

[632]

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.

[633]

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

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.

[634]

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 Man-

shujia 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

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, Yaliehuanfuxin, 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

³The 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

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-

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

[636]

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."

¹⁰Cf. subsection 7.3.1 below.

¹¹*Investigation of Literary Remains Continued*, "Investigation of Coins." *Ming History*, "Treatise on Food and Money, 5."

¹²In 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

proved of this procedure. Though the Censor Bo Baoyi and the Secretariat official Jiang Dejing opposed it,

[635]

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 Treas-

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."

ure 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

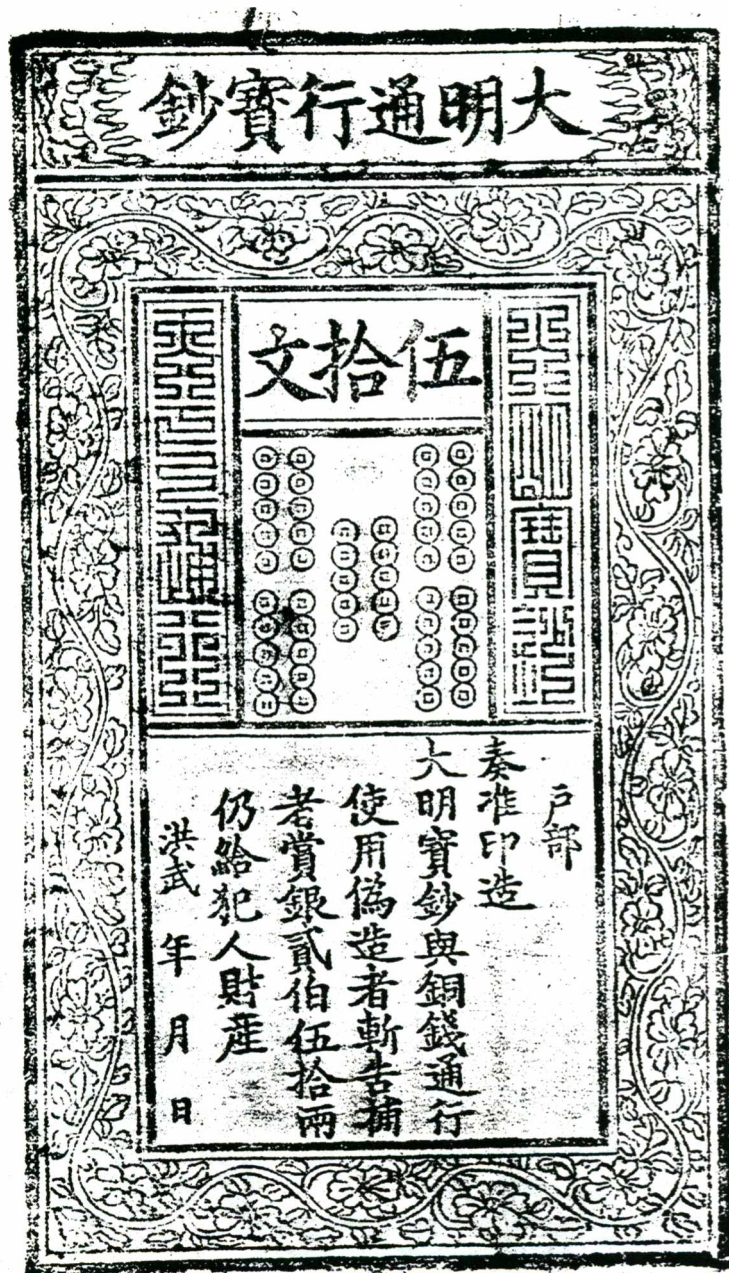
Since silver was being circulated during late Ming, the monetary units for paper notes must have been both copper cash and ounces of silver. That is, there would have been cash bills and silver bills. Among the public, such paper notes probably assumed the form of deposit receipts, so as to assure that the holder of a bill could redeem it for cash at any time.

¹⁶Emperor Huaizong's *Chongzhen Veritable Record*, 16, chongzhen 16, 9th month.



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 139 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。

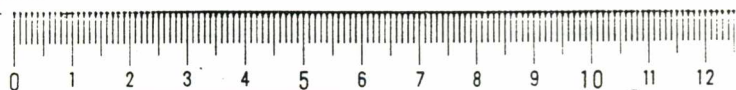


PLATE LXXI. GREAT MING UNIVERSALLY CIRCULATED
TREASURE CERTIFICATE (FIFTY-CASH)

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.

[637]

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

¹We 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:

[651]

	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

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.

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.

²The 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

[652]

bear the inscriptions 1-qian or 1-ounce.

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

[638]

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-

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.

[639]

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 weighed 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

³The *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

⁵According 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.

they have seen Jianwen coins, and thus claim minting was actually going on then, but that these coins were later

[640]

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, Guāngdōng 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.

Fifty-four 3-cash coins were equal to 160 1-cash coins.

⁶Weng Shupe, *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 lxiii,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 lxiii,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

[641]

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

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, [653]

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-

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,

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

[642]
periods.¹⁶

Second, the quantities minted of all Ming coins were very small, and to have carried out a supple-

mentary 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-

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.

¹³Tan 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."

¹⁶All 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.

¹⁷Cf. *Ming Collected Statutes; Investigation of Literary Remains Continued; Ming History*, "Treatise on Food and Money."

¹⁸Wang Ben, *Universal Investigation Continued* makes it a Wanli Original Treasure. The other woodblock editions call it a Great Ming Circulating Treasure.

¹⁹Gu 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 Jiaping 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 was 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

[643] 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.

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.

²²The 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 Zhuangli 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."

²⁰Cf. *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

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*^d (*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

[644]

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 Shiyang (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 Shiyang, 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 mint Great Ming Circulating Treasure.²⁷ Yang Jiaxiang, who lived dur-

²⁴Emperor 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."

²⁵Ming History, "Treatise on Food and Money, 5."

²⁶Qing 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 inconvenienced 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.

²⁷Ming 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 districts 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.

[654]

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."

³¹Huang 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."

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

[645]

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-

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 circulated

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, -

[646]

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-*fēn* [0.01 ounce]. These too were coins with values commuted to silver.

³²Jiang 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 Deji, was sent to Japan by boat to mint Yongli coins."

³³Liu 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."

³⁴There 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.

³⁵Peng Zunsu, *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, Sun 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

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, *Yanbian 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."

[655]

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

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

and the authorities informed so that they can collect them."

³⁹Gu 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

[647]

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.

⁴¹Song Yingxing, *Natural and Man-made Products*.

⁴²Hou 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

[648]

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

[649]

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 Yunnan'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 Bengal⁴⁵ and Siam⁴⁶

⁴³Cf. subsection 7.2.2, note 14, below.

⁴⁴Emperor 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."

⁴⁵Ma 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 [650] 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.

⁴⁷Zhu 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*.

⁵²Cf. 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-Pacifactor 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."

[656] ⁵⁴Yan Zhongping, *Investigation of Qing Dynasty Yunnan's Copper Administration*, p. 14.

⁵⁵In 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

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.

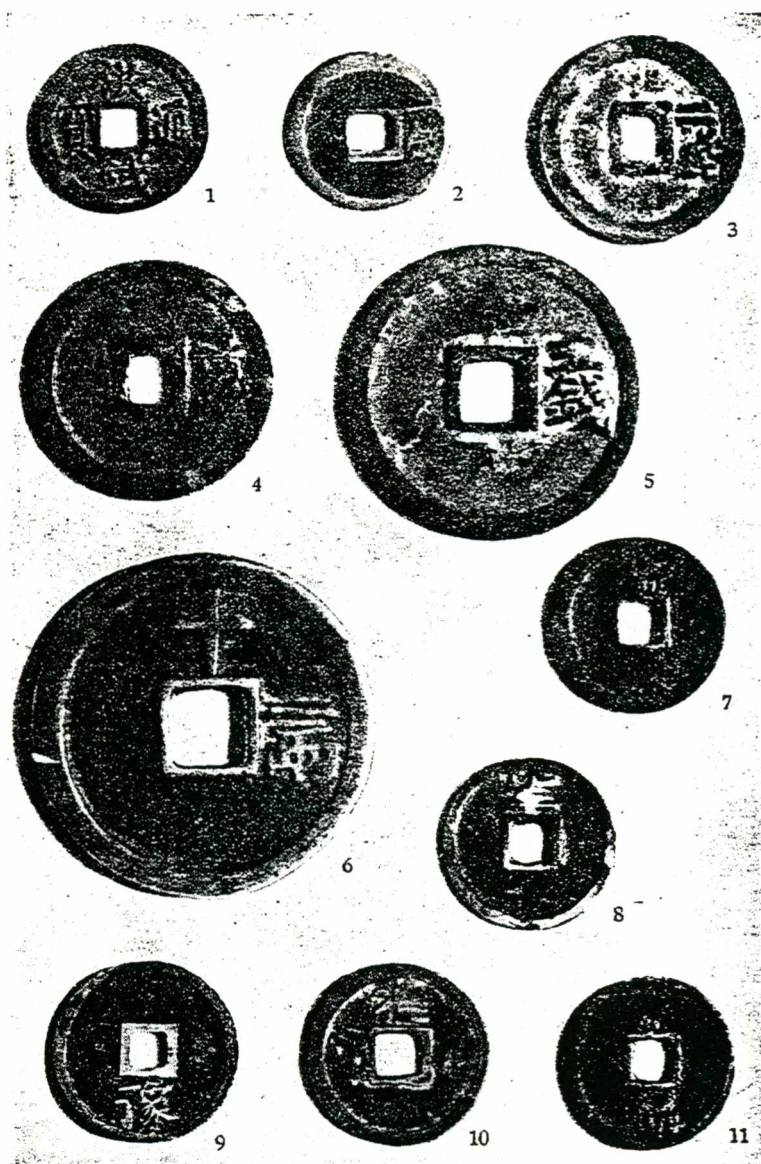
⁵⁶The Latin word for coin, *pecunia*, is derived from the word for ox, *pecus*. From this are derived such English and French words as *peculation*. The English word for the cost of something, *fee*, comes from the ancient word for ox, *feoh*. The present word in German for ox is still *Vieh*. The Indian word *rupee* comes from the Sanskrit word for livestock, *rūpya*.

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."

戶工公正天河可鶴京
浙福云密鎮府院新
一分宣府鎮密雲鎮
兵江廣清貴嘉加(嘉州)
ab 沪(滬州) 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 官 ak 品 al 共 am 別
an 季 ao 部 ap 行 aq 道 ar 寧 as 監
at 勅 au 帥 av 南 aw 亂 ax 留 ay 御 az 勅
ba 督 bb 部 bc 署 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。

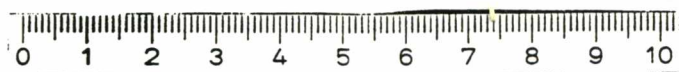
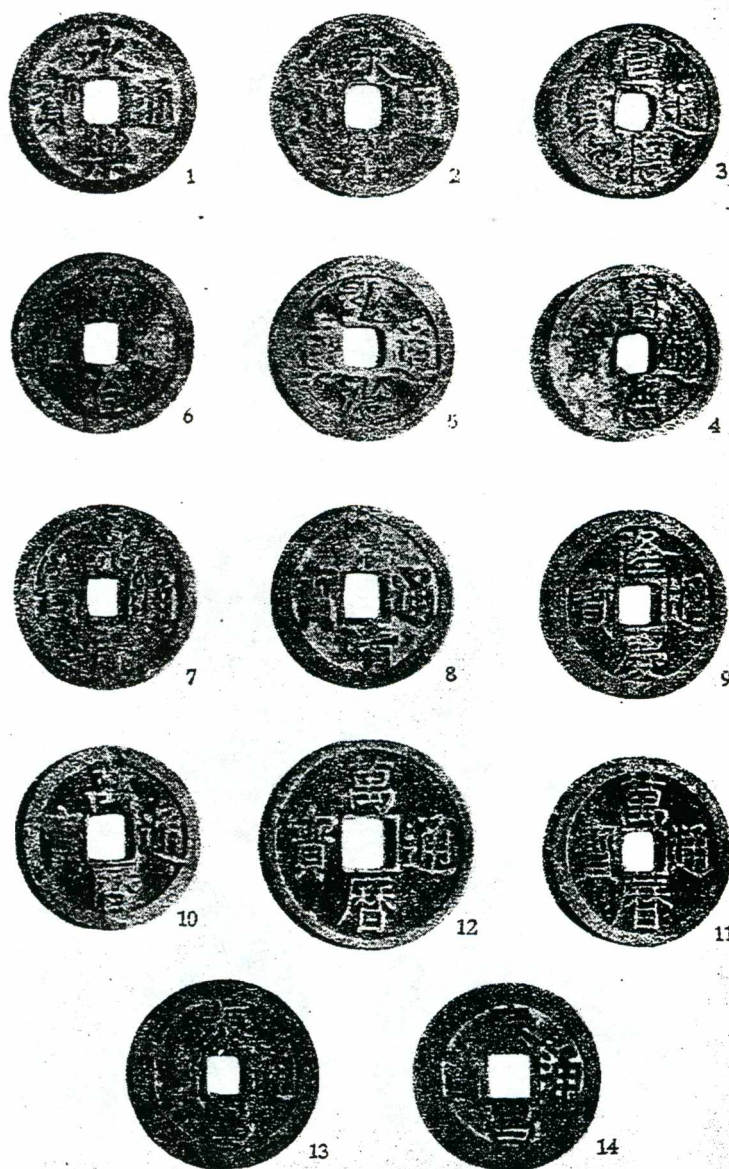


PLATE LXXII. HONGWU COINS OF MING TAIZU'S COURT

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。

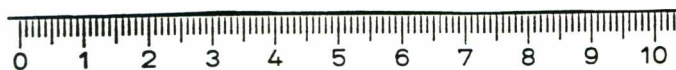
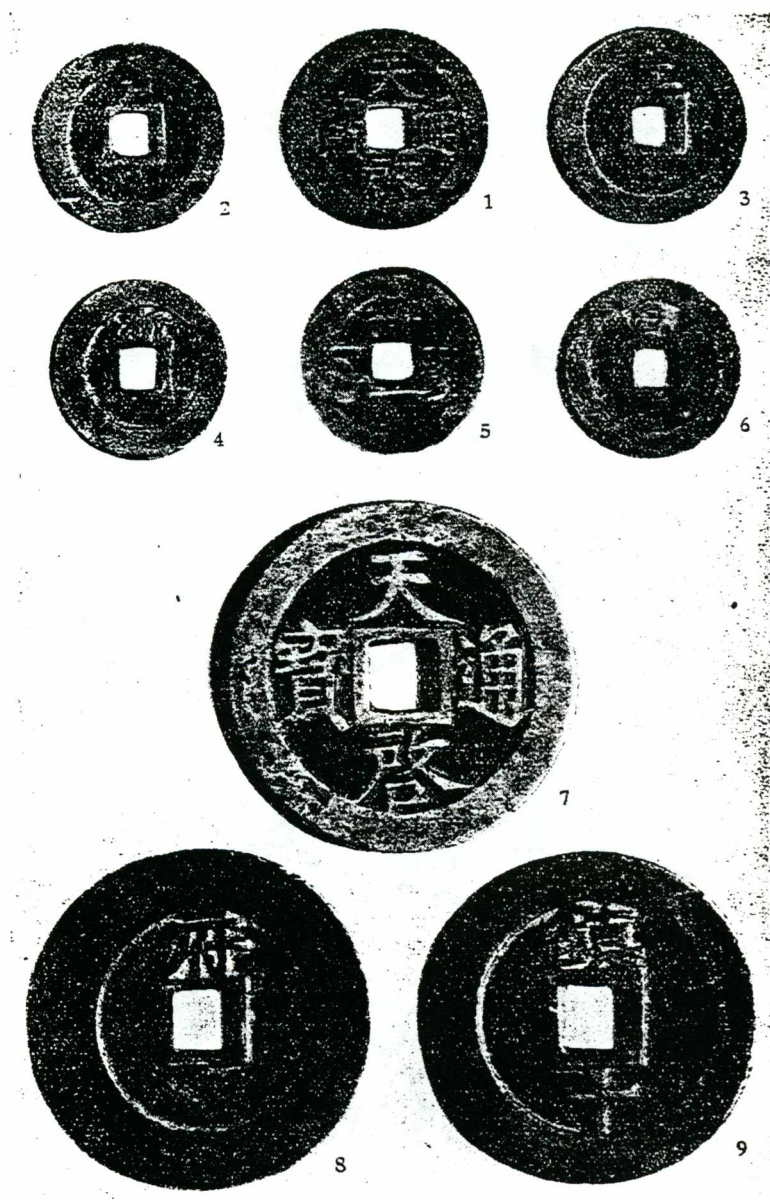


PLATE LXXIII. MID-MING COINS

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.



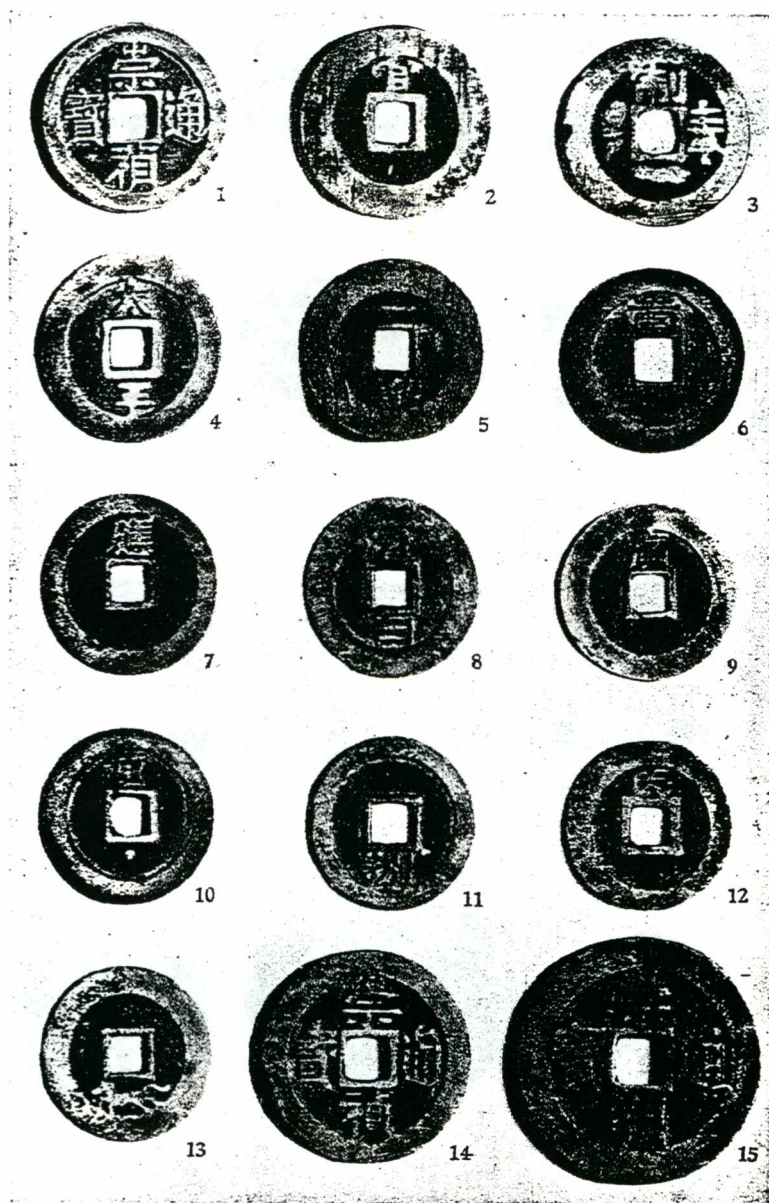
圖版七十四 熹宗朝的天啓錢

1. 天啓通寶。2—6. 天啓通寶的背文：戶、工、浙、新—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、昌、丙。13.跑馬崇禎之背。14.崇禎通寶折二錢。15.崇禎通寶折五錢。

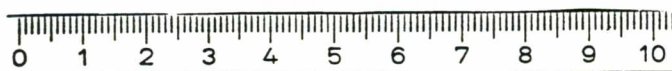
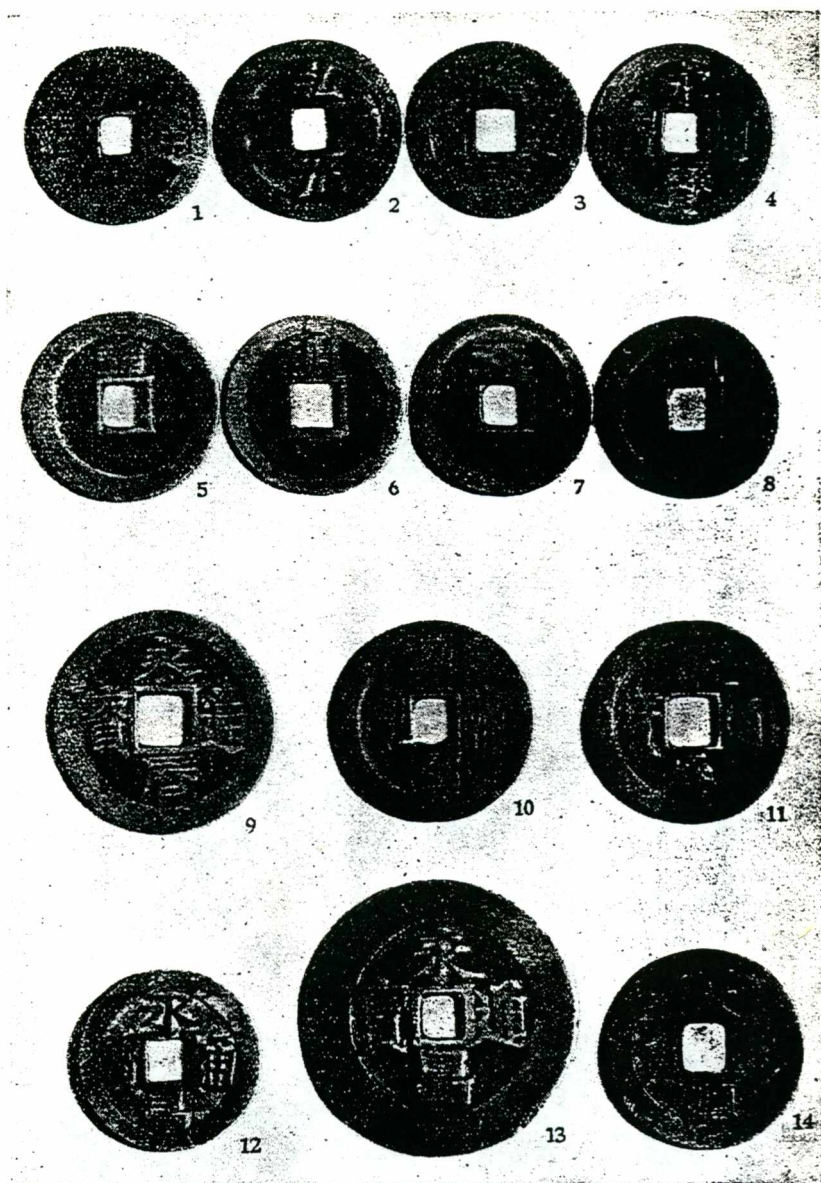


PLATE LXXV. THE CHONGZHEN CIRCULATING TREASURE
OF EMPEROR SIZONG'S REIGN

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].

¹Ming 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."

²Emperor 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 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.'"

[657]

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

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."

⁶For 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.

⁷Emperor 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

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

[658]

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.

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,

[665]

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 Treasury 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.

¹⁰Feng 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.)

¹¹Ming *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

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

[659]

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.

have cast on them the exact quantity of silver involved."

¹³Cf. 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 mak-

ing 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

¹⁵Liu 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 Collectedanea*) 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

[666]

was flourishing, they smelted silver into beans, and when the various Earls were in decay, they would cast iron into coins."

¹⁴In 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 up-right his original crime, in zhengde 8 distributes salt certificates and silver weighing 10.8 ounces exactly Silversmith Liu Cheng-yi." 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.)

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 Jiaping silver coin bearing the four character inscription "made jiaping period."

[660]

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 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 jiaping times

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

[661]

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

cials 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."

²⁰Xie Zhaozhi, *Five Mixed Tables*, 12.

²¹He Gaoyuan, *Famous Mountain Hoards*: "Between Min and Guang, silver comes from the southwestern barbarians."

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 repeatedly 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 offi-

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, [662]

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], Haidegong 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.

[663]

²²Zhang [?], *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

²⁴On 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.

²⁵Yao 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)

[667]

This records an event of the wanli period. The silver strip on its back was a silver coin minted and circulated then in Japan.

²⁶Kobata 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."

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

²⁷*Kahei*, no. 97.

²⁸Chen 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.

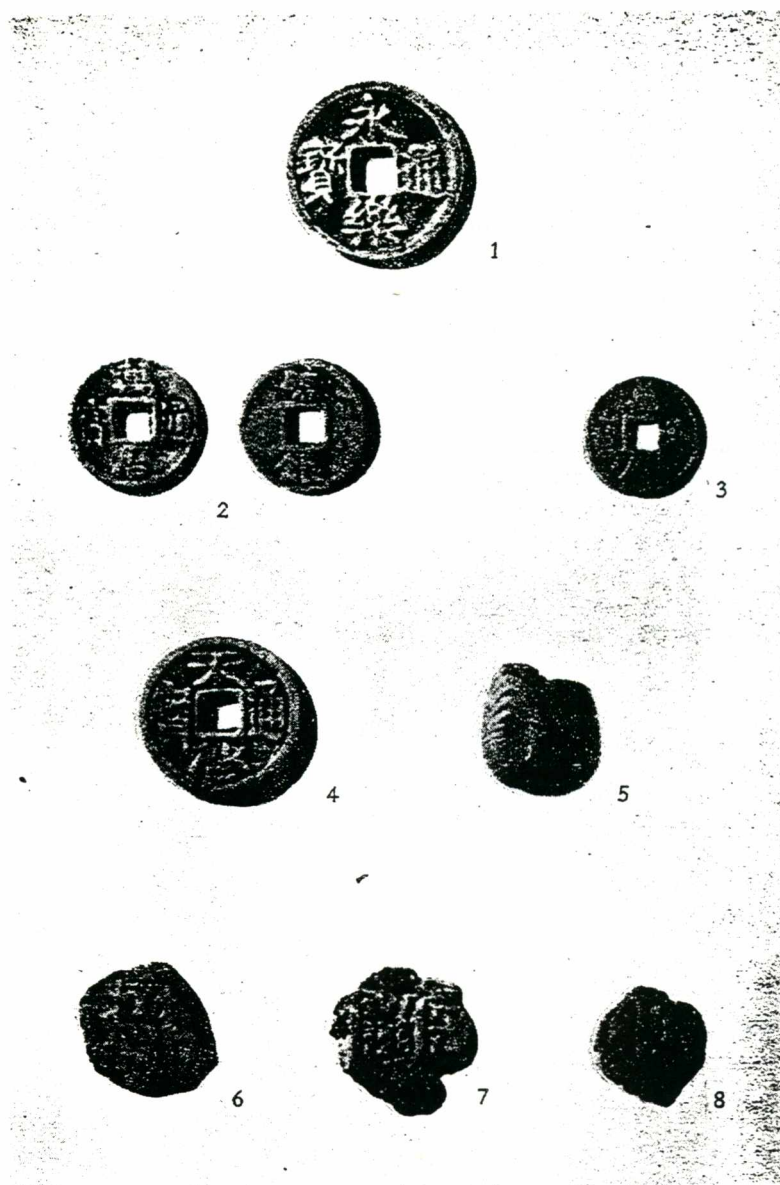
After the 1520s, people threw off the shackles of paper money to use copper coins and silver. Silver was something the feudal rulers could not control.

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

[664]

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。
大概會流到中國沿海地區來。

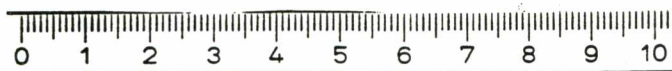


PLATE LXXVII. MING DYNASTY SILVER COINS AND BEANS

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.