions which have not

the price of coins.[3] Coin tables in the form of booths[4] could have slowly expanded into coin stores. These were originally for the purpose of exchanging copper cash, but turned into credit institutions which took deposits and made loans.

The main business of the money shops right up to the Qing Dynasty remained the provision of this money changing service. Hence they were also called exchange money shops [*duihuan qianzhuang*] or exchange shops [*duizhuang*].[5] Naturally, such exchange was accompanied by determination of the fineness and weight of gold and silver.[6] Being able to judge the fineness of the silver is the basis for money exchange. Since Yuan and Ming times, the exchange business of the silver shops had very quickly been usurped by the coin stores.

Only the highly capitalized and large scale money shops could engage in the deposit and loan business. The loan business must have developed first, with the deposit trade developing later. Some were already engaged in making loans by late Ming times. The acceptance of deposits

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was probably a Qing Dynasty development.

At the beginning of Qing, silver bills and bills of exchange were still in use.[7] Silver bills had maturation dates. Institutions like money shops and pawn shops could issue them, and deposit slips were also called silver bills.[8] Later, it seems, depositors could also issue documents over their signatures commissioning the money shop or pawn shop to pay over their funds to someone.[9] Bills of exchange were ori-

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fixed the quantities permitted will be so many empty words. . ."

[3]*Ibid.*, 16, "Investigation of Coins, 4": "In qianlong 2 . . . the Board of Revenue memorialized along with the Intendant's Office, and said that in the capital city . . . control over exchange is in the hands of the coin shops, and the officials have no control over such activity. Hence wicked merchants can raise the price as high as they please so as to scheme for fat profits."

[4]*Chongzhen Long Drafi*, 1, chongzhen 16, 11th month, jiyou, proclamation to Investigatory Office of the Boards of Revenue and Works: "There have been frequent edicts and petitions on the circulation of coins. The fundamental desire has been to assure a sufficiency for the state and to convenience the people. Recently it has been heard that coins have been terribly cheap, placing a bitter burden on the little people. . . . Both inside and outside the walls of the capital, all of the coin tables, coin markets, granaries, and the yamen of the five city guards detachments have had a severe ban placed on such activities, but they have continued to obtain an excessive amount. There has been a memorial every month on this."

[5]The qianlong 24 painting by Xu Yang, called "Painting of a Period of Plenty and Growth," depicts 9 money shops under the label *qianzhuang*, one under the label *duizhuang*, one called *duihuan qianzhuang*, and two as *duihuan yinqian*. Cf. Li Hua, "The Complexity of the Commerce and Industry of Early Qing Dynasty Suzhou As Seen From Xu Yang's 'Painting of a Period of Plenty and Growth,'" *Cultural Relics*, 1 (1960).

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[6]*The Scholars*, chapter 14: "During the evening, a fire was ignited in the furnace. The jar was placed into that fire. There was a squeaking sound. The jar was poured out, and there was an ingot of fine standard silver. Mr. Ma Two happily looked outside, and then poured out six or seven jars in succession to form six or seven large ingots of fine silver. He was doubtful. He did not know if they could be used or not. That night he slept. As dawn rose clearly the next day, he went downtown to the coin store to see about them. Everyone said they were 100 percent pure silver, and so he exchanged them for copper cash, which he brought back with him, and then hurried to Hong Handa's place below the Immortal to thank him."

Story of a Stone, 24: "And he said that Jia Yun had run into that matter, and he felt it was altogether uncommon. And he thought Ni Two's arrival was indeed a matter of interest. . . . And so he walked into a coin shop, and had that piece of silver weighed. The size was not bad. His joy grew ever greater."

Flowers in the Mirror, chapter 76: "Cizhi's impatience was such that she could only come forward, fold her hands in greeting, and say, 'Gentlemen, please. I want to exchange several ounces of silver.' Qingdian said, 'What are you talking about?' Cizhi replied, 'You have coins here! You've got an abacus here! Aren't you running a coin shop?' Qingdian said, 'To run a coin store you also need to make some profit. If you make a point of using just your bare eyes to tell the quality of the silver, you don't know whether it would be best to exchange a piece of silver or whether it would be better not to. You worry and worry, and dare not go into the business in the first place."

[7]*Dessicated Words of the Old Man of the Wilderness*, chapter 12: "On the wall was pasted an oath not to accept silver bills or bills of exchange, and not to make loans on the basis of pawn tickets."

[8]Xu Mei, *On Certificate Money* (of daoguang 26): "Although the principal for silver bills is on deposit for interest, the bills must be exchanged annually."

[9]*East China Continued Record*, Jiaqing, 13, jiaqing 7, 1st month, yiwei, proclamation: "On this day, the Junji Dachen and Judge of the Board of Punishments, Yuan Xi, inaugurated a bribery conspiracy case. Yuan Xi's statement was put in evidence. In it was a discussion of the circumstances of how Eluoxi was entrusted with an engraved diagram to take to Ming'an, and for which he was given a 1,000-ounce silver bill."

Xinzheng Continued Collection, first part, "Spirit of Contention": "Lu said, 'Since you fear that the goods cannot be sold, I will buy them all by myself, and at the poor original price. Half the goods cannot be moved. I estimate the value of the goods is 14,300 ounces.' Lu first gave a silver bill for 10,000 ounces, which they were ordered to take to the silver assay shop to have its genuineness attested and to be cashed."

ginally orders of payment to be made at some other place,[10] but because the credit of the establishments issuing them was good, they could keep turning over in circulation on the market almost like silver bills.[11] This was something which had evolved out of the money forwarding trade. The modern form of the word for bill of exchange[12] was already in use by the beginning of the daoguang period.

Another credit institution, the silver house [*yinhao*], appeared during early Qing. The origin of this label cannot yet be determined. Perhaps it evolved out of the label silver shop. Just this sort of thing happened during the same period in England. The English gold shops had lent other people's deposits to the government. Because of war with Holland in kangxi 11 (1672), the government was unable to pay back these loans, which constituted a severe blow to these gold shops. As a consequence, a division appeared within their ranks. One group of the gold shops returned to the fabrication of gold objects of adornment as their sole business. The other evolved into a group of institutions dealing solely in credit.

Though the Chinese silver shops did not suffer any one dramatic blow, because the task of assaying the purity of silver for the exchange trade had been usurped by the coin shops, a portion of them felt they might as well concentrate on exchange, and that made competition with money shops perfectly natural. Later, they also took deposits, made loans, and became just like money shops, though the traditional style silver shops also continued to exist.[13] Because the business of the silver houses and money shops was virtually identical, most people made little distinction between the two institutions.[14] Some people

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Heavenly Leopard Diagram, chapter 2: "Li Rongchun heard these words of the shopkeeper. He was silent, but after an interval replied, 'Enough. You go figure out what the price of this is, and I'll pay you.' The shopkeeper worked it out, and said, 'Altogether it comes to 384 ounces of silver.' Lord Li said, 'I'll write a silver bill to give you. Take it to the Ruchun Silver House to cash.' The shopkeeper replied, 'Many thanks, your lordship.' After writing the silver bill, Li Rongchun came straight to the flower house."

[10]Lu Shiyi, *Discussion of Coins*: "Now there are a number of people moving wealth to the capital district. Because it is inconvenient to do so by road, they entrust cash to rich merchant firms from the capital, who give them bills of that value to take to the capital. These are called bills of exchange. They are a carryover of the old idea of Flying Cash. . . ." Cf. *Imperial Dynasty Texts Through the Generations*, 52, "Fiscal Administration," 27, "Coins," first part.

Dream of the Red Chamber, chapter 16. When Jia Lian and Jia Qiang are discussing going south to purchase Yuan Chunsheng's goods: "Jia Qiang said, 'I was just considering this. Based on what your lordship says, we need not carry silver from the capital. The Zhens of Jiangnan owe us 50,000 in silver. Tomorrow I'll write a letter of credit. We can take a first payment of 30,000 ounces. The remaining 20,000 ounces will remain on deposit for setting up colored lanterns and decorated candles, and for various screens, flags, curtains and tents.'"

Xu Mei, *On Certificate Money* (narrating an event of the early qianlong period): "If you have a bill of exchange, you can pay in silver here, and withdraw silver there. It is a bill for going anywhere."

[11]*Dessicated Words of the Old Man of the Wilderness*, chapter 80: "But though Lord Wen sent out a matchmaker, he didn't send out any money. Rubao was matchmaker for Tiansheng, who paid out 10,000 in bill of exchange silver."

Xu Mei, *On Certificate Money* (concerning an event of the last years of the kangxi period): "The adviser said, 'Most among the people use cash bills and bills of exchange. Whenever a money shop goes out of business, all of its notes become useless." *Ibid.*, "The present bills of exchange go as high as a thousand in metal." *Ibid.*, "Cash bills and bills of exchange keep being exchanged for each other without being redeemed for cash."

Mao Xianglin, *Surplus Ink Record* (tongzhi 9), 2, notes the events of the fall of Shanghai in year guichou [1853]: "When Hong and Yang took the Jinling, from the great river south, the situation became so critical that it was feared we could not last out the day. . . . At this time I brought in silver to pay the households' taxes. Though I had not yet gathered the entire amount, I already had more than 70,000 or 80,000. In view of the difficulties of this time, I brought a request to Lord Yuan that the taxes paid be put out for bills of exchange, and to wait until the garrison personnel were raising supplies to gather silver for payment."

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[12]*Qing Emperor Xianzong Veritable Record*, 135, daoguang 8.

[13]*East China Continued Record*, Qianlong, 72: "In qianlong 35, 7th month, xinyou, there was a proclamation to Maolasun, judging the case of Lu Hong and Fang Guoxiu, who accused Liu Yongxiang of stealing and lending out ounces of silver. The silver shops of the provincial capital are in corrupt relations with the subbureaucracy of the frontier offices. This causes a number of abuses. Now He Biaonian has dared privately to employ the silver ounces paid over to the frontier treasury in lieu of taxes in coin and kind. . . . According to the original accusation, Lu Hong and Fang Guoxiu's deposit of official silver with the silver houses was something that was hitherto a common practice, but because of the emergency, an accusation was brought, and information about the corrupt practices by the silver shops began to be obtained."

[14]In proclaiming the guilt of Heshen, the Jiaqing Emperor said: "In the neighborhood of Tongzhou and Jizhou he had both pawn shops and coin stores." At the end he says: "Moreover, the silver houses and pawn shops have still not all been seized, and

called the ones operating on a larger scale silver houses. Others say that credit institutions in the north were mostly called silver houses. During the qianlong period, however, coin shops and silver houses existed simultaneously in Beijing, where they ran the money-changing and gold and silver trades.[15]

Official coin shops were set up during early Qing. These were governmental credit institutions. They may have been established because the authorities wanted to exchange for silver the copper coins they took in from sales of ever-normal granary grain, since the silver would be more convenient to handle. A rise in the price of coins during yongzheng 9 [1731] led the Board of Revenue to charge the official coin shops with the task of regulating the circulation of copper cash. The coins received by the government sales of rice were handed over to the official coin shops to be exchanged for silver. Such exchanges were carried out at the current price, and this kept the coins in circulation.[16]

In qianlong 2 (1737), the Board of Revenue and the Intendant's Yamen memorialized a request to set up 10 official coin offices in and around the capital. These would direct ounces of silver to the pawn shops in exchange for standard coins, which they would throw back onto the market so as to keep the price of copper cash steady.[17]

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The money shops and silver houses were very active during the qianlong period.[18] Perturbations in the price of copper cash were to some extent the result of their manipulations.[19] For example, in

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they have several tens of millions of ounces." Cf. *Historical Compendium of Chinese Domestic Disorders and Foreign Disasters*, "Outline of the Record of the Capital Case of Heshen."

[15]Pan Rongsheng, *Emperor's Capital Yearly Record of Victories* (qianlong 23), 12th month market sales: ". . . 10th day, outside they were selling in the street gate gods, hanging cash, gold and silver foil, small *kezi* ingots, gold coins, melted down gold recast into horse-hoof ingots, spirit paper money, glass mirrors, window silver, and all sorts of other things. Coin shops and silver houses exchange cash for pledges of gold and silver, small foreign silver dollar coins and Original Treasure ingots."

[16]*Qing Emperor Shizong Veritable Record*, 108, yongzheng 9, 7th month, wuchen.

[17]Tian Mao, "Petition on Leveling Coin Prices": "The Board of Revenue along with the Intendant's Yamen memorialized to state that the Board of Works at present has a surplus of 80,000 strings of cash, and requested that in and around the capital there be set up 10 official coin offices, and that each Board be ordered to send personnel to manage them. When pawn shops in and around the capital receive cash coins to redeem pledged articles, the official coin offices would be ordered to exchange their uncoined silver for the copper cash deposited in varying amounts in the pawn shops at a fair price determined by the market, the copper coins to serve as the circulating capital of the official coin offices. In the future, at the turn of Spring, when the pawn shops need copper cash, they can make exchanges for it at the official coin offices, so that it may serve as their capital. Cf. *Imperial Dynasty Texts Through the Generations*, 53, "Fiscal Administration," 28, "Coins," latter part.

[18]Wang Qihua, *An Onlooker's Rambling Use of Leisure Time in Play*: "In the last years of qianlong, the price of silver was high. It was making tremendous jumps even within a day. Within the district, a fellow named Guo, of the Tianbao coin shop, and a certain Li of the Xinglong coin shop each took a thousand in metal to go to Baikou River to buy food. When they got there they brought it to a certain food store for safekeeping. They had not yet come to an agreement on the price of the food. Guo saw an imperial gazette in the window, and took it up to examine. There was a censor's memorial which said that silver and cash were being obstructed in circulation, and that support was inadequate. The censor requested the issue of treasury silver, so as to lower the current price, etc., etc.

"Guo was disturbed. He spoke privately with Li, saying, 'To take on the burden of buying this food is something we cannot yet know about. Should treasury silver be issued, the price of silver is certain to be severely constricted. It would be best to take advantage of people not realizing this, and to take this silver intended for buying food and temporarily exchange it for cash coins. In ten days to half a month we might get to double it. At that point we need no longer delay purchasing food.' Li agreed with him.

"And so . . . they packed up and rushed to the provincial capital. They were only able to enter the city during the night watch, and deposited their silver in the Jintai Coin Shop. They took a check denominated in copper cash for their 2,000 in silver. After eating and drinking, they checked into an inn for the night. The people in the coin trade were most agitated. The Jintai House [manager] suspected these two men had some reason for coming, and told the innkeeper to lock them in. If they shouted out in the middle of the night, no answering sound was to be made. He then sent a man carrying 4,000 in silver to ride by night out of the city to Dingzhou to find out what was going on. . . .

"When dawn broke . . . the two men . . . got out of the inn and returned. When they reached the shop, the Jintai House's men had still not gone. The two each bought 2,000 in metal to be delivered a month forward. They added two more. The business was accomplished, and nothing could be reversed. As the word spread, the price of silver suddenly fell, and within a day or two the two had made good 400 or 500 strings of cash. Treasury silver had not been issued, and yet the [silver] price of coins had been lowered."

[19]*Imperial Dynasty Investigation of Literary Remains*, 32, "Investigation of Official Market Purchases," qianlong 27: "Hitherto each thousand cash of standard coins were discounted

qianlong 5 [1740], intercalated 6th month, the price of coins in Zhejiang was high because coins were scarce, and so the authorities opened a furnace to mint additional quantities, but because the official coins had an exchange price lower than the market price, the coin shops banded together to take advantage of the situation to buy them up at a profit.[20] Hence the response of the authorities was to focus on the money shops.[21] By that time, their deposit business was already rather well developed. Government funds were often deposited in the coin shops. This increased the shops' credibility by no small amount, and so rendered them still more able to obtain funds from private parties.[22]

The interest charged on loans by money shops was much lower than that charged by pawn shops. The pawn shop interest rate during the qianlong period was probably around 20 percent or more. They gave 10 percent or more in interest on deposits. The interest rate on loans by money shops was less than 10 percent. During qianlong 43 [1778], the interest rate in Niuzhuang for loans secured by residential houses was 8 percent.[23]

During the jiaqing period [1796-1821], the Beijing coin shops not only derived profit from their money changing operations, they also issued cash bills. Some of them even suddenly closed up shop and absconded, leaving holders of their cash bills with no way to redeem them for cash.[24]

Such speculation and profiteering continued to flourish during the daoguang period [1821-1851]. There was probably a total of 400 to 500 firms inside Beijing at that time, some of which had been established during the qianlong and kangxi periods, but a number of which were undoubtedly undercapitalized, so that even if they did not intend to commit fraud, they could still go out of business because of bad management.

Once a firm had gone bankrupt, holders of their cash bills could at most be paid off at 20 or 30 percent of the face values of the bills. In daoguang 10 [1830], the Court of Censors memorialized a proposal to fix new regulations concerning arrangements for coin shops going out of business. These rules required any new coin shop to be guaranteed by five already established coin shops. If any of these five firms went out of business, a replacement had to be found. Such regulations were, however, merely pro forma official documents.

The Qing court also established governmental credit institutions during the daoguang period. The Civil Affairs Office in Beijing established five official coin shops which issued cash bills. Official silver houses were also set up in various commercial ports. After the Opium War, the foreign merchants' tariff silver was all collected for the government by these official silver houses.

In Guangzhou, for example, the Maritime Customs established a silver house as early as daoguang 22 (1842). In addition to collecting the tariff, it also carried on a general credit business. The number of personnel in the silver house ranged from 40 to 60.

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by four cash on the market. Recently, the coin shops have been diminishing the string by as much 20 cash. This is a trick for surrepetitiously increasing the price to take a profit."

[20] *Qing Emperor Gaozong Veritable Record*, 121.

[21] *East China Continued Record*, Qianlong, 20, qianlong 9, the fifth article of the "Petition on Circulating the Coinage," proposed by E'ertai: "Management of the coin market ought to concentrate all the firms in one location, and the officials should supervise them so as to block the elevation of prices. We have found that management of the coin market has hitherto been under the control of a dozen firms. Each of these firms has on occasion engaged in raising the price of coins. Those responsible for the management have been severely warned to keep prices level, and they have not been permitted to set up a cartel, but these managers are dispersed in a number of different locations. It is difficult keep prices uniform over the course of a day. Hitherto there have been no specialized personnel keeping things under control. Sometimes they engage in extortion of the coin shops. We find that outside the Zhengyang Gate is a place where merchants gather in swarms. We should order the managers to gather in one place, and each day

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call them together in the market to buy and sell, with the shops and merchants honoring the officially established market price. Such just exchange will block the abuse of private purchases and sales."

[22] *North East Garden Pen Record*, Volume 4 (daoguang 28), 2, "The Commander of Leizhou": "Luo Mingxiang said, 'In daoguang 9, when in the capital, I happened to read a copy of the Imperial Gazette, which mentioned the case of a man whom the Board had selected to be Prefect of Leizhou, and who, on his way to take up his post, was hit by a bolt of lightning at Gaoyou, and died. . . This man . . . when first selected to be Prefect . . . lodged his blind mother in the capital city. He made the excuse that his funds were insufficient . . . and also said he had already given 3,000 in rent for her house. There was also a management document [*jingzhe*] which she could bring to a certain coin shop, and each month withdraw a certain sum of money for living expenses. . . . But within a month, the landlord came and pressed for the rent, and that coin shop would pay out no more money. Only then did it come out that only a month's rent had been paid, and that only a few thousand had been deposited with the coin store."

[23] *East China Continued Record*, Qianlong, 7.

[24] *Qing Emperor Renzong Veritable Record*, 225, jiaqing 15, 2nd month.

They charged a management fee of 0.8 percent of the tariff receipts, but had other sources of income. They could take a very large profit, particularly from the face value of pure silver, because the Maritime Customs kept its accounts in pure silver, but actually most payments were made in silver dollars at an exchange rate determined by the silver house. This Maritime Customs Silver House had two branches.[25]

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In xianfeng 3 [1853], the Taiping Revolution caused a run on the firms in the Beijing coin trade. By the middle of the 2nd month, Beijing was rife with rumors, and holders of cash bills went in a body to the coin shops to redeem them for ready money. Day and night, they filled the streets and blocked the alleys. Everyone struggled to be first, and feared to be last. The coin shops were caught unprepared, and closed their doors one after the other. On the 15th alone, more than 200 closed down. Some food shops were also affected and ceased business.

By xianfeng 9 [1859], 9th month, however, there were once again 511 coin shops in Beijing. Of these, 389 had been established prior to daoguang 10 [1830]. They were not part of mutual guarantor groups. The other 122 firms did have mutual guarantors. There were also gold stores, ginseng stores, tobacco stores and cloth stores which did not hang out the sign of the coin, but engaged in the silver-copper cash money exchange trade anyway.

Though the coin shops had mutual guarantors, among each set of five mutual guarantors, generally one or two firms or even three or four had already gone bankrupt. The quantity of cash bills they had issued was generally many times more than their capitalization. When a coin shop went out of business, there were often thousands or tens of thousands of their cash bills in people's hands. At most, they could only be redeemed for 20 or so percent of their face value.

People had no safeguards at all. District office functionaries accepted bribes to allow these firms to manage their affairs in ways not in accord with the regulations. If the bribes were too small, the firm would generally remain in difficulties. If the bribes were generous, then the clerks would write the guarantee documents for them, and might even use the name of a firm which had been out of business for several years as the guarantor for a newly opened coin shop. Hence in xianfeng 9, 9th month, the authorities put out new rules strengthening the mutual guarantee system.[26]

A run on the coin shops also occurred during xianfeng 3 [1853] in Fujian. This too was because their reserves were inadequate, and their cash bills could not be kept redeemable for cash. Nor could the military crisis be relieved. This actually led to a popular uprising on the 17th of the 5th month, and several coin shops suffered losses as a consequence.

A number of official coin shops were established during the xianfeng era. There were 4 of the so-called Character-Heaven official coin shops, 5 of the Character-Qian [as in qianlong] official coin shops, and 5 Character-Yu [meaning universe] official coin shops, for a total of 14 firms. Their goal was to promote the large coins and paper money the government was issuing.

Private coin shops were, however, in opposition to government policy positions in a number of places during the Qing Dynasty. This was the case during the qianlong period, and was also the case during the xianfeng period. During xianfeng 4 [1854], for example, most coin shops took an uncooperative attitude toward the government's issue of paper money. They deliberately repressed the public notes until most people preferred the private bills to the official certificates. As a consequence, it was hard to maintain the official coin shops for long. These 14 official coin shops set up during the xianfeng era all went out of business within a few years.

At the end of xianfeng 6 [1856], several Shanghai silver houses issued silver cakes. Three firms were engaged in their issue. These were the Wang Yongsheng, the Jing Zhengji and Yu Sensheng. I have narrated the details of this episode earlier in this work. These silver houses seem to have been

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private ones, but the coins are stamped with the statement that they were manufactured under the supervision of Zhu Yuanyu. This Zhu Yuanyu could have been an official or semi-official personage. Silversmiths managed the actual minting, and their names are also cast onto the surface of the silver cakes.

The term dated bill [*qipiao*] was already in general use during the xianfeng period. Official salaries were paid in dated bills. When they matured, they

[25] Letter of December 20, 1878, by William Cartright of the Canton Maritime Customs to the Peking Maritime Customs Head, Hart. Cf. *Report on the Introduction of the Gold-Exchange Standard into China, the Philippine Islands, Panama, and other Silver-Using Countries.*

[26] Zhang Xianghe, "Memorial Honoring the Imperial Edict to Investigate and Make Clear the Number of Coin Shops in the Capital City, and to Advise on Setting Limits in the Regulations."

were brought to a silver house to be redeemed for cash.[27]

The problem of coin shop bankruptcies was still a severe one during the tongzhi period. Practically every month several of them closed their doors in Beijing, even including some with relatively large capitalization and long histories, such as the Qianyuan, Gongyuan and Yuanyong firms, which closed during tongzhi 8 [1869]. The motives for such bankruptcies were mostly bad. Deposits held by a firm ranged from 50,000 or 60,000 strings to 100-200,000 strings. Very few of these deposits were the funds of officials or rich men, since such people understood how to protect their own money. Most consisted of the small deposits of hired laborers and petty merchants, ranging from one or two strings to 20 or 30 strings.

These people's needs were very pressing. If the coin shop went bankrupt, even if there was a hope that they would be paid off completely some time in the future, this was no help in case of an emergency. Hence these people would usually hasten to the local clerks' offices and accept offers of 20 or 30 percent of their face value for the cash bills they held. When the courts finally got around to making the final liquidation of assets, the rich and powerful could go themselves to the government offices and collect on the bills at face value. A poor man would not find it easy to enter the yamen, and he would not be holding many bills, and since he could have gotten 20 or 30 percent on them earlier, and feared that he would not have enough to pay the bribes required by the denizens of the yamen, most of them abandoned what they were nominally entitled to. If a coin shop had issued 100,000 strings worth of cash bills, it could after bankruptcy eventually liquidate its obligations for 10,000 or 20,000 strings at most.

Cash bills seem to have been issued on the basis of deposits, or at least this is probably how they originated. Hence their format was almost the same as that of a receipt. Upon taking in the customer's ready cash, the firm would fill out and issue to him a receipt for "deposit of ready cash of such-and-such an amount." Such receipts would be honored in their own terms, rather than on the basis of the name of the persons to whom they had been issued, and so it was quite natural that they should slowly begin to circulate on the market. Later, even the words "deposit of ready cash, etc." might not even be written by hand, but would be printed along with other printed statements.

The coin shops and silver houses adopted the system of independent entities rather than organizing themselves into chains with local branches. Hence there were many firms and the scale of each was not large. This was the case for both official and mercantile operations. There were, however, exceptions, especially during late Qing. For example, Shanghai's Yuanfengrun Silver House had 17 branch offices established in provincial capitals and commercial port cities.

However, most money shops and silver houses could not compare in size with contemporary European banks. The Bank of England, for example, was founded with a capital of £1.2 million. Assuming an exchange rate of £1 to 3 ounces of silver, that would come to 3.6 million

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ounces. Of course European private banks then were much smaller than this, but Chinese silver houses were generally only capitalized at several tens of thousands of ounces. During the qianlong era, Heshen's silver houses had an average capitalization of only 60,000 ounces.[28]

China's money shops and silver houses were numerous, small in scale, independently owned and dispersed, but compared to the pawn shops, the money shops and silver houses underwent more rapid development. The pawn shops had evolved over the course of a millennium. The expansion and development of their business had sharp limitations, whereas the later arising money shops and silver houses shot ahead of the pawn shops in the course of just a century or two.

Although the business of the silver houses and money shops was almost identical, because some of the money shops still engaged solely in the money exchange trade, and lacked the ability to handle deposits and loans, and probably only very few of the silver houses engaged solely in money exchange, most people feel that the scale of operations of the silver houses was larger. The so-called smoke-cash shops [*yanqianpu*] were already present during the daoguang period.[29] Shops which both sold tobacco

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[27] *Memorials of Expectant Executive Wang*, 3, "Itemized Memorial to the Board Advising on the Difficulties Encountered in Circulating the Silver Bills of the Silver Houses."

[28] *Yongtan Notes*' list of confiscated property cites 42 silver houses, with a total capitalization of 40 milion ounces of silver. That would make the average per firm 950,000 ounces. In addition, according to the "Investigation of Heshen's Family Property Liquidation List," in *Historical Compendium of Chinese Domestic Disorders and Foreign Disasters*, there is the statement "ten silver houses, with a capital in silver of 600,000 ounces." The average per firm here was only 60,000 ounces. The tongzhi period work *Commonplace Studio Jottings* also states that it was "ten silver houses, with a capital in silver of 600,000 ounces."

[29] *High Grade Treasure Inspection*, chapter 23: "It is said

and changed money thereafter become the most numerous kind of urban shop. They were very much like the mid-Ming coin and rice shops. These can be considered the lowest class of money shop.

The last few decades of the Qing witnessed the zenith of development of money shops and silver houses. Their center of activity gradually shifted to the Yangtze Valley, and centered in Shanghai in particular. Nevertheless, they suffered several blows during this time.

The first occurred on the occasion of the Taiping attack on Shanghai. Quite a few of the Southern Market money shops went out of business. Shanghai underwent unprecedented development after the war, but the coin trade's center shifted to the Northern Market. During guangxu 2 (1876), there were as many as 105 exchange firms.[30] Of these, 42 were in the Southern Market, and 63 were in the Northern Market.[31] The exchange firms [*huihuazhuang*] were large Shanghai money shops. They had organized an Exchange Guild [*huihua zonghui*] to serve as a clearing house. Those who were members were called Exchange firms.

The occasion for the second blow was the Sino-French War of guangxu 7 (1881). The Shanghai market was very lonely and desolate, and a number of money shops declared bankruptcy. During guangxu 8 and 9 a wave of liquidations occurred. A silk warehouse went bankrupt and took 40 money shops along with it. Another 20 mercantile establishments also closed their doors. When the market opened in guangxu 9, there remained only 58 money shops of all sizes in the Northern and Southern Markets.[32]

The third blow was the wave of checks of guangxu 23 [1897]. Because there was fat profit to be obtained from dealing in opium, the market demand for ready cash was lively, and so the money shops offered heavy interest to attract deposits so as to make loans to the dealers. Some wicked merchants took advantage of avarice among the merchants in general to set up fake money shops which attracted deposits fraudulently. When their bills matured, and holders were unable to redeem them for cash, this affected

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the genuine money shops, and as a consequence a number of them went bankrupt.

The credit institutions of the Beijing-Tianjin region received a heavy blow at the time of the guangxu 26 [1900] Eight Power Intervention. The looting was followed by a conflagration. Neither their treasuries nor their records were any longer in existence. Of the 300 odd money shops in Beijing, probably not even one remained.[33] The four largest of these, the "permanent big four" [*si da heng*] had all of their ready silver carried off as loot by the Allied Army, which took three days to carry it all away.[34] The Qing Dynasty's financial center had originally been in Beijing, but ever since the defeat of the Taiping rebels, Shanghai had been booming. After the Boxer Rebellion, China's financial center truly moved to Shanghai.

The fourth blow was the rubber boom and bust of xuantong 2 (1910). That year a foreigner founded in Shanghai a joint stock company dealing in rubber, and spread the word that it would be a considerable enterprise. It was said that the rubber business was bound to earn a considerable amount of money. A number of merchants borrowed money from the money shops to purchase shares, and money shops even bought shares themselves. Later, that foreigner absconded back to his country with the funds, and only then did everyone realize that they had been cheated. Several dozen money shops went bankrupt. The abovementioned Yuanfengrun, for example, closed its doors on the 6th day of the 9th month. A total of over 20 million ounces of public and private funds was lost.

The Shanghai Exchange firms' organization was also called the Great Harmony Guild [*Datonghang*]. The remaining money shops constituted what was

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that one day Ziyu was strolling along the Grand Canal when Li Yuanmao borrowed some cash from him. In a little while, the cashier sent out 8 strings of large coins. Li Yuanmao was overjoyed. He mused to himself, 'These coins are hard to carry around with one. It would be best to exchange them for bills.' And so he had his assistant, Servant Wang, take 5 strings of large cash, and put them into the smoke-cash shop at the mouth of the alley in exchange for 10 bills."

[30] *Shanghai Yearbook*, "Financial."

[31] Wang Xiaotong, *History of Chinese Commerce*, Volume III, chapter 1.14, "Qing Dynasty Financial Institutions."

[32] At the beginning of the 12th month (old calendar) of guangxu 8, the Jinjia jiyuan Silk Warehouse suddenly closed down because of a loss on its books of 560,000 ounces, and started a wave of failures, with each money shop hurrying to call in its loans. This was, however, at the end of the year. According to a survey made on the 30th of the 12th month, some 20 commercial establishments had gone out of business because of the monetary constriction. The total amount involved was 1.5 to 1.6 million ounces. Half the money shops ceased operations and went into liquidation. Cf. Wang Xiaotong, *History of Chinese Commerce*.

[33] *Notes of Events of Year Gengzi*. Cf. section 8.2.1, note 35.

[34] Xu Ke, *Minor Qing Certificates*, "Agricultural and Commercial Category," p. 52, "The Permanent Big Four of the Capi-

called the Lesser Harmony Guild [*Xiaotonghang*]. The latter was divided into four classes, labeled respectively the *yuan*,[a] *heng*,[b] *li*[c] and *zhen*.[d]

The *yuan* shops were called the "carry and fetch" money shops. They sometimes took deposits and made loans, but only in small quantities. In the past they had engaged in the transportation of standard coins, and had employed people to carry them on shoulder poles, and were then called carrying pole money shops, and this was later turned into the similar sounding and written term carry and fetch.

The *heng* shops were also called the "closed door carry and fetch" shops because they turned over all of their receipts every day to the Exchange firms and *yuan* shops to manage for them.

The *li* shops did not take deposits or make loans. They merely engaged in bulk buying and selling of silver and copper cash, though they also engaged in some petty money changing. Hence they were also called discount-exchange money shops.

The *zhen* shops were the smallest, what were called the ready-exchange money shops. They engaged only in the petty money changing business, and also sold incense.[35]

The first new style bank in China was established during guangxu 23 (1897). Its employees were mostly men from the coin trade, but even so it could not compete with the coin trade institutions. To speak only of deposits, the tax funds of the provinces continued to be deposited in private silver houses and money shops, and not in the imperially sanctioned bank.[36] As for merchants in general, naturally they used the money shops even more as a matter of routine. At the time of the Boxer Movement of guangxu 26 (1900), the foreigners cooperated with the traditional money trade so as to protect their Shanghai property, and to preserve the financial institutions of Shanghai. This was an obvious acknowledgement of the importance in Shanghai of the money shops.[37]

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The business of the late Qing money shops was probably influenced to some extent by the foreign commercial banks. In addition to their ordinary deposits and loans, they also had checks cashable for ready money.[38] This was a business that did not exist in China in the old days. At that time, the negotiable instruments on the market included dated bills,[39] shop bills [called native bank orders by the foreigners. EHK],[40] bills of exchange[41] and silver bills.[42] In legal terms, the money shops were in-

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[35]Pan Zihao, *Essentials of the Chinese Money Shops*, quoting *New Journal of Contemporary Events*.

[36]*Notes on Major Events in China and Abroad During Guangxu 24*, "Board of Revenue Memorials."

[37]*Imperial Expedition West and Return From Beginning to End*, "Record of the Protection of the Southern Provinces": "Because the property of the various Western countries' people in Shanghai is so extensive, they have paid special attention to it. The provisions of the agreement to protect Shanghai were as follows: . . . 5. The Shanghai market is focused on the coin trade, and the coin trade must depend on the banks for small scale money changing and transfer of funds. If the banks do not discount small amounts as they normally would, or if they insist on collecting debts in silver as they mature, then the coin market will immediately become constricted, and business must become entirely blocked. Once the market is ruined, men's

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minds will be shaken and not at peace. It is necessary to request that the Chinese and foreign bank managers and those knowledgeable about the coin trade provide aid to each other at a time of crisis, so as to make sure that the coin firms can make their payments. 6. Paper notes and bills must be circulated as of old. It is only necessary that the Daotai and the various responsible officials make this need known, and those firms which hear of this will, when paying in silver, make 20 or 30 percent of their payments in paper money, and allow those in the coin trade to do the same." Cf. *Historical Compendium of Chinese Domestic Disorders and Foreign Disasters*.

[38]*Notes on the Current Shape of Official Life*, 34: "When I returned to the office and looked at it, it turned out to be a dated check. Distant water won't put out a nearby fire. . . . I could only entrust it to a friend who was a cashier in this office, and spend several foreign dollars to have him take it to a small money shop to cash it."

[39]The term dated bill, or check was present by xianfeng times. Wang Maoyin, *Memorials of Expectant Executive Wang*, 3, "Itemized Memorial to the Board Advising of Difficulty of Circulating Silver Bills of Silver Houses": ". . . when important personnel are given salary silver, they are given dated bills, which must be held until maturity for payment." *Notes on the Current Shape of Official Life*, 4: "The thing that this fellow loves the most in his life is money. Ever since he took the job in this office, he has feared that people would gossip about him. He still does not dare to sell them to make up for his lacks. Now, because . . . some are ready cash, he puts out bills dated to after he will leave office, and this big shot has taken them."

[40]*Notes of the Current Shape of Official Life*, 6: "The next day, when he came up to the office, he actually brought along a 3,000 dollar shop bill which matured at the end of the month." *Ibid.*, 8: "At first, whenever he went out of the door, Tao Ziyao was certain to go to the money shop carrying serveral hundred in silver denominated shop bills, and one or two hundred foreign dollar bills on his person."

[41]*Ibid.*, 8: "Futai also arrived. After he had finished discussing public business, he took out of his shoe a Hong Kong & Shanghai Banking Corporation bill of exchange for 40,000 in sil-

cluded in the same category as western style banks during late Qing. The functions to be handled by banks, according to the guangxu 34 (1908) "Bank Circulation Rules," were the redemption of negotiable instruments, short-term discounting, acceptance of deposits and making of loans, buying and selling of uncoined gold and silver and money changing, acting as agents for others in paying out funds in bills, and issue of bills of exchange and silver bills. All of these activities were also undertaken by money shops.

In Shanghai alone there were more than 200 money shops by the end of Qing. Forty of these were Exchange firms. In addition to capital and deposits, their working capital was often augmented by borrowing from foreign banks at an interest rate of 7 percent. They then lent these funds to merchants at a rate of 10 percent.[43] There are no statistics on the number of money shops or silver houses in other provinces or cities. Kang Youwei stated that there were 273 silver houses in Guangzhou.[44]

The provinces set up official silver and cash offices near the end of Qing. This was undoubtedly in imitation of the procedures of the central government and the Maritime Customs. At first, they seem to have used merchants to establish them, using the so-called officially-supervised-merchant-managed method, and did not incorporate the name of the province in question into the firm's name. Later, they changed over to official management or to joint operation by officials and merchants, and then were often dubbed with the province's name.

In xianfeng 6 [1856], Jilin established the Tongji Official Cash Office, and issued silver bills. In guangxu 22 [1896], it was renamed the Yongheng Official Check Office. In guangxu 24, it was changed again to Jilin Official Silver and Cash House, and it issued Yongheng Official Checks. Fengtian originally set up a Huafeng Official Silver House. In guangxu 31 [1905] it changed its name to the Fengtian Official Silver House, and in xuantong 1 [1908], it renamed it again the Dongsansheng [Manchurian] Official Silver House.

Shandong also had a Tongji Official Cash Office, and later renamed it the Shandong Official Silver House. The official cash offices established in Xinjiang all bore place names, such as the Dihua Official Cash Office, and the Ili Official Cash Office.

The ones set up during the '20s of the guangxu period [1890s] mostly bore provincial names, such as the Shaanxi Official Silver and Cash House, the Hunan Funan Official Cash Office, the Hubei Official Cash Office and the Henan Yu Spring official Silver and Cash office. The names of some provincial institutions changed over time: In addition to the Jilin and Fengtian changes mentioned above, the Hunan Funan Official Cash office later was renamed the Hunan Official Cash Office, and the Shaanxi Official Silver and Cash House in 1909 was renamed the Qinfeng Official Cash Office. In guangxu 28 [1902], Jiangxi set up the Jiangxi Official Cash Office, but in guangxu 33 renamed it the Jiangxi Official Silver and Cash House, with a central office and branches in Nanchang, with branch houses under each.[45]

Some provinces had more than one firm, as did Xinjiang with its Dihua Official Cash Office, Ili

ver. . . ."

[42] *Ibid.*, 3: "Nor did Hu Li reply. He took a silver bill out of his shoe. On it was written that this bill was worth 25 capital ounces of silver. Below was a design. It was a Four *heng* bill."

[43] J. Edkins, *Banking and Prices in China*, pp. 33-34, but elsewhere (p. 2) he states that a loan of 1,000 ounces would earn interest of 5 ounces per month.

[45] I have here used the names and dates on the paper notes themselves to correct the varying indications of the names and dates of establishment of these provincial institutions found in other books. For Jiangxi, Zhang Jiaxiang's *History of Chinese Monetary Systems* states that in guangxu 28 an official cash house was set up using full cash bills, and that they went on to establish an official silver house. In guangxu 29, the latter was merged with the former, and the new institution was renamed the Official Silver and Cash General House. Branches were set up under it, and they also made 9 5 official bills. According to *Jiangxi's Financial Trade*, compiled by the Jiangxi Provincial Government Economic Commission in 1933, Jiangxi's paper money began in the Jiangxi Official Silver and Cash General House. This work also states that this institution was established in guangxu 29, and that the paper money it issued was full cash bills and 9 5 official bills.

What is recorded in these two books evidently does not correspond to the facts. Based on surviving paper bills, the ones issued in guangxu 28 were full standard coin bills. The issues of guangxu 29 and 30 were changed to 9 5 standard coin bills. There is a proclamation on the reverse of the guangxu 29 official bill, but because the bill is old and the characters are small, it cannot be read clearly. The guangxu 30 bill reverse has a proclamation of that same year. It clearly states that the additional manufacture of 9 5 official cash bills had taken place because 9 5 copper cash were in circulation on the streets of the provincial capital, and that the previously issued full official bills were inconvenient for the people. The name of the Jiangxi Official Cash Office still appears on the face of the guangxu 30 official bill. I have seen no others bearing some official silver house label. It was not until guangxu 33 that the Jiangxi Official Silver and Cash General House issued cash bills, silver ounce bills and silver dollar bills.

Official Cash Office, Dacheng Official Cash Office, Aqsu Official Cash Office and Kashgar Official Cash Office. In Jiangnan there was the Nanjing Yuning Official Silver and Cash Office in Nanking and the Yusu Official Silver and Cash Office in Suzhou [Soochow]. By the last years of Qing,

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such institutions had been set up in Guangdong, Guangxi, Heilongjiang, Rehe, Anhui, Fujian, Zhejiang, Gansu, Guizhou and Shanxi. Virtually all the provinces had their own financial institutions.

We can see from the names of the provincial institutions that there was an equal tendency to set up official cash offices and official silver houses. At first, some provinces may have taken into account the original meanings of these two labels. If they were planning to issue cash bills, then they established an official cash office; if they were to issue silver bills, then they called it an official silver house. Later, however, they no longer made any distinction between the two, since a number of institutions issuing cash bills also issued silver bills, and so they incorporated both names, either calling themselves official silver and cash houses or offices.

In Zhili, for example, the Tianjin silver house in guangxu 29 issued silver ounce and silver dollar bills. Baoding in guangxu 31, 1st month, and Tianjin in guangxu 32, 2nd month, issued silver ounce bills. Prior to guangxu 33, Jiangxi only issued cash bills. Therefore it set up an official cash office. In guangxu 33, however, it simultaneously issued cash bills, silver ounce bills and silver dollar bills. Hence it renamed the institution the official silver and cash general office. Obviously, the main task of such institutions was to issue paper money.

Silver furnaces were attached to some official silver houses to melt down silver and cast it into ingots. This linked the silver furnace and silver house. Jiangxi, for example, had originally set up six silver furnaces in the Treasure *chang* Office to cast silver ingots. Later, an official silver and cash house was established, and the old silver furnaces were abandoned. Official furnaces were attached to the official house to mint square treasure, dollar treasure and dollar ingot silver ingots.

a.元 b.亨 c.利 d.貞

3. *The Rise and Fall of the Draft Banks*

The draft banks [*piaohao*] were entirely a product of the Qing period, and they decayed and fell along with the Qing Dynasty.

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There are a number of theories on the origins of the draft banks. Some foreigners say that they arose at the end of Sui and beginning of Tang,[1] or link the Flying Cash of Tang Emperor Xianzong's time with the draft banks.[2]

Opinions have also varied among the Chinese. Some say the draft houses emerged during the middle years of Ming, and that they were completely wiped out by the destructive warfare at the beginning of Qing.[3] Some say they arose at the end of Ming and beginning of Qing, because it was at that time that Li Zicheng, the Rushing Prince, fled in defeat, leaving all of the gold and silver from his army in the courtyard of the Kang family of Taiyuan, Shanxi, and the Kang family used this 8 million ounces to create a draft bank.[4] There are even those who say that the regulations of the draft banks had been drawn up by Gu Yanwu.[5] Still others say

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[1]In his *Banking and Prices in China* (1905), Joseph Edkins says that because Roman coins have been discovered in Shanxi, Roman merchants must have bought iron there, and that since Shanxi merchants travelled near and far to earn a living, they became financiers. This is a fanciful surmise.

[2]S. R. Wagel, in his *Chinese Currency and Banking* completely accepts Edkins' thesis. He also says that this sort of business was being practiced ever since the ninth century A. D. (Tang Emperor Zhaozong's guanghua 3).

[3]Shanghai's *Banking Weekly*, numbers 7 and 8, contains an essay by Dong Hai, "The Shanxi Draft Banks," which says that they arose during the middle period of Ming. "At that time, not long after their establishment, they were still not very strong, and their business was regional, limited to a small number of places in Beijing. The coming of Li Zicheng, the Rushing Prince's 'disorder' wiped them out completely." In Japan, the Taishō 4 (Republic 4) *China* magazine, numbers 6 and 7, contains an essay, "The Shanxi Draft Shops," which puts forward the same thesis. Cf. Chen Qitian, *Outline Investigation of the Shanxi Draft Shops*, p. 7.

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[4]The work *Complete Book of the Chinese Economy*, published in Japan in Meiji 40 (Qing guangxu 29), and which bears the same title in the xuantong 2 Chinese translation [except for substituting *Zhongguo* for the less dignified *Shina* as the word for China. EHK], set 3, volume 5, "The Shanxi Draft Shops," was the first to advocate this thesis. Cf. *Outline Investigation of the Shanxi Draft Shops*, p. 8. Probably, though, this was a Chinese traditional story.

[5]Xu Ke, *Minor Qing Certificates*: "There is a tradition that

they were founded during the kangxi or qianlong periods.[6]

There is no evidence for any of these theories. Ever since the middle years of Ming, Chinese novels like *Golden Lotus*, *Garden of Cunning*, *Partition Curtain Flower Shadow*, *Rousing the Age Marriage Affinity*, *The Scholars*, *Dream of the Red Chamber* and *Flowers in the Mirror* have all had references to money shops, but none of them mention draft banks. Early Qing books occasionally mention "western guests."[7] Some say "western guest" was another name for draft bank. Actually, the most one can say is that it was an abbreviation for Shanxi [the second syllable for which means west] guest merchant.[8] We cannot say that all of these were associated with Shanxi draft banks.

Moreover, at the end of Ming, the money remittance trade was still run by the government. This shows that draft banks did not exist then. As late as daoguang 26 [1846], the Governor of Shanxi, Wu Qirui, mentioned that the Shanxi province coin shops were constantly increasing in number, and that their cash bills were spreading ever more widely.[9] Evidently even if the draft banks had been present by then, their development must still have been in its early stages.

More credible is the theory that they grew out of the Rishengchang Dyestuff Shop. It is said that during the qianlong and jiaqing periods there was a man from Pingyao in Shanxi named Lei Lütai, who established the Rishengchang Dyestuff Shop in Tianjin. Among the dyestuffs he sold was a type of verdigris produced in Sichuan, and so he personally went to Chongqing to manufacture this verdigris and transport it to Tianjin. At that time large amounts of silver were transported under the protection of escort offices [*biaoju*], but sometimes robberies occurred anyway. Lei Lütai then invented a method for remitting money.[10] Later this type of organization was renamed draft bank.

This method for remittance of funds was by no means the invention of Lei Lütai. Not to speak of Tang's Flying Cash and Song's Convenient Exchange, Ming and Qing[11] both employed the draft or bill of exchange method. Lei Lütai merely imitated such procedures. This point is not important. What is important is when the draft banks appeared. In other words, when did the Rishengchang (the middle character written two ways)[12] Dyestuff Shop

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the great wealth confiscated by Li Zicheng of the Ming period was taken by him in defeat to Shanxi. Upon his death, Shanxi people obtained this wealth, which they used to set up draft banks. Their house regulations were extremely strict, and were drafted by Gu Yanwu. They have been honored without interruption, and have been called heroic by the commercial world for over two centuries." Those who have adopted this thesis are the most numerous. Chen Qitian in his *Outline Investigation of the Shanxi Draft Shops* (p. 10), suspects that this was translated from the Japanese *Complete Book of the Chinese Economy*. This is not correct. First, the matter of Gu Yanwu's regulations raised by *Minor Qing Certificates* is not mentioned in *Complete Book of the Chinese Economy*. Second, the story in *Complete Book* cannot have been a fabrication. It must have been the result of an investigation undertaken in China. Probably this was a widely found tradition in China then.

[6]*The Rise and Fall of the Shanxi Draft Shops*, "Preface."

[7]*Dessicated Words of the Old Man of the Wilderness*.

[8]*Story of a Stone*, chapter 84: "Fengjie said, 'There are often people who take part in the family. This Niu Huang may not necessarily have it. If we go outside to buy it, we had best make sure it is genuine.' Mrs. Wang said, 'Let me send someone to my aunt to take a look. Pan'r in her house has done business with those western guests, Perhaps they have a genuine one, but we have no way of knowing.'"

Qing Emperor Gaozong Veritable Record, 1068, qianlong 43, 10th month, proclamation: "This will be as Lin'e memorialized. We find that in the 3rd month of this year, there was a western guest with the family name Zhang and the given name Yuan, who came to Su from outside the Great Wall. Later, during the 4th month, there was a person from the Gao Pu firm surnamed Li, in whose house he lived. He had brought with him many goods worth several hundred thousand ounces. . . . The man from the Gao Pu firm . . . sold jade. He sought profit in the market. The price was several hundred thousand ounces."

[9]*Duke Wu Palace Protector's Memorials of Advice*, 4, "Memorial Honoring the Imperial Edict to Advise on the Supply and Demand for Silver and Cash Coins." In daoguang 23, Wu was Governor of Hunan. By daoguang 26, he might already have been transferred to Shanxi.

[10]*Outline Investigation of the Shanxi Draft Shops*, quoting *Rise and Fall of the Merchants of Jin*. There was also a man from Pingyao named Li Hongling, who in a preface to *The Rise and Fall of the Shanxi Draft Merchants* stated that the draft shops were created during the kangxi and qianlong periods. Fan Chunnian, *Organization and Evolution of the Shanxi Draft Banks* says that Li Zhenghua invested 300,000 ounces and Lei Lütai invested 20,000 ounces to found the Rishengchang Draft Bank in jiaqing 2 [1797].

[11]In his *Record of Daily Knowledge*, Gu Yanwu says that the draft method existed at that time. *Dessicated Words of the Old Man of the Wilderness*, written during the kangxi period, contains the statement "on the wall was pasted an oath not to allow silver drafts to enter."

[12]The Beijing manager of the Rishengchang said that the simpler character for *sheng* was employed when the firm was a dyestuff shop, and it was only when it became a draft bank in daoguang 11 [1831] that the longer form, with the meaning classifier for "sun" on the top, was adopted. Cf. *Outline Investiga-*

turn into the Rishengchang Draft Bank? It is said that the manager of the Pingyao main office stated that this occurred during the daoguang period. The firm's Beijing manager said this was in daoguang 11 [1831].

Although there are all sorts of theories on the origins of the draft banks, there are two points that all agree on. The first is

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the relationship between the draft banks and the remittance of money. The second is the connection between the draft banks and people from Shanxi.

There had always been a large number of people from Shanxi engaged in trade. Virtually every family had to have a family member who had gone off to engage in commerce. Their traces have been found as far south as Guangdong and Guizhou, and as far north as Moscow in Russia. The early Qing informal writings often mention "western merchants."[13]

During the profound peace of the first century of Qing, their wealth would have accumulated.[14] This would have enabled them to engage in the credit business. Shanxi people were notably active in China's credit trade from the middle years of Qing on. Whether in silver houses,[15] pawn shops,[16] or in making private loans,[17] Shanxi people were numerous. So far as the draft banks are concerned, 90 percent of them were run by people from Shanxi, and the personnel running them were also Shanxi people.

The draft banks probably began to flourish during the xianfeng period [1851-1862], possibly at the end of xianfeng, since remittances seem to have been still under the management of the silver houses at the beginning of xianfeng.[18] The term bill office

tion of the Shanxi Draft Shops, p. 26.

[13]Jiyun, *Minute Observation Grass Hall Jottings* often mentions western merchants. "Four Things I Have Heard Of Like This": "Wang Fujiu of Xincheng said that a certain friend of his was chosen for office in Guizhou, and borrowed at interest from a western merchant at an extortionate rate. Of a hundred put out for machinery . . ." *Ibid.*, "Luanyang Continued Record, 5": "Many Shanxi men act as merchants outside their province. They spend more than a decade in apprenticeship learning how to trade, and do not return until they have amassed some capital. After paying it over to their wives, they go out again in search of profit. On the average they return to the province after every two or three years. This is the norm among them."

[14]Xu Ke, *Minor Qing Certificates*, "Agricultural and Commercial Categories," p. 69, "Shanxi's Numerous Rich Merchants": The rich houses of Shanxi mostly originated in commerce. The Kang family firm is said to have had several tens of millions of ounces. It was most powerful. Those which during the guangxu period had fortunes of from 7 or 8 million ounces down to 300,000 ounces may be enumerated as follows:

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Family Name	Size of Fortune	Residence
Hou	7,000,000-8,000,000 oz.	Jiexiuxian
Cao	6,000,000-7,000,000	Taiguxian
Qiao	4,000,000-5,000,000	Qixian
Ju	3,000,000-4,000,000	Qixian
Chang	1,100,000-1,200,000	Shucixian
Liu	c.1,000,000	Taiguxian
Hou	800,000	Shucixian
Wang	500,000	Shucixian
Wu	500,000	Taiguxian
Meng	400,000	Taiguxian
He	400,000	Shucixian
Yang	300,000	Taiguxian
Ji	300,000	Jiexiuxian
Hao	300,000	Shucixian

[15]*High Grade Treasure Inspection*, chapter 13: "This Lord Pan is called Pan Qiguan. He is a rich old gentleman of this capital. He is a millionaire, owning 3 silver houses and 2 pawn shops. . . . His original residence registration was Shanxi."

[16]*Xinzheng Appended Collection*, first part, "Grace and Compassion": "Th old gentleman Li Taoji . . . is from Kunming . . . and said, 'Pawnbroking in my home town is entirely monopolized by Shanxi and Shaanxi people. Monthly interest is 30 percent, and the term of a loan is limited to two years. The poor people are pitiable.' And so the old gentleman opened a pawn shop of his own. In his request to the authorities, he said he would reduce the monthly interest to 20 percent, and would extend the term of loans to three years. The Shanxi and Shaanxi men brought a lawsuit against him. It was taken from the district and circuit offices to the Governor-General. The old man made generous gifts to all the offices involved, within and without, and was able to win the case. Before long, the old man said that a monthly interest of 20 percent would be hard for poor people to meet, and this was a shame, so he requested of the authorities that he be permitted to reduce it to 15 percent. The Shanxi and Shaanxi people brought another suit against him, and the old gentleman again brought gifts as before to the various yamen. Reason again prevailed, and he won that case too. Before long he further reduced the interest for pawning goods worth up to 10 in metal to 10 percent per month. Thereupon the Shanxi and Shaanxi men all closed up their businesses and departed."

[17]*Xinzheng Added Collection*, latter part, "Judging Grievances": "There was a fellow surnamed Tian, from Shanxi, who made loans for a business." *Xinzheng Interpolated Collection*, first part, "The Straw Shoe Old Gentleman": "There was a man surnamed Gao, from Shanxi, who had a loan-making business."

[*piaoju*] was already in use by xianfeng 4, seemingly referring to the institutions promoting official bills. Later, such institutions also were responsible for the task of buying up official bills. Perhaps these were silver houses or money shops. Perhaps the term draft bank [*piaohao*] evolved from the activities of one group of the silver houses or money shops, when they simultaneously promoted official bills and undertook the forwarding or remittance of money.

Security was poor in many places during the xianfeng period, and it was inconvenient to transport ready money. When the Qing government was battling against the Taiping and Nien Rebellions, the provinces' forwarding of funds for military supplies to the central authority, and the central authority's need to remit funds to the provinces probably provided the context within which the draft banks arose.[19]

Some say that the draft shops suffered very large losses from the Taiping Rebellion which were all but fatal, since in xianfeng 11 [1861], the main office of the Rishengchang repeatedly urged the Guangdong and Hankou branch shops to cease operations, and the Henan branches had already done so.[20] I suspect, however, that this was a temporary phenomenon, related to the war, and we cannot say it represented the decline of the draft bank trade.

It is not until the tongzhi period that official documents begin to mention the draft merchants. In tongzhi 6 [1867], Zuo Zongtang learned that the Yuncheng, Shanxi draft banks had a great deal of ready silver, and so requested that silver be paid over to the draft banks in Shanghai in exchange for silver bills which would be forwarded to Yuncheng for redemption.[21] This probably refers to the 1.2 million ounce loan from the foreign merchants. These funds were for use in putting down the Muslim Rebellion in the northwest. The draft banks reached their apogee during the guangxu period [1875-1908]. They managed virtually all of the national and provincial treasuries.

Because the draft banks were mainly engaged in the remittance trade, they formed themselves into chains, with many local branches or associated banks in the outer provinces. Hence, though the draft banks were run by Shanxi people, all provinces were joined by them into networks which stretched as far as Guangdong, Singapore and Osaka and Kobe in Japan. Sometimes they were called draft shops [*piaozhuang*], remittance draft shops [*duihuizhuang*], or remittance banks [*duihao*]. The Rishengchang had

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some 24 branches.[22] The personnel of the draft banks included men who could speak various languages. Some, for example, spoke Mongol or Manchu, and those stationed along the Russian border spoke Russian.[23]

Their methods for handling remittances were not like those employed by modern banks. In addition to the bill of exchange, they also employed what were called matching tallies [*fujie*] or flying tallies [*feifu*], which were secret marks or identification symbols much used in silver manufacture. These came in various shapes. Some were square, some round, some oval. One sort of flying tally was generally broken in half. Two linked banks would each keep one of the halves. When a remittance was made, the two tallies would be brought together to see if they matched. A similar system had been used during the Tang Dynasty. After the exchange process had been completed, the other half of the flying tally was returned to the bank which had originally issued the bill of exchange.[24]

The draft banks and money shops were both Chinese credit institutions of that time, but there are a number of obvious differences between them. In organizational terms, each money shop was an independent entity, while the draft banks formed chains of linked branch operations. In terms of location,

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[18]Yang Yizeng, "Memorial Urgently Requesting Circulation of Official Bills To Help Meet Requirements For Military and River Work Supplies" (xianfeng 3, 11th month, 19th day): "Upon investigation we find that the provincial silver houses are remitting silver ounces in large amounts. . . ."

[19]Li Hongling, *Rise and Fall of the Shanxi Draft Merchants*, "Preface": ". . . until the beginning of xianfeng, those who contributed funds to meet the military payroll were dispersed. For the most part this task came into the hands of the draft merchants, and the scope of their operations gradually broadened. Later, when Hong's rebellion [the Taiping Rebellion] broke out, military payrolls rose like a shooting star for the seven southern provinces where the armies were active, but the roads were obstructed, and transportation became difficult. The court attempted to hire various merchants, but only the draft merchants proved to be loyal and dependable. And so the head tax for military payrolls was all remitted through them. From tongzhi times on, their foundations became ever firmer. . . ."

[20]Wei Juxian, "Most Recent Inquiries into the Shanxi Draft Banks," *Central Bank Monthly*, Vol. VI, numbers 5 and 6.

[21]*Qing Emperor Muzong Veritable Record*, 201.

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[22]Xu Ke, *Minor Qing Certificates*, "Agricultural and Commercial Categories," p. 72, "Evolution of the Shanxi Draft Banks."

[23]*Ibid.*, p. 71, "The Shanxi Draft Banks."

[24]Zheng Xingxun, *History of Chinese Commerce*.

the money shops were centered in the south, and were mostly founded by men of the lower Yangtze. The home offices of the draft banks were in the north. The great majority of them were owned by Shanxi men. In terms of the type of business they did, the money shops arose from money exchanging, and the draft banks from remittance of funds. As for their customers, most of those having dealings with the money shops were merchants; most customers of the draft banks were government officials.

But like the money shops, which though they originated for purposes of money changing, did not thereafter limit themselves just to money changing, the draft banks' business was not limited to remittance. Eventually, I suspect, deposits and loans became more important for them, and their power came from the loans which they made to governments and to officials. Their goal, naturally, was to gain access to government funds, and so we may be sure they spared no effort to establish links with government officials. It is not that money shops did not desire such links with officials,[25] it is just that their operations centered in the commercial regions of the south, and it was not so convenient for them to obtain such links as it was for the draft banks.

In the past, because it was inconvenient for them to carry ready cash with them when they came up to the capital to sit for the examinations, scholars would often first have their funds forwarded through a draft bank.[26] Some of them even borrowed travel expenses from a draft bank. Those who had passed the examinations were especially likely to borrow money from the draft banks, because a number of those coming up for the examinations were relatively poor men. After passing the exams, only a minority would remain in Beijing to serve as officials. The majority were usually sent off to serve in the provinces. The feudal officials loved their prestige, and liked to repay people for the favors done them. As soon as it had been announced that they were to be officials, unless they had extensive funds, they could not live up to their new-found status.

The draft banks were happy to undertake such loans. First, principal and interest were secure. When an official took up his responsibilities, he would have money.[27] Moreover, very few new officials would delay making repayment, lest they lose prestige.

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Second, the interest was very large, and was often deducted from the principal handed over to the borrower when the loan was first made. When a new official took up his appointment, he did not haggle very much over the interest. Third, once the banker had established friendship with these officials, he could get them to deposit with him the official funds under their management. Fourth, by entering into friendly relations with officials, the banker might raise his own status. Not only would they obtain various direct benefits from this, their private merchant customers would come to trust them more.

The branches of the draft banks constituted a lively intelligence network.[28] If there was an official vacancy someplace, the banks would be the first to learn of it. Most officials needed such news. This made it easy for the draft banks to forge relationships with officials over and above the credit the

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[25] *Notes on the Current Shape of Official Life*, 27: "Wang Bogao . . . finally came up to the large railing at the front gate of Huang Panggu's money shop. . . . Huang Panggu knew that when he had come in the past it was for no small matter . . . and he hurriedly came out himself to accompany Wang in. . . . Wang Bogao first inquired, 'There is a certain Jia Run's grandson, Inspector Jia. Have you made his acquaintance?' Huang Pangu was a person of a certain station in life, and as soon as he heard this, he knew these words had significance, and so was unwilling to speak the truth. He slowly replied, 'I know him alright. A friend introduced us, but I've had no deep connection with him. He has not come so often to my small bank." *Ibid.*, 21: "In a quarter of an hour the *maxing* game was over, and a number of other gamblers came in. Lord Double-three introduced them one by one. The high titles tumbled out one after the other. . . . Among them were a few scions of the Inspectorate of Merchants, the manager of the ginseng shop, and some guards from the draft bank and money shop."

[26] *Notes on the Current Shape of Official Life*, 24: "Let us merely speak of young Lord Jia Da. The messenger was sent. His money was now sufficient. He was wearing the red cap. His introduction to the Board was secure in his hand. His ambition was ripe and his spirits high. Everything was going his way. He rested at home for a couple of months, and then thought he would set out for the capital to have his audience. He worked out his plan for the future. . . . He first took the silver he had gained, and entrusted it to a draft bank to remit on his behalf 100,000 to the capital."

[27] *Ibid.*, 4: "Of this loan, 10 percent will be needed upon taking office and 10 percent for transportation. It will be another life. A year after leaving the capital to take up a new appointment, who can say but that there will be needed another 10 percent for the new year's presents. At the very least it will be another 10,000 in silver."

[28] *Ibid.*, 10: "Ziyao . . . asked the person who had come . . . where he had gotten this news? The man replied that he had heard that it had come from a friend in a draft shop. It was said that Inspector Wang had yesterday sent a telegram to Shandong about the machinery. Not enough silver had been remitted from Shandong."

banks granted to them.[29] This increased the dependence of the officials on the draft banks, and intertwined the fate of the two sides.[30]

Especially prominent were the Weishengchang's connection with Prince Qing, the Baichuantong's friendship with Zhang Zhidong, and the Xietongqing's friendship with Dong Fuxiang.[31] These three draft banks were all relatively well capitalized. Some draft bank managers moved along with certain officials. When such an official changed posts, the manager would move along with him. For example, Manager Gao of the Dadetong accompanied Zhao Ruxun. When Zhao was transferred to Manchuria, Gao went there too. When Zhao went to Beijing, so too did Gao. When Zhao was sent down to Sichuan, so was Gao. The Dadetong virtually became Zhao Ruxun's cashier's office.[32]

This reminds one of the silver houses or usurers of the period of primitive capitalist accumulation in Europe. The German Fugger silver house forged indissoluble ties with the Hapsburg Dynasty, and also followed along after them. Of course the power of the Chinese draft banks was not as great as that.

The guangxu 10 [1884] tax levy problem and the problem of the halt in remittance of funds amply show the close relationship between officials and the draft banks. Because the draft banks arose later, they could move more freely. Taxes, for example, had long since been paid on an annual basis in the pawnbroking trade, whereas remittance draft banks avoided them altogether. Such indirect encouragement may be considered one reason for the rapid development of the draft banks.

Nevertheless, some draft banks were not well-managed, and their bankruptcy harmed both public and private interests. The guangxu 9 [1883] bankruptcies of the Fukang and Hutongyu Draft Banks caught the attention of the authorities, and led them to institute licensing, require that each firm pay an annual tax of 600 ounces of silver, and have each province make the draft banks within its boundaries provide complete financial reports to the government.[33]

After this order had been issued, Li Hongzhang sent up a petition from Tianjin stating that the Tianjin remittance draft banks were branches of Beijing firms, set up merely for the purpose of transmitting information for the shops in Beijing and Shanghai, and for holding and transporting silver. They had no

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[29] *Ibid.*, 4: "Boss Three said, 'Yesterday a vacancy opened up in Jiujiang prefecture. Just this morning a friend in the draft bank received a telegram from the head of the district there, asking the bank to send on his behalf 2,000 in silver, since they were seeking to appoint a replacement head of district in a month or two."

[30] *Ibid.*, 19: "Though Huang Sanliu's son had money, he was not someone conversant with the ways of officialdom. The only thing he could do was to invite over the deputy manager of the Yuji Draft Bank where he had an account, talk matters over with him, and ask him to draw up a plan. The deputy manager said, 'Fortunately, the Inspector has left full instructions on this matter. . . . Although this fellow looks like a pure man, in his bones he's the sort whose eyes open wide whenever he sees money. A month ago I made a loan to him. Our branch office remitted it to the capital for him. It was more than 500,000. Later, he received an imperial edict dismissing him from office, and he sent the silver back. It is now in our branch office here. What can be done now is that if the Inspector can put out 200,000 in silver, I can take care of the matter for you, and everything can be guaranteed without difficulty."

[31] Fan Chunnian, "The Organization and Evolution of the Shanxi Draft Banks," *Central Bank Monthly*, IV, 1.

[32] Chen Qitian, *Outline Investigation of the Shanxi Draft Shops*, p. 152.

[33] *Memorials of Advice of the Daoguang, Xianfeng, Tongzhi and Guangxu Periods of the Imperial Dynasty*, 26, first part, "Board of Revenue Administration Category: Managing Finances, first part: Petition By the Board of Revenue Honoring an Imperial Edict to Discuss Economizing on the Sources of Revenue": "In guangxu 10, 9th month, 5th day, there was respectfully received . . . an imperial edict proclaiming . . . that the remittance bank merchants enter to explain their accounts. We find that the peasantry laboring in the fields all pay capitation and transport taxes. Merchants who deal in goods and pawnbroking merchants also pay excise taxes. It is only the rich merchants who set up chains of remittance draft banks in the capital and provinces who do not pay anything into the official coffers. Depending upon remittance drafts to capture profit, they sit athwart generous amounts of capital. If we consider silver and cash coins, we find that the regulations of the Board of Punishments do not permit private establishments, and do not permit private emission of bills. . . . Recently, however, the draft shops have opened everywhere as they pleased, without any limitations. Wicked merchants have set them up to cheat people. . . . Last year, the Fukang and Hutongyu Draft Banks set up by Hu Guangyong went bankrupt, losing extremely large amounts of public and private funds. This was especially detestable. Hereafter, remittance draft banks in the capital and provinces must request licenses from the Board to make it more convenient

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to investigate the firms. It is intended to carry out such licensure. If there are to be remittance draft banks . . . each bank should pay an annual license fee of 600 ounces of silver. Before the 8th month, each province should construct a concise and clear ledger for the banks' condition during the previous year. . . . If a silver house is privately established without a license, the punishment is to be in accord with the penalties set for private establishment of a coin shop."

business of their own, and so lacked the strength to pay the full tax.[34]

When the government was thinking of halting
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the remittance of public funds by the draft banks, Ding Baozhen of Sichuan defended the nine firms of Shanxi draft banks in Sichuan, and strongly praised their accomplishments.[35] He said that they differed from the money shops and silver houses of the south, and that they were all substantial and reliable.[36] He also said that insecure roads created a great many dangers for the transport of ready money. Xu Yingkui of Fujian made the same argument.

Most officials continued to deal as before with the draft banks, even after the establishment of new style banks, because the draft banks guaranteed secrecy of their accounts. None of the officials dared to deposit their illicitly gained funds in new style banks for fear that their existence might by some chance be revealed, and their money would be confiscated by the government. If they kept their funds in the draft banks, they would not face this hazard, because even when an official was placed under investigation, the draft bank would not let this information come to light.

There were around thirty draft banks in Beijing during the '20s of guangxu [1894-1904]. Their total capital was around 10.7 million ounces.[37]

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[34] *Ibid.*, Li Hongzhang, "Petition Advising On the Restoration of the Source of Wealth and Frugality."

[35] *Ibid.*, guangxu 11, 6th month, 2nd day, Ding Baozhen, "Petition Advising the Board of Revenue On the Restoration of the Source of Wealth and Frugality": "The remittance draft banks established in Sichuan Province include only the Tianchengheng, Xietongqing, Weifenghou, Xiehe, Xintaihou, Yuanfengjiu, Baichuantong, Rishengchang and Weitaihou, in all nine firms. They have all been established by managers who have come to Sichuan from Pingyao and Jiexiu districts in Shanxi. Because in recent years Sichuan province has received a great deal of supply funds from the capital and other provinces, and because the routes are of different lengths, and because of the great variety of prices in different provinces, the handling of such matters is quite difficult. These nine firms have all been ordered to undertake the remittance of funds so as to save time and for convenience. Aside from this, what and how much trade these firms have engaged in is not known to us. . . . These merchants all claim that after the great disaster in Shanxi last year, their eastern branches put out capital, but only gradually collected back a small amount. Combined with this, the severe restrictions on doing business in recent years make it easy for them to loan out money, but hard to recover it. Each of them is doing its best to uphold its position, but they are absolutely powerless to pay in so great a sum of money for the privilege of remitting drafts for the Board. Moreover, each of the home offices has its owners, for whom they must provide management. They are responsible to the firm owners, and must report to them."

[36] *Ibid.*, 26, latter part, "Managing Finances, latter part," Ding Baozhen, "Brief Arguing That Sichuan Province Should Be Relieved of Capital Supply Payments and Continue to Issue Commercial Remittance Drafts": "I have again responded to the Board of Revenue's inquiry in the matter of halting remittances. . . . Investigation reveals that circumstances in Sichuan differ from those in other provinces. Western merchants' silver houses differ greatly from those of the southern merchants. The southern merchants' silver houses in other provinces are either not deeply rooted, or their exchanges are too reckless, so that they do not avoid the abuse of transgressing the limits of prudence. Their going bankrupt is truly of their own doing. The silver houses of Sichuan Province have hitherto not been run by southern merchants, but only by Shanxi merchants. They are all engaged in substantial business, and bring surpluses to make up for deficiencies. Most have been in business for years. There has never been a loss or shortage of either public or private funds at their hands. They are to be distinguished from the Kang and Fu firms of the southern provinces. There are now nine Shanxi draft banks in Sichuan managing public funds. All of them have mutual guarantors. Whenever a sum of 200,000 ounces is released, each firm remits only some 10,000 ounces of silver, which is not much. Their transmission of these funds is not delayed or in error. Should something unexpected occur, such as one firm going bankrupt, the remaining eight firms would divide its obligations among themselves, and they simply could not all go out of business on the same day. . . . Moreover, these Shanxi merchants all know that every year they must have silver bullion to forward to the capital, and must be prepared with the proper amount of reserves. The capital city markets can also count upon this rotation for their commerce. . . . Recently I have heard that there have been many cases of robbery in various places in Shanxi. . . ." In addition, Xu Yingkui of Fujian also requested continuance of remittance by such mercantile banks.

[37] The manager of the Beijing branch of Japan's Yokohama Specie Bank, Sawamura Tairō, conducted a survey at the end of Qing, and said there were altogether 33 draft banks, having a total capital of 40 million ounces, but he only provided the names of 30 firms, the capital of which only adds up to 10.7 million ounces. The names of the 30 firms and the capitalization of each are as follows (Cf. *Complete Book of the Chinese Economy*):

Zhiyitang	(400,000oz)	Sanjinyuan	(300,000)
Weichanghou	(400,000)	Changshengchuan	(200,000)
Xintaihou	(400,000)	Dadewang	(300,000)
Xietongqing	(500,000)	Henglongguang	(200,000)
Dadeheng	(300,000)	Gonghequan	(150,000)
Tiandelong	(200,000)	Rishengchang	(500,000)
Yuyuanyong	(200,000)	Weishengchang	(400,000)
Xiechengqian	(400,000)	Yongtaiqing	(300,000)

CATEGORIZATION OF LATE QING BEIJING DRAFT BANKS BY AMOUNT OF CAPITAL

Amount of Capital	Number of Firms
100,000 ounces	2 firms
150,000	1
200,000	6
250,000	1
300,000	7
400,000	7
500,000	4
1,000,000	2

The two largest of these were southern. Most of the rest were from Shanxi. In addition to the main offices, there were 414 branch offices, distributed among 21 provinces (18 provinces plus the three provinces in Manchuria) as well as Mongolia and Xinjiang. Beijing, Tianjin, Hankou, Shanghai and Shashi were the five cities where draft banks were most numerous, having one-quarter of the total number of draft banks. Shanxi, Zhili, Jiangsu, Hubei and Sichuan were the five provinces where they were most numerous, these constituting 62 percent of the total.[38]

The organization of the draft banks was quite unusual. It involved a feudal style joint management by labor and capital. There were shareholders who had paid out money

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for what were called silver shares [*yingu*]. There were also shareholders who had put forth effort for what were called personal shares [*shengu*]. They mostly recruited their personnel from among literate and numerate youths. At first these young men served as clerks. After a few years, if the managers considered them promising, they would be given personal shares. They received no salaries, but merely incidental expenses every year. At the end of three years, the books would be closed, and the profit would be distributed among the shareholders.

The idea was to cause everyone to work as hard as possible, so this was nothing but a way of ensnaring the employees. Before a clerk had won a personal share, he was not permitted to return home. If he committed some transgression, he would be dismissed, and none of the other draft banks would hire him.[39] Since most of their personnel were from Shanxi, if some corruption occurred, the owners could very easily locate the malefactor's family to look into the matter. This was one reason why they liked to employ their fellow provincials.

Their internal table of organization consisted of a manager, deputy manager, external cashier, internal cashier, street-runners, receptionist, silver manager, petty clerks and office workers. The power of the manager was very great.

Draft bank deposits were of two types: time deposits and freely withdrawable deposits. Time deposits were held for periods between three and six months. The interest paid on them ran from 4 or 5 to 8 percent per month. Interest on the freely withdrawable deposits ranged from 2 to 4 percent. Interest paid by loans ran from 5 to 10 percent.

The draft banks were more conservative than the money shops. In guangxu 29 [1903], when Yuan Shikai became a high official in the north, he invited the Shanxi merchants to manage the silver houses of Tianjin, but they were unwilling to do so. The following year, when the Board of Revenue's bank was created, he pressed them to become shareholders, but they resisted doing this too. The government finally removed its funds from the draft banks and

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Weitaihou	(400,000)	Deshengchuan	(200,000)
Baichuantong	(500,000)	Dameiyu	(300,000)

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Xietongxin	(300,000)	Fuchengde	(250,000)
Dadetong	(300,000)	Gongshengqing	(100,000)
Heshengyuan	(200,000)		
Yishenglian	(100,000)	Southern Group	
Cunyigong	(500,000)	Yiyangyuan (Hefei Li family)	(1 million)
Weifenghou	(400,000)	Yuanfengrun (Ningpo people)	(1 million)

Chen Qitian, in his *Outline Investigation of the Shanxi Note Shops*, based upon the accounts in *China* semi-monthly, *Rise and Fall of the Merchants of Jin* and *Organization and Evolution of the Shanxi Draft Banks*, supplements this to come up with 49 firms, but since the dates of the investigations in each of these works differs, I have not recorded any of this here.

[38]According to the figures in *Complete Book of the Chinese Economy*, there were 22 in Shengjing, 1 in Jilin, 58 in Zhili, 25 in Mongolia, 46 in Jiangsu, 3 in Anhui, 7 in Shandong, 120 in Shanxi, 21 in Henan, 22 in Shaanxi, 11 in Gansu, 2 in Xinjiang, 9 in Fujian, 1 in Zhejiang, 5 in Jiangxi, 40 in Hubei, 23 in Hunan, 27 in Sichuan, 12 in Guangdong, 6 in Guangxi, 1 in Yunnan and 1 in Guizhou. The location of 5 is not known. Several of these do not belong to the Shanxi group. There are several others that I suspect were money shops (*Outline Investigation of the Shanxi Draft Shops*). J. Edkins, in his *Banking and Prices in China* (1905) states that there were 20 draft banks in Shanghai, but he does not make it clear whether these were branch offices or main offices.

[39]Xu Ke, *Minor Qing Certificates*, "Agricultural and Commercial Categories," p. 70, "The Shanxi Draft Banks."

deposited them in the new style banks. The draft banks were greatly affected by this move.[40]

By then the railroad and steamship had come into use and had rendered communications more convenient, so that not only did the new banks engage in remittance of funds, so too did the post office and letter offices. As a consequence, the draft banks went into decline. Some people within the draft banks advocated converting them into banks, but this was opposed by the main offices in Shanxi.

[40]A public letter to the Shanxi main offices written in guangxu 34 by the branch offices in the capital of the Qi, Tai and Ping draft bank groups stated: ". . . and since years jiawu and gengzi [1900], not only have deficits accumulated, business with officials and merchants has also daily been lost. When we seek the reasons for this, we find that it is indeed because of the emptiness of the market, and because the Board of Revenue and the provinces have established banks one after the other, and have taken away our profitability. Moreover, banks from other countries have jumped into the market, and exerted all their strength in competition with us. There are some twenty firms in our guild, and their business has gone down by 40 or 50 percent. Some 60 or 70 percent of deposits have been withdrawn. In places where the Board of Revenue Bank has branches, remittance of official funds has been entirely taken over by them, and our firms' exchange business has by now rendered us entirely helpless. We pay only 4 percent on deposits, while at the banks one may draw 5 or 6 percent. Because the interest the banks offer is higher, people borrow from us, and move the funds to them. With the power of the national and provincial treasuries behind them, their capital is swelling, and as it grows, they can reduce the interest rates they charge, and spread their funds over the market, leaving us with no choice but to reduce our loan rates as well. If that proves insufficient, then, having become winded, our profits disappearing, we have no choice but to raise our rates. Their power is such that we are constantly trailing along behind them. What will be the size of the deficit? As for the foreign banks, they have gradually penetrated into the interior. All trade by merchants and deposits by officials and gentry must eventually be usurped by them. The foreigners' adeptness in war and commerce makes it still more impossible for us to compete with them." Quoted from Chen Qitian, *Outline Investigation of the Shanxi Draft Shops*, p. 40.

4. The Rise of the New Style Banks

Though the Chinese term for "bank" [*yinhang*, literally, silver firm or guild] is a translation of a foreign word, it also has rich traditional connotations in China.

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Though silver and gold diverged in price, beginning during Tang times, the monetary status of the two metals had become approximately the same, though there was a tendency for silver to be favored. From Song on, silver came to be used more often than gold, so that by the daoguang period [1821-1851] of the Qing Dynasty, silver had occupied the dominant position in the Chinese monetary system for a millennium.

The word for silver often symbolized money in general, and over the course of history many credit institutions had incorporated the character for silver into their names, as in silver store, silver shop and silver house. Though the word *hang*, meaning guild or collection of businesses on a single street or lane [also *hang*], was previously used to refer to businesses, such as the Tang Dynasty gold and silver guild, and the Yuan Dynasty silver guild, it was a collective term. During the kangxi period in Guangdong, there was a guild hall of the silver guild.[1]

Eventually, however, it was used only to mean a business establishment. During Ming times a store might be called a *puhang*.[2] During early Qing the term *gonghang*, usually translated "Co-hong," and meaning public firm, came into use. Later, foreign commercial establishments were often called *yanghang*, foreign firm. In his second letter to the King of England, the Qianlong Emperor mentions that the number of *yanghang* was very large. We also encounter the term *huohang*, or goods emporium. So it was a very natural thing to translate the name of the

[1]In the Loyalty and Fidelity Hall of the silver trade which the Guangdong silver houses organized, there was a bell on which was engraved the motto "silver guild guild hall," and the date kangxi 53.

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Cf. Muto Chozo, "Verification of the Term *Yinhang*," *Upper Commercial School Graduate School Annual* (Nagasaki, Japan), Vol. III. Cf. also, "Verification of the Term *Yinhang*," *Banking Weekly*, Vol. XIII, number 47.

[2]*Ming Emperor Shenzong's Wanli Veritable Record*, 66, wanli 5, intercalated 8th month, xinmao, Pang Shangpeng of Fujian, "Fourteen Matters Involving Illegal Mercantile Activity": "There are certain *puhang* which are really private, but are allowed to mint coins and hold deposits of government silver to use as their capital. This money should be returned to the officials at the originally fixed commutation rate."

new style credit institution, the bank, as *yinhang*.[3]

When did China first begin to use the term *yinhang*? In jiaqing 24 (1819), the *Dictionary of the Chinese Language* by the Englishman R. Morrison contained only the terms silver shop and silver bill, but not *yinhang*.[4] The *Anglo-Chinese Calendar, 1849* of daoguang 29 (1849) includes in a list of names of foreigners in Canton the firm name "Oriental Bank," but translates the word "bank" with the Chinese *yinfang*. Evidently the term *yinhang* was not yet in use. However, by that time the practice of attaching to the names of commercial establishments the suffix *hang* was already present, as in the names for businesses *Longshunhang* and *Gongsihang*. Probably later on businesses which specialized in handling silver and copper cash were called *yinhang*.

The earliest use of the term *yinhang* seems to have been in the book *Knowledge Circle Primer School Lesson First Steps*, printed in Hong Kong during xianfeng 6 (1856), in which the term "Bank note" is translated as *yinhang qianpiao*. In xianfeng 9, the book by the Taiping Prince of Gan, Hong Rengan, entitled *A New Financial Policy*, has a section called "The Rise of the *Yinhang*." Hong Rengan had just come from Hong Kong, so obviously the term *yinhang* was already in circulation there. In the *English-Chinese Dictionary* published in Hong Kong in tongzhi 5 (1866), under the word "Bank," the first translation given is *yinhang*, with *yinpu* only coming second, followed by *yinhao* and *qianpu*. On the notes issued that year by the English Oriental Bank, the Chinese title of the institution is given as *Dong fan huili yinhang*.

Instead of saying that the circulation of foreign silver dollars in China represented the invasion of China by the power of capitalism,

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it would be better to say that the appearance in China of foreign *banks* represented the invasion of China by the power of capitalism. This is because the inflow of foreign silver dollars began during the Ming Dynasty, and they were circulating in abundance during early Qing.

Nor were the silver dollars which flowed into China in the largest quantities from those countries which later committed the most severe aggression against China, i.e. England, France, Russia and Japan. Rather they were from countries with relatively minor connections with China, like the Spanish silver dollars, or from countries which had virtually no hostile connection with China, like the Mexican silver dollars. These silver dollars did not only circulate in China. They also circulated in a number of other countries. Even England had used Spanish silver dollars, and the United States relied on them for an even longer period.

The situation differed with respect to foreign banks. The strength of the foreign banks in China was entirely the consequence of aggression by the great capitalist powers. The timing of their appearance in China paralleled the timing of the aggression of the capitalist powers against China. The places where they were found within China coincided with the spheres of influence of these nations. It is very clear that the business they carried on in China was tainted with aggression, and encroached upon China's sovereignty.

No nation committed aggression against China earlier than had England. Hence the earliest foreign banks to appear in China were established by Englishmen. The English had already established banks in India during the jiaqing period [1796-1821]. These came to China later. Some say[5] that even before the Opium War there were English merchants who were planning to open Bank of India and Bank of Asia branches in Canton, but were prevented from doing so by the British East India Company. At that time the Far Eastern trade of England was monopolized by the British East India Company. The Chinese government also opposed this plan. Hence the silver shops remained the credit institutions of Canton.[6]

After the opening of the five Treaty Ports, movements of foreign merchants in China were no longer hindered. In daoguang 22 [1842] or a bit later, England opened a branch of the Bank of Western India in Hong Kong. The bank's main office was in Bombay. In daoguang 25 this bank changed its name

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[3]Some say that the word *yinhang* [Japanese pronunciation *ginkō*] was first used in Japan to translate the term bank in the Meiji 5 "National Banking Law." Meiji 5 was 1872, or tongzhi 11 of the Qing Dynasty. By then the term *yinhang* had long since come into use in China.

[4]Volume III of Morrison's work, translating English into Chinese, contains as the translation for "Bank bill" the Chinese word *yinpiao*, and for "Banker" the Chinese word *yinpu*, but "Bankruptcy" is translated as *daohang*.

[5]A. S. J. Baster, *The International Banks*.

[6]Lin Zexu, *Xinji Record*, "Draft Discussing the Foreign Merchants' Responsibility For Having the Barbarians Turning Over Their Opium" (year jihai, 2nd month, 4th day): "In addition, the barbarian factories are responsible for what these merchants do, and they rent their residences from the barbarians. . . . The neighboring silver shops have all been making exchanges with these merchants for more than a decade. All of them have drawn drafts on the silver shops; all horse post stations have been open to them."

to the Oriental Bank, and its main office was shifted to London.[7] In Hong Kong it was called by a Chinese name translatable as Oriental Remittance Bank. The name remittance bank was generally used then by foreign banks engaged in the foreign remittance trade. The Canton branch office was probably established in daoguang 28 [1848], and another branch was set up a year or two later in Shanghai. The English government granted authority to this bank to issue paper money in China. In Canton or Shanghai this bank was probably known as the *Liru yinhang*, since the same bank was sometimes called by different names in Hong Kong than elsewhere.

The Commercial Bank of India set up a branch office in Canton during xianfeng 1 (1851). It set up a Shanghai branch in xianfeng 4. The Mercantile Bank of India,

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London and China[8] also opened a branch in Shanghai that year. There was another new bank in Canton at that time, the Agra and United Service Bank.[9] The Chartered Bank of India, Australia and China was called the *Chada Yinhang* in Hong Kong. It too opened a Shanghai branch in xianfeng 7 [1857].

In tongzhi 3 (1864), Chinese, English, American, German and Persian merchants joined to found the Hong Kong & Shanghai Banking Corporation. Later, with the withdrawal of Chinese and American capital, it became a purely English commercial bank. Its main office was in Hong Kong. An administrative branch was set up in Shanghai, and branch offices were established in Fuzhou, Amoy, Hankou, Tianjin, Beijing, Chongqing, Canton and Dairen [Dalian]. It holds an extremely important position in the history of banking in China. Chinese tariff and salt excise tax collection were managed exclusively by it for several decades. During these decades it served as England's official representative, and contributed to the rise of the Chinese financial world and of Chinese fiscal policy.

After the English commercial banks, the most important financial power was exercised by Imperial Russia. The Sino-Russian Daosheng Bank (or Russko-Kitaijskij Bank) was the representative of this power. This bank was founded after the First Sino-Japanese War, when Russia, France and Germany pressured Japan into returning the Liaodong Peninsula to China in exchange for payment of an increased indemnity by China. The money for this indemnity was borrowed from Russia. In that same year (guangxu 21) [1895], this bank was founded.

Though containing the words Sino-Russian in its title, Imperial Russia and France put up the capital for its establishment, and its management was also in the hands of these two countries. The year after its founding, the Chinese government was permitted to deposit in it 5 million treasury ounces of silver, and it distributed dividends. This was called joint management.

By guangxu 29 (1903), it had branch banks in 15 places: Harbin, Kirin [Jilin], Hailar, Fengtian, Tieling, Lüshun, Yingkou, Tianjin, Beijing, Shanghai, Hankou, Hong Kong, Kalgan [Zhangjiakou], Colombo [Ceylon] and Vliastai. It also obtained the right to build a Chinese-Eastern Railway, and later on the Chinese-Eastern Railway Company shares bought by this bank were transferred to the Imperial Russian government.

The Russo-Japanese War dealt this bank a severe blow. By xuantong 2 (1910), at the advice of France, it merged with the Northern Bank, and its Russian name was changed to Russko-Aziatskij Bank.[10] Its Chinese name was not changed. It issued an additional 24,000 shares, of which only one-sixth were taken up in Russia. The remainder probably fell into the hands of French capitalists.[11] Russia also had

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[7] A. S. J. Baster, *Imperial Banks* (London, 1929), chapter III.

[8] In guangxu 18 (1892) it changed its name to The Mercantile Bank of India.

[9] For the original names of the foreign banks between daoguang 28 and xianfeng 5, cf. the *Anglo-Chinese Calendar*, for 1848, 1849, 1851, and 1855. For example, the *Dongfang Yinhang* (or *Liru Yinhang*) is given in the daoguang 28 (1848) *Anglo-Chinese Calendar* as Oriental Bank, Hongkong, but in later documents it is always rendered as Oriental Banking Corporation. This bank is already stated as being present in Canton that year, but no mention is made of the establishment of a Shanghai branch. Nor does the daoguang 29 *Calendar* mention Shanghai. I have not seen the daoguang 30 *Calendar*. It is not until xianfeng 1 (1851) that the *Calendar* mentions an "Oriental Banking Corporation, Hongkong, Canton and Shanghai." Therefore the Shanghai *Liru Yinhang* could have been established in that year. It might also have been set up in daoguang 30 [1850], but it also could have been a year or two earlier, if we assume that the *Calendar* had omitted it. However, English businesses in Hong Kong then were not yet numerous, and the managers of that bank must have seen the *Anglo-Chinese Calendar*. If it had made such an omission, it would be reasonable to assume they would have immediately corrected it. In recent years, several books published in China have said that the Shanghai branch was established in daoguang 28, but they provide very little evidence of any kind.

[10] For information on this bank, cf. D. K. Lieu, *Foreign Investments in China* (1929) and C. F. Remer, *Foreign Investments in China*.

[11] M. S. Atlas, *Nationalization of the Banks of the U.S.S.R.*

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a lending bank in Harbin, which was established in xuantong 1 [1908].

Japanese activity was mostly by Japanese banks specially brought to China. The earliest of these was the Yokohama Specie Bank, which established branches in Shanghai and Hong Kong in guangxu 23 [1897], and not long thereafter in Tianjin, Niuzhuang, Yingkou, Dalian, Fengtian, Changchun, Tieling, Andong and Gongzhuling. The Bank of Taiwan opened a branch in Amoy prior to guangxu 26 [1900]. Japan's financial power was especially robust in the Northeast [Manchuria], especially after the Russo-Japanese War, when it exerted itself to overcome Russian power, with the intention of taking over a monopoly position.

In addition to the Yokohama Specie Bank, the Bank of Korea and Seiryu Ginkō were present. The Bank of Korea pushed into Manchuria at the end of Qing and the beginning of the Republic. The Seiryu Ginkō was founded in Yingkou during guangxu 31 [1905]. After reorganization in xuantong 3 [1910], its main office was moved to Dalian, and branch offices were established in Yingkou, Fengtian, Changchun, Lüshun, Kaiyuan and Tianjin. There were also some other small banks, like the Tieling Bank (Japanese Tetsurei Ginkō).

France had in China the Comptoir d'Escompte de Paris and the Banque de l'Indochine. The former was a branch of a large French commercial bank. The latter was a colonial bank. Though its main office was in Paris, it served as the central bank of Vietnam, with a monopoly of note issue within Vietnam. It had branches in Siam and Singapore. Its Chinese branches were in Shanghai, Hankou, Tianjin, Beijing, Canton, Wuzhou and Kunming.

The Belgian banks in China were the Banque Sino-Belge and the Credit Foncier d'Extrême Orient. The former was founded in guangxu 28 [1902] in the capital of Belgium, Brussels, and a Shanghai branch was set up simultaneously. Another branch was placed in Tianjin during guangxu 32. It mainly invested in Chinese railways. The main office of the Credit Foncier was also in Brussels. The bank opened a branch office in Tianjin in guangxu 33 [1907], and before long opened others in Shanghai and Hankou, which made mortgage loans secured by houses and land.

The Germans had the Deutsche-Asiatische Bank, established in guangxu 15 [1889], with its main office in Berlin, and Chinese branches in Qingdao, Shanghai and Hankou. It issued paper notes in China, including both silver ounce bills and silver dollar bills.

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The Bank of Holland was established in the Dutch capital in 1824. It opened a Shanghai branch in guangxu 29 [1903], and issued paper money.

The United States had the *Baoxin Yinhang* and the International Banking Corporation. The former was founded in tongzhi 3 [1864]. The latter placed a branch in Shanghai during guangxu 27 [1901], and later other branches in Beijing, Tianjin and Hankou, but with the Shanghai branch as the administrative control center. It issued notes in these places.

Therefore, by late Qing, there were more than 20 foreign banks within the borders of China.[12]

These foreign banks took in deposits,[13] issued

(Chinese translation of the Russian text by Peng Jianhua), p. 8.

[12]*Notes on the Current Shape of Official Life*, 33: "The next day, the steamship reached Shanghai. The Shanghai district head welcomed him into his office, and took him by the hand into the city to pay a call on the Daotai of Shanghai. After they were introduced, he said he wanted to go to the bank to look into his account. The Shanghai Daotai said, 'But I do not know in which bank you have placed your money.' In great alarm, Fan Tai blurted, 'Surely there are not two banks?' The Daotai replied, 'The English alone have the Chartered Bank of India, Australia and China and the Hong Kong & Shanghai Banking Corporation. In addition there is the Russian Sino-Russian Daosheng Bank and the Japanese Shoryu Bank, as well as the Banks of Holland and France.

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Altogether there are more than a dozen of them.' Fan Tai heard this, stood dumbly for a long time, and then said, 'In the provinces we had only thought there was the Hong Kong & Shanghai Banking Corporation, and their foreign bank notes. Over the course of a few years, whenever my brothers were in Shanghai, they sent me several of them. But I never thought there were a number of banks.'"

[13]Zheng Guanying, *Words of Warning to a Flourishing Generation*, 4, "Banks," first part: "The Western countries have both official banks and merchants' banks. In former years, the Western merchants in Hong Kong and Shanghai attracted Chinese and foreign shareholders to found the Hong Kong & Shanghai Banking Corporation, and permitted people to deposit in it silver bullion and silver dollars as they pleased. Anyone could make deposits in silver bullion of from $1 to $100 so long as the rate of deposit came to $100 in a month. Amounts beyond $100 were applied to the following month. In a year $1,200 would accumulate. Amounts of $5,000 or more were categorized as large, and did not come under the rules for small deposits. The interest was set at 3.5 percent reckoned by the month, with the minimum size of the total account during a month used as the basis for calculations."

Flowers of the Sea of Evil, chapter 22: "Manager Guo laughed and said, . . . 'He has big ideas. His silver had all been deposited in a foreign bank, the Hong Kong & Shanghai, or the

bank notes,[14] and offered loans to the government of the day. By means of these loans they assumed a number of special privileges in China. The banks of the imperialist governments of England, the United States, Japan, France, Germany and Russia were most active on this front.

For example, the invasion of Xinjiang in guangxu 3 [1877] by Yaqub Beg allowed Imperial Russia to occupy Ili. To permit it to respond to this situation the Qing government borrowed 5 million ounces from the Hong Kong & Shanghai Banking Corporation, using the Maritime Customs revenues of Wenzhou, Canton, Shanghai and Hankow as security. This was the beginning of the takeover of the management of the Chinese Maritime Customs by the imperialist nations.

In guangxu 4 [1888], to create a navy, the government borrowed 2.5 million marks from the Deutsche-Asiatische Bank at an interest rate of 5.5 percent. In guangxu 5, it made another loan for fiscal purposes from the Hong Kong & Shanghai of 16.15 million ounces at an interest rate of 7 percent. In guangxu 21 [1895], the government borrowed 400 million francs (£15.82 million) from a consortium of French and Russian banks to pay off the Sino-Japanese War indemnity owed to Japan. The following year, to make the second payment to Japan, the Qing borrowed £16 million from the Hong Kong & Shanghai and Deutsche-Asiatische Banks. These loans were all secured by the customs revenues.

To fund the nationalization of the Canton-Hankow Railway, in xuantong 3 [1910], Sheng Xuanhuai memorialized a request to take a loan from the Japanese Shoryu Bank of $10 million. This roused the people of Hunan and Sichuan to fight to protect the railroad. At this point the English Hong Kong & Shanghai, the French Banque de l'Indochine, the German Deutsche-Asiatische and the American Morgan Group, the Kongluobu [?] Company and New York First National Bank formed a four power banking consortium, and attempted to secure a monopoly over loans to China.

The first large loan was made in xuantong 3, 3rd month, when the Secretary of the Board of Revenue and Finance, Zaize, borrowed £10 million, nominally to rectify the monetary system and stimulate business, but actually to meet a government deficit. The United States hoped by means of this loan to counter Japan and Russia in Manchuria, but because of resistance by these two nations, only £400,000 was actually paid out.

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These foreign banks were of no particular help to China's production. To the contrary, they sometimes discriminated against Chinese capitalists, refusing to do business with them. The shares of Chinese companies could not be placed as security for loans from them. Naturally there has been no shortage of people to emphasize the behavior of these "men who came to dinner."

The first man in China to advocate establishment of modern banks was the Taiping Prince of Gan, Hong Rengan. In xianfeng 9 [1859] he urged creation of banks to issue paper money.[15] In guangxu 18 (1892), Zheng Guanying also forcefully spoke of the

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Sino-Russian, or whatever. Our Chinese money shops had stopped dreaming about finding the way to his side. Then, wonder of wonders, today he suddenly changes his mind, he withdraws all his money, and spreads it out among the money shops of the capital and Tianjin.'"

[14] *Words of Warning to a Flourishing Generation*, 4, "Banks," first part: "If, as now, you have silver bills used by foreign merchants, with the quality of their backing attested by neither Chinese nor foreign official, then the quantity issued is solely at the whim of the issuers. I have heard that the English merchants' Hong Kong & Shanghai Banking Corporation has over a million in bank notes in circulation in Guangdong, and that this bank has gained a book profit of over 2 million. Although there are Chinese merchants who are shareholders, the bank does not do business with Chinese merchants. Even shares from prosperous Chinese companies are not accepted as security, but all foreign company shares are equally accepted as security for loans. Western merchants hold the power, and Chinese merchants lose their profit. The Chinese merchants help with their capital, but the Western merchants receive the benefits from it. What sort of intentions must they have to force such discrimination?"

[15] Hong Rengan, *A New Financial Policy*: "Item: Encourage banks. If we have families with wealth of a million, we should first allow this wealth to be deposited with the treasury, and then permit the issue of 1.5 million worth of silver in paper. The engraving on the notes should be of finely wrought flowers and plants, and they should be stamped with the national seal. Silver and goods would be exchanged for each other, and paper and silver would also be exchanged for each other. All would be given 3 percent interest. If three or four rich people jointly request permission to set up a bank, or if one person makes such a request, none should be denied permission. This would be very profitable for merchants, gentry and commoners: Deposits and withdrawals of such notes will be more convenient than carrying specie. One might carry the equivalent of 10,000 in metal without anyone realizing it. Should these notes be lost in the depths of a river, only the particular individual would suffer a loss, but this would be an advantage to the bank, since the specie would remain in existence. Should a traveler encounter bandits, it would be less hard for him to run away carrying the paper notes."

importance to China of establishing banks.[16] Advocates of banks became more numerous after the Sino-Japanese War. Finally, upon the advice of Sheng Xuanhuai, the Imperial Bank of China was founded in Shanghai on guangxu 23 [1897], 4th month, 26th day. This was China's first new style bank. In succession it opened branches in Tianjin, Hankou, Canton, Swatow, Yantai, Zhenjiang and Beijing.

The Imperial Bank of China was originally founded by the government, with government capital. At first it was intended to be a government bank, and so the word "China" appeared as part of its name both in the Chinese and English version. Zhang Zhidong, however, preferred merchant management, and the government looked into this possibility.[17] Therefore it cannot be viewed as a bank managed purely privately.

It was no accident that China's first capitalist bank was born in Shanghai. This shows that Shanghai had become China's financial center. Later, some banks put their main offices in Beijing. This was merely to keep up political connections. Their business centers remained in Shanghai.

The Imperial Bank of China was modeled on the Hong Kong & Shanghai Banking Corporation in all respects. It even invited Englishmen to take on its management. A Chinese manager was also selected from the traditional banking side. Though this bank had something of the nature of a government bank, even after it was opened, all categories of government funds were still deposited in draft shops and silver houses, and the money of rich merchants of the capital continued to be deposited in foreign banks.

The bank advocated by Zheng Guanying would have been a government bank, with 40 percent of customs revenue serving as its capital. The Maritime Customs was at that time taking in 22 million ounces per annum. Forty percent of that would have come to 8 or 9 million ounces. Aside from this, the Pekin Syndicate (called in Chinese the "English Merchants Wealth Company") had "recommended" to the Qing court in guangxu 24 [1898] that it run the Chinese official bank, to be called the Great Qing Bank, for a 50 year period, and with a capitalization of £10 million. Of this amount, £6 million would be held by Chinese shareholders. Annual dividends on these shares would be 8 percent. Thirty percent of the remainder

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would revert to the government, and 70 percent would be retained by the bank.[18] Such a procedure was undoubtedly intended to be patterned on the rules of the Bank of England, since that bank was also founded on the basis of an agreement between merchants and the government. The Chinese financial world then was, however, under the sway of foreign merchants. Since China was getting ready to set up such a bank precisely in order to recover its sovereignty, it could hardly have allowed foreigners to run a government bank.

Establishment of a government bank was needed mainly so as to rectify the monetary system. One might say that China did not have a standard money then. The guangxu 28 [1902] "Sino-English Commercial Treaty" contained a clause requiring that China set up a uniform legal tender money. In guangxu 30, the Board of Revenue memorialized to request establishment of a central bank, and the same year it was decided to set up the Great Qing Board of Revenue Bank, with capital of 4 million ounces, and only Chinese as shareholders.

People did not jump at the chance to acquire these shares, since the Chinese still did not understand the nature of banks. Most rich people preferred to buy real estate, and were not used to making financial investments. In the end the government put up the first 200,000 ounces, and the bank did not open for business until the following year in Beijing's Xijiaomin Lane. It was not until guangxu 34 [1908] that the remainder of its capitalization was fully subscribed. Since business was not bad, the amount of its capital was raised to 10 million ounces.

The main office of the Board of Revenue Bank was in Beijing. It had branch offices in Shanghai, Tianjin, Hankou, Colombo, Jakarta, Kalgan, Yantai, Qingdao, Yingkou and Fengtian.

In guangxu 32 [1906], 9th month, the Board of Revenue was renamed the Board of Revenue and Finance, and so the two characters for Board of Revenue were excised from the bank's name, and it

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[16] *Words of Warning to a Flourishing Generation*, 4, "Banks," first part: "A Chinese money shop has capital of 20-30,000, and makes loans of several hundred thousand. Should there be a slight deficiency in repayments, they will not be able to respond to it. In effect, they are holding the sword by the wrong end. Their debtors are the ones holding the handle. Is this not the case? If our current plan is not to accumulate large sums of money to found banks, then we will be unable to save our commerce, or preserve our markets."

[17] *Complete Works of Duke Zhang Wenxiang*, 46, "Memorial Honoring the Imperial Edict to Discuss the Profits From and Abuses Associated With Banks."

[18] *Notes on Major Events in China and Abroad During Guangxu 24*, "Announcement of the Pekin Syndicate to Establish an Official Bank."

was called the Great Qing Bank. In accord with the newly promulgated "Great Qing Bank Regulations," it was charged with issuing paper money on behalf of the nation, and exercised control over its quantity on behalf of the treasury.

After the creation of the joint official-merchant run Board of Revenue Bank, new style banks gradually increased in number. In guangxu 31 [1905], for example, the Sichuan Rongchuanyuan Official Bank became the first provincial bank. In guangxu 33, the Bank of Communications was founded in response to a memorial by the Postal Ministry. It too was jointly managed by officials and merchants. The total value of its shares came to 10 million treasury ounces, of which half was initially subscribed. In addition to ordinary banking business, it also handled official funds for roads, telegraph, post and navigation activities, and issued paper money. Hence the range of activities of the Bank of Communications was comparable to that of the Board of Revenue Bank.

Beginning in guangxu 33 [1907], joint stock company banks gradually increased in number. Two Xingye Banks opened in Zhejiang that year, and the following year there were 4 Siming Banks. The Bank of Zhejiang opened in xuantong 1 [1908]. In xuantong 2, there was the Northern Protection of Commerce Bank, and the year after that the 3 Zhibian Banks. Hence by the end of Qing, China already had over a dozen new

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style banks. If we include foreign banks, then there must have been no less than 30 to 40 firms.

At the same time the "Great Qing Bank Regulations" were promulgated in guangxu 34, "General Bank Regulations" were also promulgated, fixing the nine kinds of business banks could engage in: 1. Cashing of checks, 2. Short-term discounting of funds, 3. Deposits, 4. Loans, 5. Buying and selling of uncoined gold and silver, 6. Money exchanging, 7. Taking of acceptances, 8. Issue of acceptances, 9. Issue of silver and cash bills. Any establishments carrying on these nine functions were to be called banks. Therefore, draft banks, silver houses and money shops all came under these regulations. The regulations permitted the banks' capital to be organized as either individual proprietorships, or partnerships, or to take on corporate form, but did not fix the amount of capital.

In fact the provincial official silver and cash houses had begun to be renamed banks at the end of Qing. In xuantong 1, the Zhejiang Official Cash Office was renamed the Bank of Zhejiang. In xuantong 2, the Guangxi Official Silver House was changed into the Bank of Guangxi. In xuantong 3, the Fujian Official Cash Office became the Fujian Provincial Bank. The Guizhou Official Cash Office became the Bank of Guizhou.

The provisions on issue of silver and cash bills decreed that before the proclamation of a legal tender paper money, both public and private banks could temporarily issue silver and cash bills. It was only necessary that the officially established institutions file monthly reports with the Board of Revenue and Finance of the quantity issued and the amount of backing for this issue. The Board was authorized to send personnel to conduct audits at any time. Private institutions seem, on the contrary, to have not been subject to such supervision. It was not until xuantong 2 [1909] that the "Exchange Paper Money Regulations" fixed the backing for paper money issues at 50 percent in hard money, and 50 percent in securities of equivalent value.

The banks then, whether jointly managed by officials and merchants, or private shareholder banks, focused almost exclusively on issue of paper money. One might even say they depended entirely on issue of paper to maintain themselves and earn money. The basic function of a bank is to support industry and commerce, and so they should take deposits and make loans as their main business, but since Chinese industry and commerce were not well developed then, unless the banks themselves had accumulated plans for the development of industry and commerce, and taken the initiative in such matters, there would have been no significant commerce or industry for them to support.

Very few of the people who ran banks then worried about promoting the wealth of society. As for the rich, they buried any money left over from buying real estate in hoards.[19] Therefore, the banks had no way to gather in large deposits. Small-scale deposits were all taken up by foreign banks and by Chinese draft banks and money shops. As a consequence, the new style banks of late Qing were unable to have a normal development.

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[19]Mao Xianlin, *Surplus Ink Record*, 4, "Unearthing Hoards": "After the military shelling in Jiangnan, fields and gardens were abandoned to grow wild, and the people had nothing off which to live. Those who had fled into hiding during the time of disorder had dug holes and buried most of their wealth. For this reason, poor people who had lost their livelihoods kept themselves going by picking through the broken tiles and gravel. . . . There were two brothers in Changzhou . . . who were digging things up in square excavations, and at a depth of more than a *zhang* indeed found a number of bills in a hoard. They then took these to a bank. Now they have built a house and opened a silver shop at Ganchang Bridge, and are said to be rich."

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CHRONOLOGY OF IMPORTANT EVENTS IN CHINESE MONETARY HISTORY

Explanation:

1. For year-period coins whose dates are not given in the histories, the first year of the year-period is used.
2. Non-year-period coins whose date of issue is not clear are not included.
3. Yuan Dynasty temple coins or recent apparent temple coins are not included.
4. Important events in foreign monetary history having global significance or which are relevant to Chinese monetary history are placed inside parentheses.

B.C.

3000-1122 Cowry shell evolves from an article of adornment into a means of payment.

1500-1122 Begin to cast bronze cowries.

1154-1122 According to tradition, the Yin King Zhòu increases the land tax so as to make possible the Deer Platform Coins.

1122 Traditional date for King Wu of Zhou's conquest of Shang and dispersing of Deer Platform Coins.

800-700 Early period hollow socket spades appear.

700-600 (Asia Minor and Greece mint gold and silver coins. This is the beginning of minting coins in the West.)

613-591 According to tradition, King Zhuang of Chu changes the small coin into a large one, and Sun Shu'ao argues against doing so.

524 According to tradition, King Jing of Zhou mints large coins.

521 (Persia mints gold and silver coins.)

480 Warring States Era begins.

403 Jin breaks up into the three states of Han, Zhao and Wei.

386 Tian He proclaimed Duke of Qi; Qi Construct-the-nation Knife perhaps minted at this time.

361 Wei moves its capital to Daliang; the Worth-*yuan*-spade perhaps minted after this time.

336 King Huiwen of Qin circulates coins. (Alexander of Macedon mints gold coins.)

290-200 (Rome mints the heavy *as* copper coin.)

284-279 The Yan army attacks and occupies 70 Qi cities. The Qi *ming* knife coins must have been minted at this time.

278 Chu moves its capital to Chen.

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248 (Parthia mints silver and copper coins.)

241-223 Chu moves its capital to Shouchun, and mints Ying *yuan* gold plate money.

221 The First Emperor of Qin unifies the nation's coinage, promotes the Half-ouncer, and uses the *yi* as the standard unit for gold.

204 Western Han established. Half-ouncer begins to be reduced in weight; catty used as the standard unit for gold. The people permitted to mint coins.

190 (Rome mints silver denarius coin.)

186 Half-ouncer reduced to 8-grains. Ban on private coining(?).

182 Half-ouncer reduced to 2.4 grains, and called Five-*fen* coin.

175 Mint Four-grain Half-ouncer. Private coining again permitted.

144 Determine on minting coins so that false gold is driven from market.

140 Emperor Wu of Han mints Three-grainer.

136 Three-grainer abolished; Half-ouncer again circulated. Three-grainer and Four-grainer square and round small coins must have been minted at this time.

119 White Metal and Hide Money issued.

118 Mint Five-grainer.

117 White Metal abolished.

115 Circulate Red-edged Five-grainer, with one equal to five.

114 Promulgation of string law.

113 Abolish Red-edged Five-grainer 5-cash coin system. Centralize minting for entire country in Three Offices of the Shanglin.

95 Mint Deer-hoof and Horse-hoof gold.

A.D.

7 Wang Mang's first reform of the monetary system: Mints Gold-engraved knife, Gold-inlaid knife and Large Spring round coin.

9 Wang Mang's second reform of the monetary system: Knife coins abolished; solely use Large and Small Spring round coin.

10 Wang Mang's third reform of the monetary system: Adopt Treasure-money system.

14 Wang Mang's fourth reform of the monetary system: Mint Monetary-spring and Monetary-spade coins. Rectification of the prices of gold and silver.

24 Liu Xuan (Prince of Huaiyang) mints Five-grainer.

30 Gongsun Shu mints iron coins.

40 Emperor Guangwu of Eastern Han restores the Five-grainer.

184 Yellow Turban uprising.

186 Emperor Ling mints the Four-corner Five-

grainer.
193 Dong Zhuo mints small coin.
208 Cao Cao becomes Chancellor, restores Five-grainer.
214 Liu Bei mints Value-hundred Five-grainer in Yizhou.
[987]
221 Cao Bei abolishes Five-grainer; uses grain and cloth.
227 The Cao-Wei restores the Five-grainer. (Persian Pathan Dynasty mints gold and silver coins.)
236 Sun Quan mints Large-spring-five-hundred in Jiangdong.
238 Sun Quan mints Large-spring-equals-thousand.
246 Sun Quan calls in Large-spring coins.
312 (Constantine reforms Roman Empire's coinage.)
313 Zhang Gui restores Five-grainer in Hexi.
319 Shi Le mints Fenghuo cash.
324 Shen Chong killed. Lord Shen's Five-grainer must have been minted prior to this time.
338 Li Shou mints Hanxing cash.
376 Taiyuan Monetary-spring perhaps minted at this time.
430 Liu-Song mints Four-grainer.
447 Liu-Song fixes large coin as equal to two.
448 Abolish large coin as equal to two system.
454 Liu-Song mints Xiaojian Four-grainer.
465 Liu-Song mints Yongguang and Jinghe coins.
490 Xiao-Qi mints coins in Sichuan.
491-518 (Byzantine minting of coins commences.)
495 Northern Wei mints Taihe Five-grainer.
502 Xiao-Liang mints Five-grainer and Public Female Cash.
510 Northern Wei mints Five-grainer.
524 Xiao-Liang mints iron Five-grainer.
529 Northern Wei mints Yong'an Five-grainer.
540 Western Wei changes the coinage.
543 Eastern Wei changes to minting of Yong'an Five-grainer.
546 Western Wei's second change in coinage.
552 Xiao-Liang mints ten-unit coin.
553 Northern Qi mints Changping Five-grainer.
557 Xiao-Liang mints Four-pillar coin, with one equal to twenty.
561 Northern Zhou mints Spade-spring. The commanderies of the Hexi use western frontier gold and silver coins.
562 Chen mints Five-grainer.
[988]
574 Northern Zhou mints Five-agents Large-spade.
579 Chen mints Taihuo Six-grainer. Northern Zhou mints Perpetual-circulation-myriad-states coin.
589 Sui mints Five-grainer.
590 Permit Yang Guang to mint coins in Yangzhou (White-cash?).
598 Permit Yang Liang to mint coins in Bianzhou. Yang Xiu mints coins in Yizhou.
621 Emperor Gaozu of Tang abolishes the Five-grainer, and mints the Inaugural Circulating Treasure.
666 Mint Qianfeng Spring-treasure 10-cash coin.
667 Abolish Qianfeng coin; restore use of Inaugural coin.
695 (The Arabs formally establish a monetary system.)
708 (The Japanese mint the Wadō Kaihō.)
732 It is ordered that various grades of silk and plain cloth be used in the markets as money along with coins.
750 An Lushan mints coins in Shanggu.
755-768 (France mints denier silver coin, beginning the minting of coins in Medieval Europe.)
758 Mint Qianyuan Heavy Treasure 10-cash coin.
759 Mint Double-wheel Qianyuan Heavy Treasure 50-cash coin. Shi Siming mints Obtain-one Original Treasure and Obey-Heaven Original Treasure 100-cash coins in Luoyang.
762 Large and small Qianyuan coins circulate at par with Inaugural coins.
766-779 Dali Original Treasure minted at this time.
780 Double Tax promulgated.
780-783 Jianzhong Circulating Treasure minted at this time.
796 It is ordered that exchanges in the market employ heavy and light silk and plain cloth as money along with coins.
817 Prohibition on hoarding coins.
845 Emperor Wuzong of Tang removes all the bronze statues from the nation's Buddhist temples to mint the Huichang Inaugural.
870 Guiyang Inspectorate mints the Xiantong Mysterious Treasure.
907 Latter Liang mints the Kaiping Circulating Treasure.
911 Ma Yin of Chu mints the Tiansong Prefectural Treasure. Wang Jian of Former Shu mints the Yongping Original Treasure.
916 Wang Jian mints the Tongzheng Original Treasure. Min's Wang Shenzhi mints an Inaugural Circulating Treasure made of lead.
917 Wang Jian mints the Tianhan Original Treasure. Great Yue's Liu Yan mints the Qianheng Heavy Treasure.
918 Wang Jian mints the Guangtian Original Treasure. Southern Han's Liu Yan mints the Qianheng Heavy Treasure lead coin.
919 The Houzhu of Shu mints the Qiande Original

Treasure.

922 The Khitan mint the Tianzan Circulating Treasure. Min's Wang Shenzhi mints a large iron Inaugural Circulating Treasure.

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924 Min's Wang Yanxi mints the Yonglong Circulating Treasure large iron coin.

925 Shu's Houzhu mints Xiankang Original Treasure. The Khitan mint Tianxian Circulating Treasure. Chu's Ma Yin mints lead coins.

926 Latter Tang mints the Tiancheng Original Treasure. Ma Yin mints Qianfeng Spring-treasure large iron coins. Markets use folded tallies for exchange.

938 Latter Jin permits private minting of Tianfu Original Treasure. Latter Shu mints Guangzheng Circulating Treasure.

942 Min's Wang Yanxi mints Yonglong Circulating Treasure.

944 Fujian's Wang Yanzheng of Yin in Jianzhou mints Tiande Circulating Treasure large iron coin.

948 Latter Han mints Hanyuan Circulating Treasure.

951 Liao mints Yingli Circulating Treasure.

955 Latter Zhou's Emperor Shizong destroys the bronze images in the nation's Buddhist temples to mint Zhouyuan Circulating Treasure.

959 Southern Tang mints the Perpetual-circulation Spring-money 10-cash coins, and also the Tang State Circulating Treasure and Great Tang Circulating Treasure.

961 Song Emperor Taizu mints Song Original Circulating Treasure.

962 Latter Shu circulates Guangzheng Circulating Treasure iron coins.

964 Southern Tang's Houzhu issues iron coins.

968 Liao mints Baoning Circulating Treasure.

970 (Vietnam's Minister Dinh mints Taiping Xingbao.)

971 Northern Song fixes punishment for counterfeiting gold.

976 Mint Taiping Circulating Treasure.

980 Silver takes on function of use for payment of taxes.

983 Khitan mint Tonghe Circulating Treasure.

990 Mint Chunhua Circulating Treasure.

994 In Chengdu Li Shun mints Yingyun Original Treasure and Circulating Treasure copper and iron coins.

995 Chengdu merchants use Exchange Notes as a private medium of exchange. Mint Zhidao Circulating Treasure.

996 (Korea mints Qianyuan Heavy Treasure iron and copper coins.)

998 Mint Xianping Circulating Treasure.

1004 Mint Jingde Circulating Treasure.

1008 Mint Xiangfu Circulating Treasure.

1017 Mint Tianxi Circulating Treasure.

1023 Establish Yizhou Exchange Note Authority. Mint Tiansheng Original Treasure.

1024 Government in Yizhou issues first term of official Exchange Notes in denominations from 1-string to 10-strings.

1032 Khitan mint Chongxi Circulating Treasure.

1034 Mint Jingyou Circulating Treasure.

[990]

1039 Exchange Note denominations changed to 5-string and 10-string. Mint Imperial Song Circulating Treasure.

1041 Because of war with Western Xia, mint 10-cash iron coins.

1045 Mint Qingli Heavy Treasure 10-cash bronze and iron coins.

1053 Western Xia mint Fusheng coins.

1054 Mint Zhihe Original Treasure small coins and Zhihe Heavy Treasure 2-cash and 3-cash coins.

1055 Khitan mint Qingning Circulating Treasure.

1056 Mint Jiayou Original Treasure and Circulating Treasure.

1064 Mint Zhiping Original Treasure.

1066 Liao mints Xianyong Circulating Treasure.

1068 Exchange Note denominations changed to 1-string and 500-cash. Mint Xining Original Treasure.

1069 Set up Luzhou Exchange Note Authority. Exchange Notes circulate in Hedong Circuit.

1070 Abolish Luzhou Exchange Note Authority.

1071 Exchange Notes circulate in Shaanxi. Mint Xining Heavy Treasure 10-cash coin.

1072 Two terms of Exchange Notes circulate simultaneously.

1073 Change 10-cash coins into 2-cash. This represents beginning of circulation of 2-cash coins.

1074 Liao mints Dakang Original Treasure and Circulating Treasure.

1076 Abolish Shaanxi Exchange Notes. Western Xia mints Da'an coins.

1078 Mint Yuanfeng Circulating Treasure.

1083 Liao mints Da'an Original Treasure.

1092 Liao mints Shouchang Original Treasure.

1093 Mint Yuanyou Circulating Treasure.

1094 Mint Shaosheng Original Treasure and Circulating Treasure.

1098 Mint Yuanfu Circulating Treasure.

1101 Mint Sagely Song Circulating Treasure. Liao mints Qiantong Original Treasure.

1102 Shaanxi again circulates Exchange Notes.

Western Xia mints Zhenguan coin.

1103 Cai Jing mints Chongning Heavy Treasure 5-cash and 10-cash coins.

1104 Jingxi Circuit circulates Exchange Notes.

1105 Outer circuits change from Exchange Notes to Coin Vouchers. Their sphere of circulation is broadened to include Jingdong, Jingxi, Huainan and the capital region. Quantity issued expands to twenty times the original issue of tiansheng period. Mint tin alloy coins.

1107 Sichuan Exchange Note Authority renamed Coin Voucher Authority. Mint Daguan Circulating Treasure in denominations from 1-cash to 10-cash.

1109 Sichuan issues Coin Vouchers. Old Exchange Notes abolished.

[991]

1110 Liao mints Tianqing Original Treasure.

1111 Abolish 10-cash coins. Mint Zhenghe Circulating Treasure.

1118 Mint Zhonghe Circulating Treasure.

1119 Mint Xuanhe Original Treasure and Circulating Treasure.

1120 Western Xia mints Yuande Circulating Treasure and Original Treasure.

1126 Mint Jingkang Circulating Treasure and Original Treasure.

1127 Southern Song mints Jianyan Circulating Treasure.

1131 Mint Shaoxing Circulating Treasure and Original Treasure. Liu Yu mints Fuchang coin.

1137 Wu Jie in Hechi issues Silver Account Notes. This is China's earliest silver denominated system.

1149 Western Xia mints Tiansheng Original Treasure.

1151 The Jin issue Exchange Certificates.

1157 The Jin mint Zhenglong Circulating Treasure.

1160 Southeastern Account Notes issued by Board of Revenue.

1163 Hubei issues Value-convenient Account Notes. Xingyuanfu issues iron cash Account Notes.

1165 Mint Qiandao Original Treasure 2-cash coins.

1166 Liang-Huai uses Exchange Notes.

1168 Reform system for issuing Account Notes, setting a limit of 10 million strings worth for their issue.

1171 Western Xia mints Qianyou coins.

1173 Jin established public pawnshops, calling them *Liu quan* [Flowing Springs].

1174 Mint Chunxi Original Treasure.

1178 Jin mints Dading Circulating Treasure.

1180 Dates placed on coin reverses. (England mints silver pence.)

1188 Jin sets up an additional 28 *Liu quan* offices.

1189 Jin removes the expiration dates on its paper money, allowing Exchange Certificates to circulate indefinitely.

1190 Mint Shaoxi Original Treasure.

1194 Western Xia mints Tianqing coins.

1195 Mint Qingyuan Circulating Treasure.

1197 Jin mints Cheng'an Treasure Money silver ingots.

1201 Mint Jiatai Circulating Treasure. Jin mints Taihe Circulating Treasure and Heavy Treasure.

1205 Mint Kaixi Circulating Treasure.

1208 Mint Jiading Circulating Treasure.

[992]

1210 Western Xia mints Huangjian Original Treasure.

1211 Western Xia mints Guangding Original Treasure.

1215 Jin changes issue to Zhenyou Treasure Deed.

1217 Jin changes issue to Zhenyou Circulating Treasure.

1222 Jin changes issue to Xingding Treasure Spring.

1223 Jin issues Yuanguang Precious Money.

1225 Mint Great Song Original Treasure.

1227 In Mongol-controlled territory, Heshi prints Zhi Account Notes in Bozhou.

1228 Mint Shaoding Circulating Treasure.

1233 Jin issues Tianxing Treasure Account in Caizhou. Several months later overthrown by Mongols.

1234 Mint Duanping Original Treasure.

1236 Ögedei issues Exchange Certificates.

1237 Mint Jiaxi Circulating Treasure and Heavy Treasure.

1240 Within Mongol-controlled territory, Liu Su issues mulberry paper money in Xingzhou.

1241 Mint Chunyou Original Treasure. Sichuan mints Chunyou Circulating Treasure 100-cash coin.

1247 Account Notes circulate for indefinite period.

1249 Sichuan Vouchers given 10-year term of circulation.

1251 Paper money of different places in north not exchangeable. Möngke determines on Silver and Certificate dual system.

1252 (Florence mints the Florentine gold coin.)

1253 Mint Imperial Song Original Treasure.

1259 Mint Kaiqing Circulating Treasure.

1260 Mint Jingding Original Treasure. The Mongols issue Zhongtong Certificates. Withdraw various northern local certificates.

1264 Jia Sidao issues gold, silver and copper cash denominated Communicating Medium.

Seventeenth term of Account Notes abolished.

1265 Mint Xianchun Original Treasure.

1266 (The French King Louis IX imitates the Arab Di'erhengdu's minting of the Geluo silver coin.)

1276 The Mongols take control of the south, and exchange Zhongtong Certificates for Southern Song paper money. Boyan mints silver Original Treasure.

1285 Lu Shirong proposes plan for rectification of paper money. Mint Zhiyuan Circulating Treasure. (Venice mints ducaton gold coin.)

1287 Yuan Emperor Shizu issues Zhiyuan Certificates.

1292 Set up public Broad Favor Treasury pawnshops, with capital of 5,000 ingots worth of Certificates.

1294 (The Persian Ilkhan state circulates Chinese-style paper money.)

1295 Mint Yuanzhen Circulating Treasure and Original Treasure. (Japan circulates paper money.)

[993]

1297 Mint Dade Circulating Treasure.

1309 Yuan Emperor Wuzong carries out monetary reform, issuing Zhida Silver Certificates, and minting Great Yuan Circulating Treasure and Zhida Circulating Treasure.

1311 Emperor Renzong withdraws the Zhida Silver Certificate, and abolishes the Zhida coins.

1350 Reform of monetary system. Issue Zhizheng Exchange Certificates, mint Zhizheng Circulating Treasure.

1353 Zhang Shicheng mints Tianyou Circulating Treasure.

1355 Han Lin'er mints Longfeng Circulating Treasure.

1358 Xu Shouhui mints Tianqi Circulating Treasure.

1359 Xu Shouhui mints Tianding Circulating Treasure.

1360 Chen Youliang mints Dayi Circulating Treasure.

1361 Zhu Yuanzhang mints Dazhong Circulating Treasure.

1368 Ming Emperor Taizu mints Hongwu Circulating Treasure, and proclaims Hongwu Circulating Treasure coinage system.

1375 Issue Great Ming Treasure Certificates. Halt minting of coins by Treasure Origins Office.

1376 Halt provincial minting of coins.

1377 Restore provincial minting of coins.

1389 Restore Treasure Origins Office minting of coins.

1393 Again halt provincial minting of coins.

1394 Ban use of copper cash.

1397 Again halt minting of coins by Treasure Origins Office. Ban use of gold and silver.

1399 Restore minting of coins and revise coinage system.

1400 Again change coinage system.

1408 Mint Yongle Circulating Treasure.

1411 Relax ban on gold and silver.

1425 Again ban gold and silver.

1433 Mint Xuande Circulating Treasure.

1436 Loosen order banning use of silver.

1448 Ban use of copper cash.

1457 (Ryukyus mint Dashi Circulating Treasure.)

1460 Restore copper cash to circulation.

1465 Order that commercial taxes be paid half in coin and half in Certificates.

1503 Mint Hongzhi Circulating Treasure.

1518 (German Empire mints Thaler large silver dollar.)

[994]

1527 Mint Jiajing Circulating Treasure.

1557 Portuguese take over Macao.

1570 Mint Longqing Circulating Treasure. Spanish take over Luzon, opening route for flow of Spanish silver dollars into China.

1576 Mint Wanli Circulating Treasure.

1596 Mining begins to flourish.

1616 Manchus mint Tianming cash.

1621 Mint Taichang Circulating Treasure and Tianqi Circulating Treasure large and small coins. Wang Xiangqian requsts minting of three denominations of large coins.

1625 (Japan begins to mint the Kan'ei coin.)

1627 Manchus mint Tiancong coins.

1628 Mint Chongzhen Circulating Treasure.

1637 British East India Company vessels first come to China.

1643 Mint Chongzhen 10-cash coin. Jiang Chen proposes plan for issuing paper money.

1644 Qing Emperor Shizu mints Shunzhi Circulating Treasure in Beijing. The Prince of Fu mints Hongguang Circulating Treasure in Nanjing. Li Zicheng mints Yongchang Circulating Treasure in Xi'an. Zhang Xianzhong mints Dashun Circulating Treasure in Chengdu.

1645 Shunzhi coins increased in weight to 0.12 ounce. Prince of Tang mints Longwu Circulating Treasure in Fuzhou.

1646 Prince of Lu mints Great Ming Circulating Treasure in Shaoxing.

1647 Prince of Yongming mints Yongli Circulating Treasure in Zhaoqing.

1649 Sun Kewang mints Prosperous Dynasty Circulating Treasure in Yunnan.

1651 Issue Certificates denominated in strings. Shunzhi coins increased in weight to 0.125 ounce. Japan mints Yongli Circulating Treasure to aid Zheng Chenggong.
1653 Mint 1-*li* [0.001 ounce of silver] silver equivalent copper coins.
1657 Shunzhi coins increased in weight to 0.14 ounce.
1662 Mint Kangxi Circulating Treasure.
1663 (England mints Jini gold coin.)
1664 Wu Sangui mints Liyong Circulating Treasure. Geng Jingzhong mints Yumin Circulating Treasure in Fujian and Zhejiang.
1678 Wu Sangui mints Zhaowu Circulating Treasure. Wu Shifan mints Honghua Circulating Treasure.
1684 Kangxi coins reduced in weight to 0.1 ounce.
1702 Kangxi coins increased in weight back to 0.14 ounce. Small 0.07 ounce coin minted in addition.
1706 Japan carries out weight reduction of coinage. Kan'ei coins begin to flow into China.
1720 Canton merchants organize the Co-Hong. Foreign silver dollars flow in on a large scale.
1723 Mint Yongzheng Circulating Treasure.
1731 Beijing establishes Official Cash Office.
[995]
1733 Yongzheng coin reduced in weight to 0.12 ounce.
1736 Mint Qianlong Circulating Treasure.
1737 Beijing opens ten official cash offices to stabilize price of coins.
1743 Prohibit use of Guangzhong and Jingxing foreign coins.
1745 Close down official cash offices.
1759 Xinjiang begins to mint Pu'er Red Cash.
1793 Tibet sets up Treasure Tibet Office, mints Qianlong Treasure Tibet silver coins.
1794 (The United States begins to mint silver dollars.)
1796 Mint Jiaqing Circulating Treasure.
1814 Guangdong establishes Ao Maritime Customs Silver House.
1816 (England adopts gold standard.)
1821 Mint Daoguang Circulating Treasure.
1828 Xinjiang mints 5-cash and 10-cash Red Cash.
1830 Memorial on fixing new regulations concerning arrangements for bankruptcy of coin shops.
1832 (Mexico begins minting Eagle. Owen issues work on labor.)
1837-1838 Taiwan mints God of Longevity Silver Cake.
1848 The English merchants' *Liru Yinhang* bank sets up branch in Canton.
1851 Mint Xianfeng Circulating Treasure.
1852 Xianfeng coin reduced in weight to 0.1 ounce.
1853 Taiping Rebellion causes run on Beijing banks. Mint Xianfeng 10-cash coin. Beijing established three official silver and cash houses. Provinces ordered to set up official cash offices. Issue Board of Revenue Official Bills and Xianfeng Certificates. Taiping government mints Taiping Heavenly Kingdom Sagely Treasure in Nanjing.
1854 First month: Mint 100-cash, 500-cash, 1,000-cash large coins. Later use Treasure Certificates to redeem large coins. England's Mercantile Bank of India, London and China, and the Commercial Bank of Inda place branches in Shanghai.
1855 Mint iron coins and lead coins.
1856 Several Shanghai silver houses use steel molds to mint Xianfeng silver cakes. Small Sword Society mints Taiping Circulating Treasure sun and moon coins in Shanghai.
1857 Beijing merchants close down the market, resist using large iron coins. Treasure *su* Office uses steel molds to mint Xianfeng Circulating Treasure silver coins. English Chartered Bank of India, Australia & China establishes Shanghai branch.
1862 Official bills cease to circulate. Mint Tongzhi Circulating Treasure.
1864 Hong Kong & Shanghai Banking Corporation founded. Rashidin mints Arabic inscription coins in Kulja, Xinjiang.
1866 Hong Kong mints silver dollar.
[996]
1870 (Japan mints Dragon Foreign.)
1873 (United States mints Trade Silver Dollar.)
1875 Mint Guangxu Circulating Treasure.
1882 Jilin makes test minting of Changping silver coin, representing beginning of machine-made coins in China.
1885 Fujian uses machinery to mint coins.
1887 Guangdong mints Dragon Foreigns.
1889 Guangdong mints machine-made coins.
1890 Guangdong mints silver dimes.
1893 Hubei establishes Silver Dollar Office.
1895 Sino-Russian Daosheng Bank founded, issues paper money and silver Original Treasure. England issues the Stick Foreign in the Far East.
1897 Imperial Bank of China established, issues paper money. Japan's Yokohama Specie Bank sets up branch in Shanghai.
1900 Guangdong mints 10-cash Copper Dollar.

1901 Fix weight of the silver dollar at 0.72 treasury ounce.

1904 Hubei mints 1 ounce Great Qing Silver Coin.

1905 Board of Revenue establishes Silver and Cash Central Factory in Tianjin. Great Qing Board of Revenue Bank established.

1906 Great Qing Board of Revenue Bank issues Exchange Tickets. Tianjin Coin Factory test mints 1 ounce Great Qing Gold Coin.

1907 Xinjiang Machine Office mints Supply Gold coin. Bank of Communications established. Authorities ask provincial governors for their opinions on the appropriate unit for silver coins.

1908 Great Qing Board of Revenue Bank renamed Great Qing Bank, promulgates "Great Qing Bank Regulations."

1909 Mint Xuantong Circulating Treasure. Establish coinage investigation office.

1910 Promulgate "Monetary System Regulations," adopt silver standard, fix "Coin Mint Rules," mint Great Qing Silver Coin.

GLOSSARY-INDEX

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a 阿, Plate lxxxiii.
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Da Jin diaofalu. Cf. *Record of Great Jin's Campaigns*.
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Da Qing huidian. Cf. *Great Qing Collected Statutes*.
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Da Qing jinbi. Cf. Great Qing Gold Coin.
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Da Tang baochao. Cf. Great Tang Treasure Note.
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Da Xia Zhenxing coin. Cf. Great Xia Zhenxing.
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yuan cao 元金曹, "Original *cao*," 777.
Yuan chao mishi. Cf. *Secret History of the Mongols*.
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Yuan dai baihua beiji lu. Cf. *Yuan Dynasty Colloquial Language Steles Collected Record*.
Yuande Circulating Treasure [*Yuande tongbao* 元德通寶], 547, 991.
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Yuan fa chuyan. Cf. *Simple Words on the Coinage*.
Yuanfeng Circulating Treasure [*Yuanfeng tongbao* 元豐通寶], Plate xlviii, 401, 402, 404, 495n21, 651n1, 990; Vietnamese coin, 407.
Yuanfengrun 源豐潤 Silver House, 954, 956.
Yuan Fu 袁甫, 501n74, 518, 520.
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Yuan hua ji. Cf. *Record of Original Transformations*.
Yuan Jie 元結, 340.
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Yuan Ke 袁珂, *China's Ancient Myths* [*Zhongguo gudai shenhua* 中國古代神話], 23n44.
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Yunnan 雲南, use of cowry in, 28, 30n25, 649.
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Zaobi zongchang longyang. Cf. Manufacture of Coins General Factory Dragon Foreign.
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Zhongguo gudai huobi fazhan shi. Cf. *History of the Development of China's Ancient Money*.
Zhongguo gudai shuxue shiliao. Cf. *Historical Materials on Ancient Chinese Mathematics*.
Zhongguo huobi lun. Cf. *On Chinese Money*.
Zhongguo huobi shi. Cf. *Chinese Monetary History*.
Zhongguo huobi wenti. Cf. *The Chinese Monetary Question*.
Zhongguo huobi yange shi. Cf. *History of the*

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Zhongguo jindai bizhi wenti huipian. Cf. *Modern Chinese Coinage Question Compendium.*
Zhongguo jindai zhubi huikao. Cf. *China's Modern Minted Coins.*
Zhongguo jin yin nie bi tu shuo. Cf. *Illustrated Discussion of Chinese Gold, Silver and Nickel Coins.*
Zhongguo jingji quan shu. Cf. *Complete Book of the Chinese Economy.*
Zhongguo lishi yanjiu fa. Cf. *Chinese History Research Methods.*
Zhongguo neihuan waihuo lishi congshu. Cf. *Historical Compendium of Chinese Domestic Disorders and Foreign Disasters.*
Zhongguo qian zhuang gaiyao. Cf. *Essentials of the Chinese Money Shops.*
Zhongguo quanbi yange. Cf. *The Evolution of Chinese Coins.*
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zhong shu 衆黍, "masses of cultivators," 3, 10n12.
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