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## 1.2 The Establishment of a Monetary Economy

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

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

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

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

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

It is characteristic of ancient spades that they come in no standard size, thickness, or shape. One

might expect the larger kind to have appeared first, but it is a difficult matter to determine just when the earliest hollow-socket spades appeared. Indeed the line between tool and specialized money is hard to draw. I would place the transition at around the time that King Ping moved the capital to the east. In modern times these spades have mainly been unearthed in the Anyang region, which in ancient times was the area where metallurgy was best developed.

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

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

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

<sup>1</sup>For illustration cf. *Ancient Money and Exchange*.

<sup>2</sup>For illustration cf. *Cultural Relics*, no. 8-9 (1960), 14.



tion, and are not necessarily dates.

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

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

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

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

Many of the inscriptions on hollow-socket spades are unreadable, and of those we can read, we often cannot altogether fathom their purposes. Even for those which we can determine to be place names, we cannot always pin the names to specific loca-

tions. This is because a number of place names from Spring-Autumn and Warring States times have not come down to us, and also because there are instances of two places having the same name. These can only be verified through archeological excavations.

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

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

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

<sup>3</sup>Su Tianjun, "Brief Discussion of the Pre-Liao Cultural Relics Excavated in Beijing," *Cultural Relics*, 9 (1959) states that in the Summer of 1956 there was unearthed outside Beijing's Chaoyang Gate a large quantity of knives and spades. The spades were of both the pointed-foot and square-foot types, and bore such inscriptions as *pingyang*,<sup>cq</sup> *anyang*,<sup>ch</sup> *zhaiyang*,<sup>ci</sup> [63]

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



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

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

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

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

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

character on its face resembles the character "capital" [*jing*<sup>eh</sup>].

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

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

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

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

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

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



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

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

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

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

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

Of the small square-foot spades, those minted in Anyang, Pingyang and Zhaiyang are most numerous. These places were probably commercial centers. Anyang and Liangyi have large spades of twice

the weight of small specimens. It is possible, however, that these differed in character from the large pointed-foot spades, and instead served as multiple denominations of their small counterparts.

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

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

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

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



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

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

Some round-foot spades have holes, one in the handle and one in each of the feet. These are called three-hole spades. Among the places minting them were Anyang, Luyang, Shangzhuan, Xiazhuan, Shangyuan, Shangbiyang, Xiabiyang, Beijiumen, [37]

E,<sup>5c</sup> [j<sup>gd</sup> and [j<sup>ge</sup> [perhaps *wenyingxiang*<sup>gf</sup>]. In addition to their three holes, the reverses of these coins are also distinctive. Most ordinary round-foot coins bear numbers on their reverses, but the three-hole spades record weights or values there. Large ones have the two characters meaning "one ounce" [*yi-liang*]; small ones the three characters for "twelve grains" [*shi'erzhu*]. This gives the three-hole spade unusual importance in Chinese monetary history. It is the earliest coin to employ the grain (*zhu*) and ounce (*liang*) as its units of value. The grain and ounce were the monetary units of the state of Qin, and so these could be Qin coins. [Bruce W. Smith reports that Chinese numismatists now believe that three-hole spades were issued by the state of Zhongshan.]

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

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

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

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

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

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

[38]

from 11 to more than 16 grams. The [j<sup>gh</sup> runs from 10 to 16 grams. The Yinjin is around 14 grams; the Jinyang 13 grams; the Fufan (Puban) 12 grams; and

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



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

The question remains: Was the adz really a unit of weight? The *Collected Rhymes* defines the character for adz as homonymous with the character for "hatchet" and the weight unit "catty" [*jin*], which is the former's phonetic component. This in turn is defined by the *Formal Meaning of Words* [*Zheng-zitong*] as a kind of tool "made of iron, with a curved wooden handle, the common term for a wood graver." The *Mencius* mentions "the ax [*fu-jin*]<sup>6</sup> entering the the mountain forests in its season." The *Zhuangzi* says "thereupon they called for the adz [*jin*] and saw."

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

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

The Anyi are the most numerous of the adz-spades, but the half-adz denomination is rare and has a different shape, so it must not have been minted at the same time as the others. There is an Anyin spade which is shaped like the Yu spade, both having raised outer edges. The Anyin does not, however,

bear the character for adz. There seem to have been two denominations. The smaller bears only the two characters Anyin. Sometimes the numeral one appears below the *yin*. It is about the same size as a half-adz. There is a numeral two below the *yin* on the large version. These would seem to be adz-coins, with the small one being a one-adz, and the large version a two-adz. They were probably minted later, after a weight reduction, with the character for adz left off. The Anyin Two weighs only 14 grams, about the same as the common one-adz spade.

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

### [39]

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

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

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

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

Judging by their construction, we can determine

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



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

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

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

[40]

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

Worth-Yuan spades might have been minted be-

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

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

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

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

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

[41]



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

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

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

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

The several basic types of flat-handle spades circulated simultaneously rather than consecutively. There are rather large differences in shape among

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

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

[42]

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

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

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

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

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



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

On the basis of shape and construction, the needle-tip knife would be judged the earliest of the knife coins. Its light and thin construction is not the consequence of a crude manufacturing technique or reduction in weight. Otherwise the pointed tip could not have been so exaggerated. This feature makes the coin inconvenient to circulate as money. It possibly dates to around the time of the hollow-socket spade, which would make it an artifact of Spring-Autumn times. Some characters found on hollow-[43]

socket spades are not found on this type of knife, probably because so few of these have as yet been discovered. The fact that pictographs like "bird" and "fish," which are found on these knives, are never encountered on hollow-socket spades, is worthy of investigation.

Such knives might have been produced for the trade between the Chinese and the Xiongnu or Eastern Hu. Even the shape of the knife could have been influenced by these peoples. The character for knife does not seem to be present among the terms for weapons in oracle bone writings. In recent years many bronze knives with different shaped handle ends have been found in the vicinity of Chengde and Zhangjiakou [Kalgan].<sup>7</sup> These knives were probably used by the Xiongnu. Perhaps this should cause us to undertake a new examination of the origins of knife coins, to see if they grew out of Chinese use of

small knives to exchange for such animal products as the hides and furs produced by the nomadic peoples of the northeast. Later on these small knives would have become money within China proper as well.

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

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

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

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

The pointed-tip knives were probably contemporaneous with the needle-tip knives. In addition to their similarities in shape, their inscriptions are basically the same, aside from some small differences in the component strokes. The character meaning "sheep" *yang*, for example, is written [j]<sup>f</sup> or [j]<sup>g</sup> on the needle-tip knife, and [j]<sup>h</sup> or [j]<sup>i</sup> on the pointed-tip knife. "Fish" *yü*, however, is written [j]<sup>j</sup> on both. The fact that the needle-tip knives bear more archaic characters, like [j]<sup>k</sup>, [j]<sup>l</sup>, [j]<sup>m</sup>, [j]<sup>n</sup> and [j]<sup>o</sup> which are lacking on the pointed-tip knives, while the latter include place names like Lin and Taohua, which may indicate that the latter came somewhat later. As the needle-tip knives have so far only been excavated from one location, and only in small quantities, it is also possible that this particular set was influenced by the pointed-tip knives.

<sup>7</sup>Hebei Province Cultural Bureau Cultural Relics Labor Brigade, "Cultural Relics Found in Waste Copper of Hebei Province in Recent Years," *Cultural Relics*, 2 (1960).

<sup>8</sup>Sun Shoudao, "Discovery of a Group of Ancient Tombs of



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

[44]

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

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

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

*Ming* knives are characterized by the presence of a single character on their obverses. This character appears in countless variant forms, but it is certain that all are variations on a single character. What character this is, or if it is even a true Chinese character at all, has been a subject for unending debate within the numismatic world down through the ages. In the old days most numismatists said these were Ju knives, from the ancient state of that name in southeastern Shandong, but this is far-fetched. Some have read this character as *zhao*<sup>9</sup> because it seems to be composed of [j] and [i].<sup>10</sup> Some even say that this *zhao* is an abbreviation of the name of the state of Zhao, making these Zhao coins, just as Handan was abbreviated on coin inscriptions.<sup>9</sup>

Most identify this as the character *ming*,<sup>11</sup> and say it was minted by the city of Xinming in Zhao, but most of the places where this coin has been excavated are in the Hejian and Yizhou region, which lay within the sphere of ancient Yan rather than Zhao. *Ming* knives have also turned up in Liaoyang and Liaodong, which was the territory of

the Eastern Hu barbarians, and whose contacts were mostly with Yan. Hence we can definitely say this was Yan money. Consequently some have said the character *ming* stands for the *ming* in the name of the Yan city of Pingming. [Bruce W. Smith notes that the main ancient texts do not mention Pingming and that the ancient and modern place name dictionary says it was not established until Han.] Others say it is the character *yi*,<sup>12</sup> referring to Yizhou, the character *yi* being made up of [j]<sup>u</sup> and [i]<sup>v</sup> which corresponds with what seems to be written on the knives. Nevertheless, most people still employ the name *ming* knife for this coin.

The reverse inscriptions on *ming* knives are most complex. Some have one character, others many characters. Some of the monocharacter inscriptions are *qi*,<sup>13</sup> *xing*,<sup>14</sup> *gong*,<sup>15</sup> *gan*,<sup>16</sup> *ji*,<sup>17</sup> *wang*,<sup>18</sup> *wen*,<sup>19</sup> *da*,<sup>20</sup> *li*,<sup>21</sup> *gu*,<sup>22</sup> *fang*,<sup>23</sup> *tong*,<sup>24</sup> *jun*,<sup>25</sup> *chang*,<sup>26</sup> *yi*,<sup>27</sup> *shang*,<sup>28</sup> *xia*,<sup>29</sup> *zhong*,<sup>30</sup> *zuo*,<sup>31</sup> and *you*,<sup>32</sup> as well as numerals. The multiple character inscriptions are divisible into four categories, based on their initial characters: "left" *zuo*,<sup>33</sup> "right" *you*,<sup>34</sup> "inner" *nei*,<sup>35</sup> and "outer" *wai*.<sup>36</sup> "Left" and "right" are the most common. Combinations like "left three" *zuosan*, "right seven" *youqi*, "outside ninth-stem" *wai-ren* and "metal second-stem" *jinyi*<sup>37</sup> occur, not all of which can be deciphered.

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

[45]

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

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

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

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

<sup>9</sup>Zhou Shu, "Words on Money of the Nourishing Wind House," *Money*, no. 42, p. 11.



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

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

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

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

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

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but come in different sizes. The handle ends are

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

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

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

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

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

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

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

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



resembles the Six-character knife in construction, except that its calligraphy is more graceful. Individual coins weigh 44-5 grams, about the same as the Six-character knife. Nor are they much more common. It can, however, be distinguished from the Construct-the-nation knife. The latter's obverse outer edge goes completely around the coin, whereas the obverse outer edge of the Four-character knife

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breaks off at the base of the handle. This characteristic divides Qi knives into two categories.

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

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

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

The Jimo knife is heavy and particularly coarsely made, with a wide blade. Large ones weigh upwards of 56 grams. Some characterize the inscriptions of those found in Shandong as robust, and the Henan ones as delicate. I fear this distinction is specious, since all Jimo knives were minted in Shandong.

They are often covered with red and green verdigris, which is rarely the case with other such coins. Evidently they must not have been buried very far apart, and so coins with both calligraphic styles would have been intermixed. Most Anyang knives have washes of either mercury or black pitch. [Bruce W. Smith has never heard of such a phenomenon.] The Three-character knives, Four-character knives and Construct-the-nation knives mainly bear green verdigris.

Because of their thickness and the presence of such inscriptions as *Pifeng* and *Anbang* on their reverses, some believe the Jimo knives to be the earliest of the Qi knives. This is possible, but is not necessarily the case. Coins from different places might well be made differently. Different places need not develop in technique at equal rates. The name Jimo on these coins does not refer to Jimo

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state, but to Jimo (or Jiemo) city. In other words, they were minted after Qi had conquered Jimo. Qi must have been minting knife coins before they would have been produced in distant Jimo. The meanings of *pifeng* and *anbang* are not very clear.

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

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

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



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

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

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

All Qi knife inscriptions contain the character *hua* or *huo*,<sup>ld</sup> which seems to be an abbreviation for the noun meaning "money." Later, there [49]

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

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

The problem of the sequence of the Qi knives is related to their categorization. Some make a distinction between broken and unbroken raised outer rims, attributing the broken form to Qi's Lü Dynasty, and

the unbroken rim coins to the Tian Dynasty.<sup>11</sup> Of course differences in shape must not be ignored. All Zhao knives, for example, have continuous rims, but all Yen knife rims are discontinuous. If we accept that the pointed-tip knife belongs to the early period and use it as our standard, then the Jimo, Anyang and Four-character knives would come ahead of the Construct-the-nation and Three-character knives.

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

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

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

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

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

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

[50]

separate state and constitutes a separate category.<sup>12</sup>

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

<sup>11</sup>Zheng Jiaxiang, *History of the Development of Ancient Chinese Money*, p.74.

<sup>12</sup>Wang Liuquan, *Origins and Development of Our Country's Ancient Money*, p. 59. Many of the coin illustrations



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

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

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

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

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

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

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

[51]

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

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

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

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There is no such knife coin.



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

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

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

cash.

[52]

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

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

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

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

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

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



coins had small holes; later ones had large holes.

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

First of all, Ban Gu was mistaken. We do not know on what he based his statement that "Duke Tai establishing the Nine Offices Round System for Zhou." According to my understanding, [53]

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

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

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

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

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

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

[54]

incomplete.

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

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

<sup>15</sup>The *Explanations of Words*, quotes the *Erya* under the entry for the character *huan*.<sup>mx</sup>



influenced by the jade ring.

According to our present knowledge, ring coin inscriptions include *yuan*,<sup>my</sup> *gong*,<sup>mz</sup> *gongtun* *chijin*,<sup>na</sup> *changyuan yijin*,<sup>nb</sup> *wuping*,<sup>nc</sup> *jiyin*,<sup>nd</sup> *x jin*,<sup>ne</sup> *anzang*,<sup>nf</sup> *lin*,<sup>ng</sup> *lishi*,<sup>nh</sup> *taoyang*,<sup>ni</sup> *xizhou*,<sup>nj</sup> *dongzhou*,<sup>nk</sup> [which are place names], *banqiong*,<sup>nl</sup>

Weight One-ounce Fourteen-grains *zhong yiliang shisizhu*,<sup>nm</sup> and Weight One-ounce Twelve-grains, *zhong yiliang shierzhu*.<sup>nn</sup> Counting the last two, the larger of these coins averaged around 10 grams, but the weights of individual coins varied considerably from this figure. Of those *changyuan yijin* I have seen, for example, the heaviest ran to 13.5 grams, and the lightest to only 8.4 grams. Other coins might be still heavier or lighter. If the Weight One-ounce Fourteen-grains coin was to live up to its name, it should be heavier, but runs only something over 14 grams, with some as light as 12 grams. Nor are the Weight One-ounce Twelve-grains coins necessarily any lighter.

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

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

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

The Half-*qiong* inscription meant, according to past numismatists, a half coin of round metal. They

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

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

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

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

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

<sup>17</sup>Yu Yan, "Investigation of the Character *gong* Coin," *Money*, no. 22.



the three-hole spade.<sup>18</sup> These do not, however, seem to be the earliest ring coins.

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

The label Western Zhou on ring coins refers to Henan (i.e. Shannxi). King Kao of Zhou enfeoffed his younger brother in Henan, and the brother's territory was called Western Zhou. Eastern Zhou refers to Luoyang. Duke Hui of Western Zhou enfeoffed his younger son Ban in Gong,<sup>19</sup> which was called Eastern Zhou. Both events occurred during the fifth century B.C. This, however, only sets the upper limits for the dates of the Western and Eastern Zhou coins.

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

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

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

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

bearing identification numbers, or having identification numbers but lacking the inscription "weight four-ounces," they are suspect.

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

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

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

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

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

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

<sup>18</sup>Zheng Jiaxiang, "Origins of and Changes in the Nomenclature of Knife, Spade and Spring Coins," *Money*, no. 22.

<sup>19</sup>Wu Dacheng, *Experiments in Weight Measurements*.

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<sup>20</sup>Ma Ang, *Investigation of the Inscriptions on Monetary Spades*.



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

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

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

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

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

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

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

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

The second stage comprises the various knife and spade coins of the Warring States Era, with spade

coins being especially important. It runs from around 480 B.C. to 221 B.C. (If it is considered to have ended with putting of coins into circulation in the 2nd year of King Huiwen of Qin,

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

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

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

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

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

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



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

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

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

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

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

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

It was precisely because Chinese coins bore only inscriptions that they could reflect developments in writing. This is one great source of Chinese coins' historical value. The reason why we can call the second stage of development of China's ancient coinage the free style stage is partly because of the numerous shapes taken on by coins, but also because of the variations in inscriptions. At that time coins were

cast in clay molds. Each mold could only be used once. Hence even among coins from a single place, there are no two coins with identical inscriptions.

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

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

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

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

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



coins, which is written  $\square$ .<sup>oe</sup> It would be more appropriate to call these pictures than writing.

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

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

The numerals on knife and spade coins are also worthy of note. Even if the numerals or signs used by Chinese merchants did not take full form at this time, their earliest versions did appear then.<sup>21</sup>

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

Modern Numerals	1(一)	2(二)	3(三)	4(四)	5(五)	6(六)	7(七)	8(八)	9(九)	10(十)
Hollow-socket Spades	—	=	≡		×		ㄥ	ㄣ	ㄤ	+
Pointed-foot h.s. Spades	—	=	≡			ㄥ	ㄣ			
Pointed-foot Spades	—	=	≡	≡	×	ㄥ	ㄣ	×	ㄣ	+
Square-foot Spades	—	=	≡	≡	×	ㄥ	ㄣ	×	ㄣ	+
Round-foot Spades	—	=	≡		×	ㄥ	ㄣ	×	ㄣ	+
Needle-tip Knives				×	ㄥ					
Pointed-tip Knives	—	=	≡	×	ㄥ	ㄣ	ㄣ	×	ㄣ	+

Numerals appear on hollow-socket spades, flat-handle spades, needle-tip knives, pointed-tip knives and *ming* knives. It is, however, no easy task to collate the numerals on each type of coin. Aside from those on the hollow-socket spades, nearly all the rest appear on the coins'

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

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

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

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

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

*Ming Knives* —  $\square$   $\square$   $\square$   $\square$   $\square$   $\square$   $\square$   $\square$   $\square$   $\square$   $\square$

<sup>22</sup>Zheng Jiaxiang, *History of the Development of China's Ancient Money*.



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

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

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dispersed monetary systems. Most coins bore place names.

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

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

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

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

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

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



w 君 x 烏 y 是 z 谷 aa 西 ab 月  
 ac 刀 ad 州 ae 田 af 古 ag 山 ah 白  
 ai 止 aj 陽 ak 高 al 乙 am 木 an 屯  
 ao 留 ap 目 aq 成 ar 于 as 氏 at 共  
 au 豆 av 化 aw 七 ax 丘 ay 盧 az 朱  
 ba 商 bb 示 bc 侯 bd 冏 be 貨 bf 貿  
 bg 當 bh 富 bi 吉 bj 鬲 bk 吳 bl 口  
 bm 耳 bn 同 bo 鼎 bp 宗 bq 宗  
 br 羣 bs 濟 鉞 bt 郛 鉞 bu 武  
 (武) 鉞 bv 武 孚 bw 安 臧  
 bx 東周 by 同是 bz 武 安  
 ca 宣 考 cb 盧 氏 cc 貿 丘 cd 棘 甫  
 ce 小 化 ce 甫 至 水 cf 小 or 小 化  
 cg 平 陽 ch 安 陽 ci 宅 陽 cj 陽 邑  
 ck 大 陰 cl 土 襄 陰 cm 梁 鄉 cn 祁  
 co 郛 鄉 cp 郛 鄉 cq 郛 鄉 cr 王 氏 cs 茲 氏  
 ct 皮 氏 cu 鄧 氏 cv 平 周 cw 中 都  
 cx 高 都 cy 蒲 子 cz 郛 子 da 北 屈  
 db 同 是 dc 屯 留 dd 馬 服 邑 de 丘 貝  
 df 襄 垣 dg 豐 dh 露 di 涅 dj 蘭  
 dk 咎 如 dl 茲 氏 半 dm 武 平  
 dn 武 安 do 晉 陽 dp 晉 易  
 dq 申 陽 dr 陽 人 ds 平 周 dt 北 茲  
 金 化 du 郛 dv 郛 山 dw 高 丘  
 dx 西 都 dy 蘭 半 dz 榆 半 ea 高 石  
 eb 郛 半 ec 易 大 ed 登 廿 五 左 邑  
 半 金 化 ee 白 鉞 ef 柏 eg 柏 人

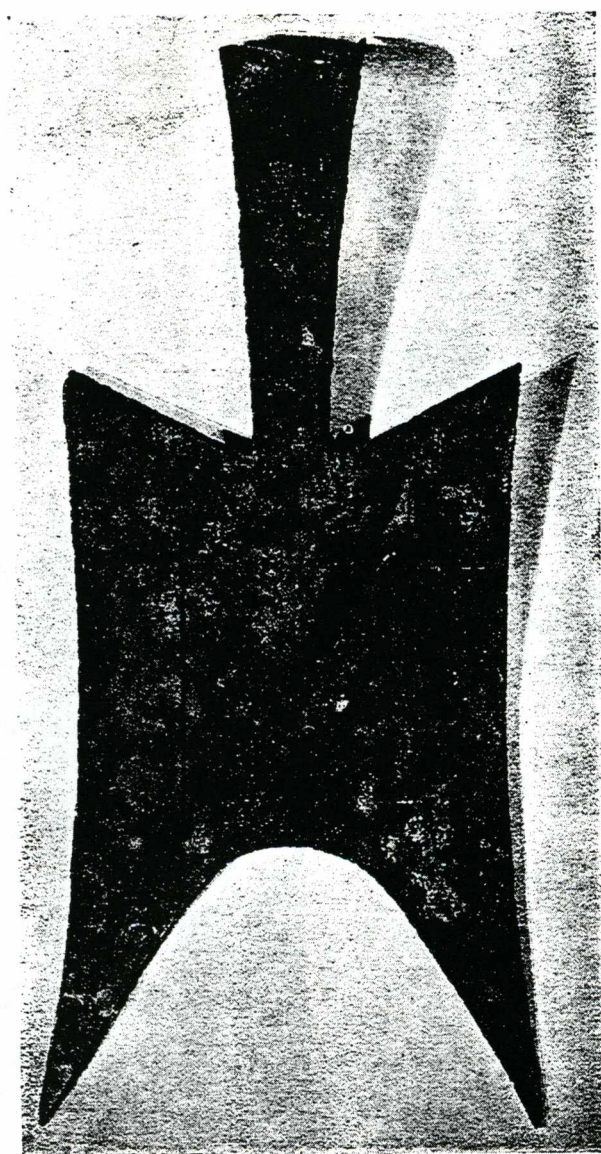
eh 京 ei 甘 丹 (郛 郛) ej 晉 陽  
 ek 武 安 el 茲 em 茲 en 茲 eo 茲  
 ep 茲 (茲) 氏 eq 茲 土 城 er 茲 金 鉞  
 es 閔 et 蘭 eu 郛 (郛) 石 ev 平 周  
 ew 皮 氏 ex 中 陽 ey 蒲 子 ez 大 陰  
 fa 西 都 fb 中 都 fc 陽 fd 大 陽 半  
 fe 武 平 fg 斗 邑 fh 商 土 城 fi 郛  
 fj 分 郛 齊 貝 郛 文 貝 fl 丘 貝 fm 郛 貝  
 fn 郛 安 fo 父 易 fp 平 各 fq 郛 邑  
 fr 鄭 氏 fs 示 邑 ft 右 明 新 郛  
 fu 治 fv 但 fw 人 fx 火 fy 口 fz 楚  
 ga 郛 gb 恭 gc 阿 gd 楚 ge 父 郛 郛  
 gf 文 雁 鄉 gh 郛 郛 gi 郛 氏  
 gj 金 化 gk 斤 金 gl 斧 斤 gm 梁 今 金 五  
 gn 斗 梁 今 金 尙 半 go 今 郛 本  
 gp 尙 斗 gq 梁 今 金 尙 半 gr 尙 半  
 gs 尙 半 gt 尙 半 gu 當 半 gv 尙 半  
 gw 梁 正 尙 金 當 半 gx 梁 半 尙 二 金 當 半  
 gy 正 半 gz 整 ha 尙 hb 幣 hc 郛 郛 郛 郛  
 hd 殊 布 當 十 化 he 郛 郛 (郛) 金 當 折  
 hf 十 郛, 十 貨 hg 郛 郛 hi 尙 折 hj 四  
 錢 or 布 當 折 hk 郛 hl 十 斤 hm 貨 hn 化  
 ho 斤 hp 大 hq 工 hr 公 hs 羊 ht 高 hu 戈  
 hv 又 hw 魚 hx 刀 hy 成 hz 郛 郛 行  
 ib 土 ic 化 id 吉 ie 工 if 大 ig 丁 ih 上  
 ii 中 ij 下 ik 立 il 于 im 王 in 井 io 氏  
 ip 易 郛 城 ir 木 is 水 it 生 iu 公 iv 日  
 iw 閔 ix 工 化 iy 兆 郛 化 iz 非 一 ja 文 一



jb 六-jc 八-jd 八木 je 丙七 jf 干  
 jg 下 jh 干 ji 干 jj 干 jk 干 jl 干 jm 干  
 jn 干 jo 南 jp 召 jq 刀 jr 口 js 明 jt 易  
 ju 日 jv 月 jw 七 jx 行 jy 工 jz 干 kz 吉  
 kb 王 kc 文 kd 大 ke 立 kf 古 kg 方  
 kh 同 ki 君 kj 長 kk 邑 kl 上 km 下  
 kn 中 ko 左 kp 右 kq 内 (8) kr 外  
 ks 外壬 kt 金乙 ku 齊化 kv 齊化共金  
 kw 齊化 kx 齊化 ky 齊化  
 kz 齊化 lb 齊建邦就法化 lc 齊造邦長法化  
 ld 化 le 日 lg 上 lh 工 li 吉 li 干 li  
 lk 卜 ll 齊之 忒化 lm 二 ln 忒 lo 忒  
 lp 齊忒化 lq 行 lr 止 ls 土 lt 忒 lu 正  
 lv 立 lw 央 lx 安 ly 生 lz 万 ma 木  
 mb 金 mc 易 md 大 me 大 mf 鄧 黑邑之

忒化 mg 大行 mh 安邦 mi 闕封  
 mj 之 mk 十 ml 九 mm 八 mn 安易之  
 忒化 mo 忒 mp 忒 mq 忒 mr 忒  
 ms 鄧 mt 譚 mu 貨 mv 七 mw 止  
 mx 王 my 垣 mz 共 na 共屯赤金  
 nb 長垣一金斤 nc 武坪 nd 濟陰  
 ne x 晉 nf 安藏 ng 閱 nh 離石  
 ni 兆陽 nj 西周 nk 東周 nl 半農  
 nm 重一兩十四金朱 nn 重一兩十二金  
 no 爰 np 環 nq 乎 nr 罕 ns 眾 nt 卑  
 nu 桑 nv 各六朱 nw 洛 nx 行 ny 君  
 nz 旬 oa 折 ob 全 oc 金 od 8 oe 8  
 of 一 og 二 oh 三 oi 三 oj 三 ok 三 ol 三  
 om x on 五 oo 三 op 介 oq 4 or 3 os 2  
 ot 1 ou 1 ov 1 ow 1 ox 三 oy 三 oz 1  
 pa x pb 三 pc 忒 pd x 2 pe 3 pf 2





圖版三 空首尖足大布

這種布多沒有文字，但也有甘丹等地名的，近代發現有四五個字的，大概要晚些。

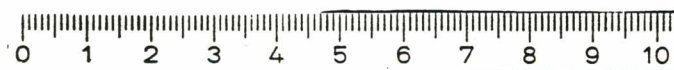
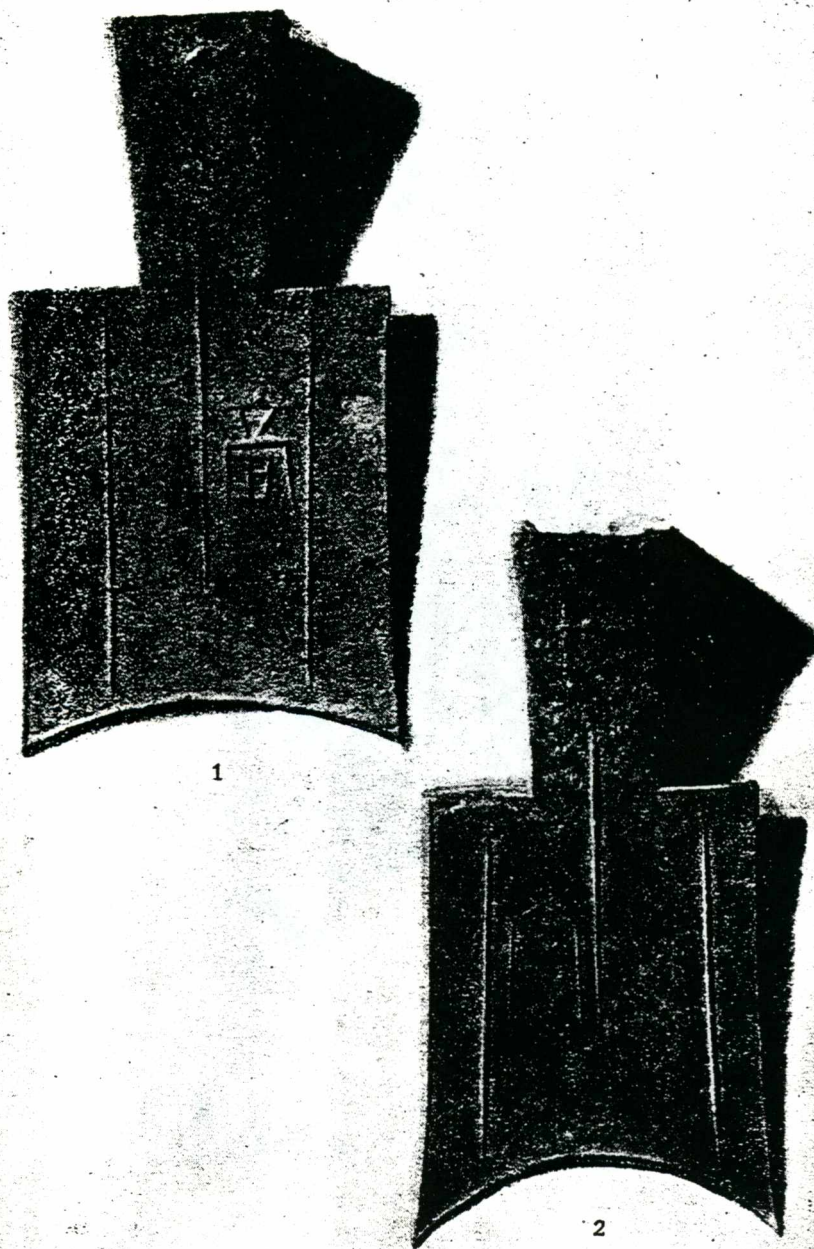


PLATE III. HOLLOW-SOCKET, POINTED-FOOT LARGE SPADE

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





圖版四 平肩空首布(一)

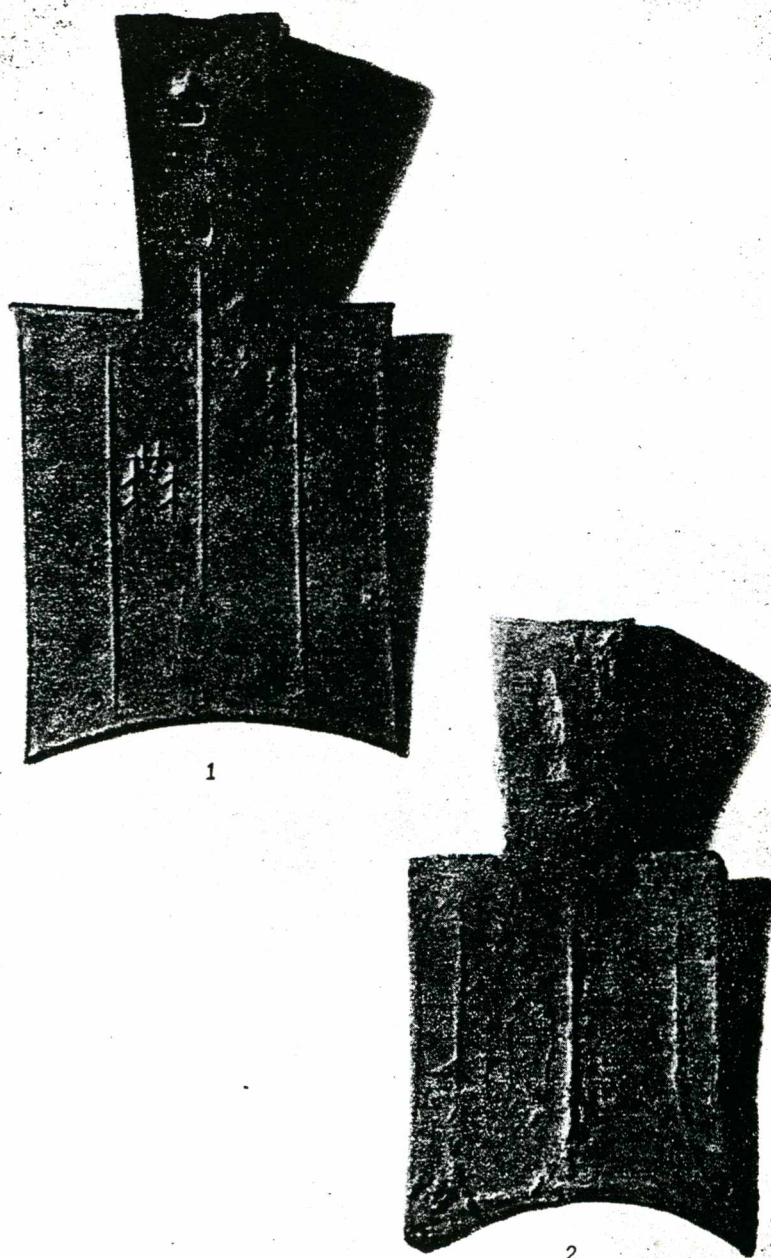
1.高。 2.富。



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

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





圖版五 平肩空首布(二)

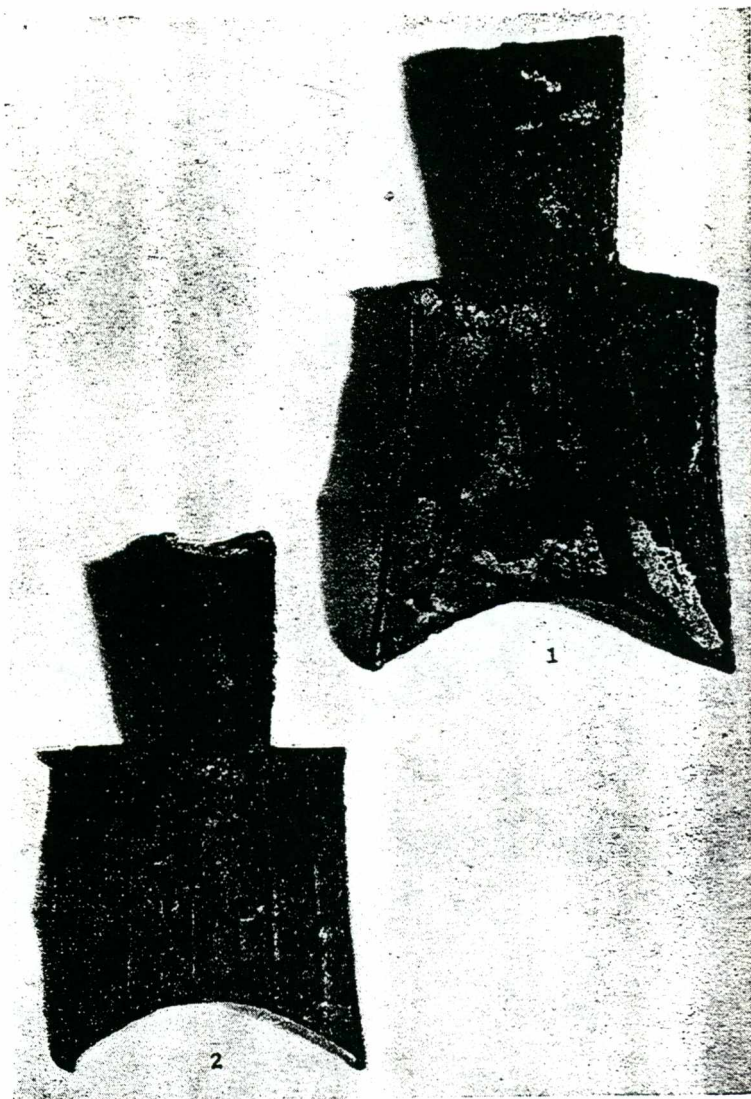
1. 益(舊釋寶或朋)。 2. 邦鉞。



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

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





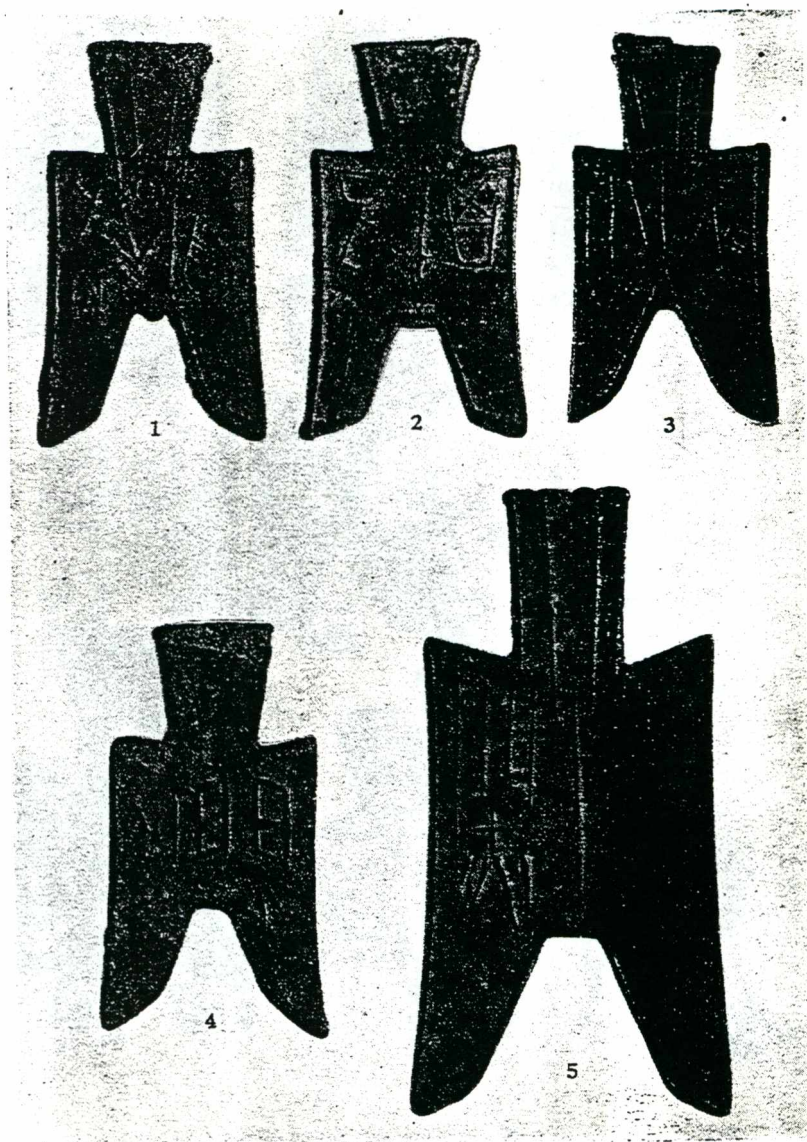
圖版六 斜肩空首布和小形空首布  
1.武。 2.安臧。



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

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





圖版七 尖足布

1.西都。 2.晉陽。 3.平周。 4.閼半。 5.閼。



PLATE VII. POINTED-FOOT SPADES

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





圖版八 方足布(一)

1. 豕章。2. 襄平。3. 戈邑(郊)。4. 涅。5. 涅金。6. 安陽。

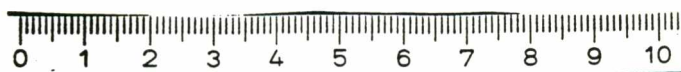
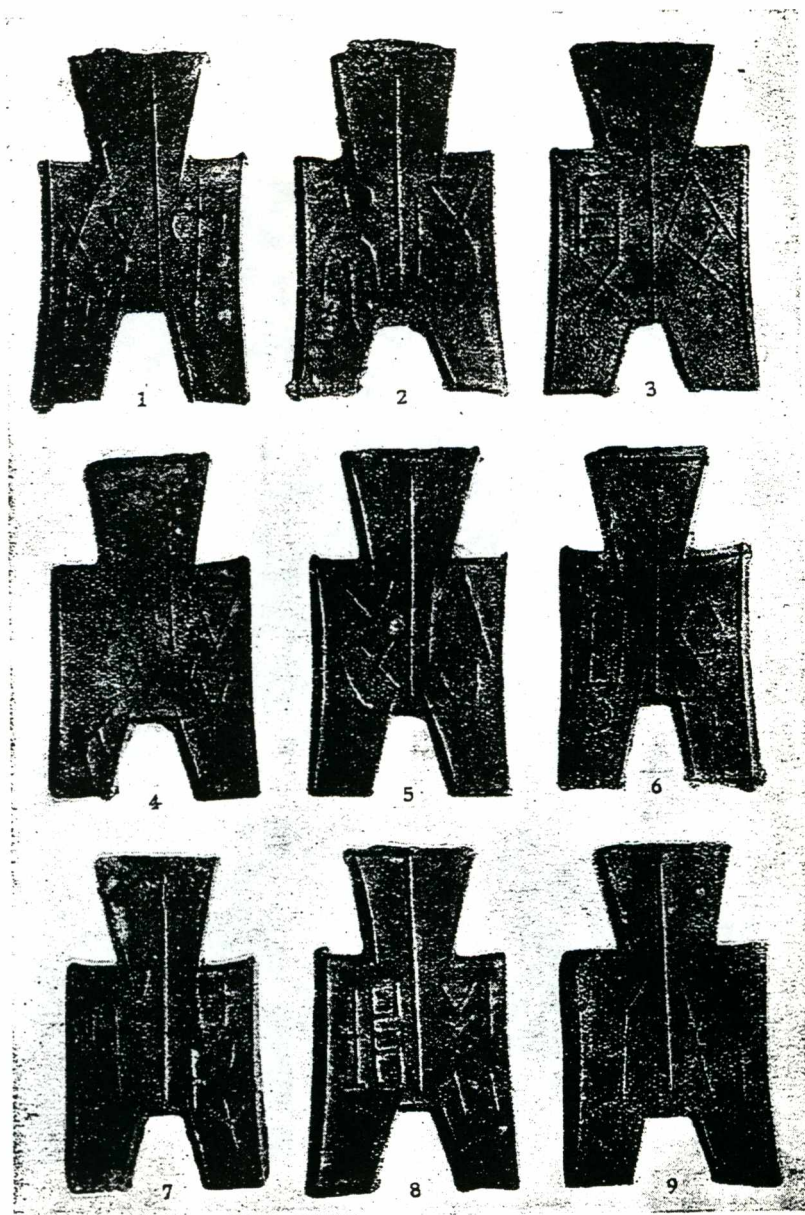


PLATE VIII. SQUARE-FOOT SPADES (1)

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





圖版九 方足布(二)

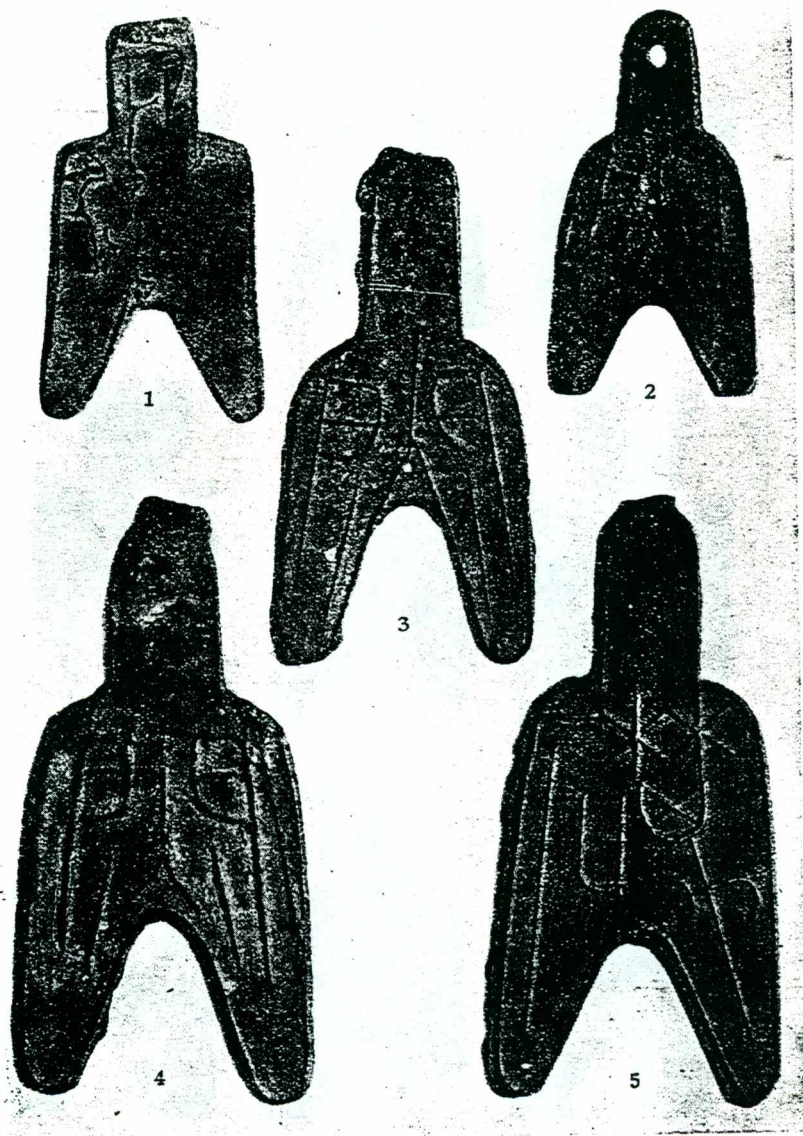
1. 中都。2. 魯陽。3. 貝丘(或釋齊貝、文貝)。4. 烏邑(鄒)。5. 同是(銅鞮)。  
6. 馬雒(或釋馬服邑)。7. 皮氏。8. 穀垣。9. 鄆子。



PLATE IX. SQUARE-FOOT SPADES (2)

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





圖版十 圓足布

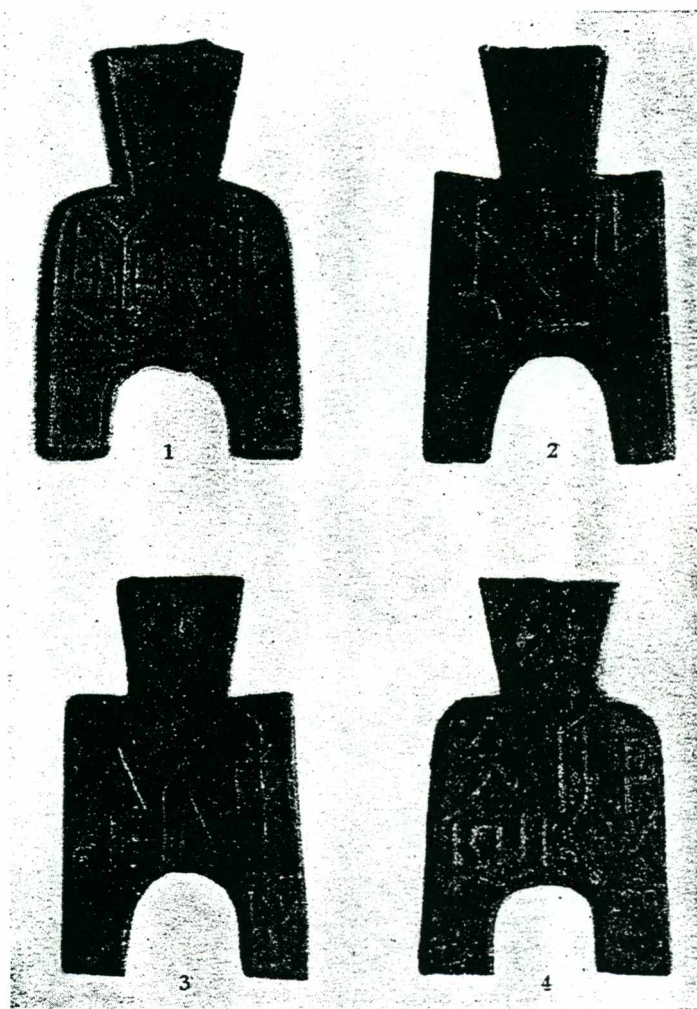
1. 鎡氏(茲氏)。 2—4. 閔。 5. 簠(籬)石。



PLATE X. ROUND-FOOT SPADES

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





圖版十一 布 銚

1. 虞一銚。 2. 采一銚。 3. 甬反(蒲板)一銚。 4. 安邑一銚。



PLATE XI. ADZ-SPADES

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





圖版十二 梁的布幣

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

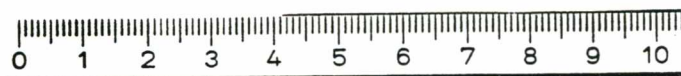
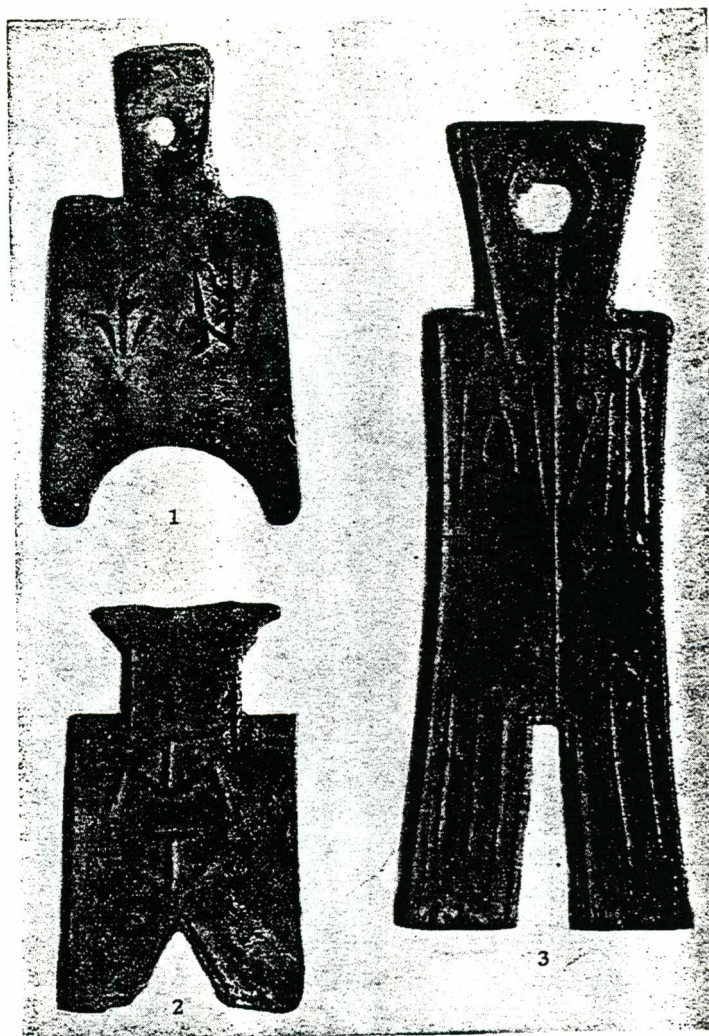


PLATE XII. LIANG SPADE COINS

1-2. Liangyi. 3. Liang Formal Metal Worth Yuan [*Liang zheng shang jin dang yuan*]. 4. Liang [?] Adz Metal Worth Yuan [*Liang [?] jin jin dang yuan*]. 5. Liang [?] Adz Five (Twenty) Worth Yuan [*Liang [?] jin wu (ershi) dang yuan*].





圖版十三 異形布

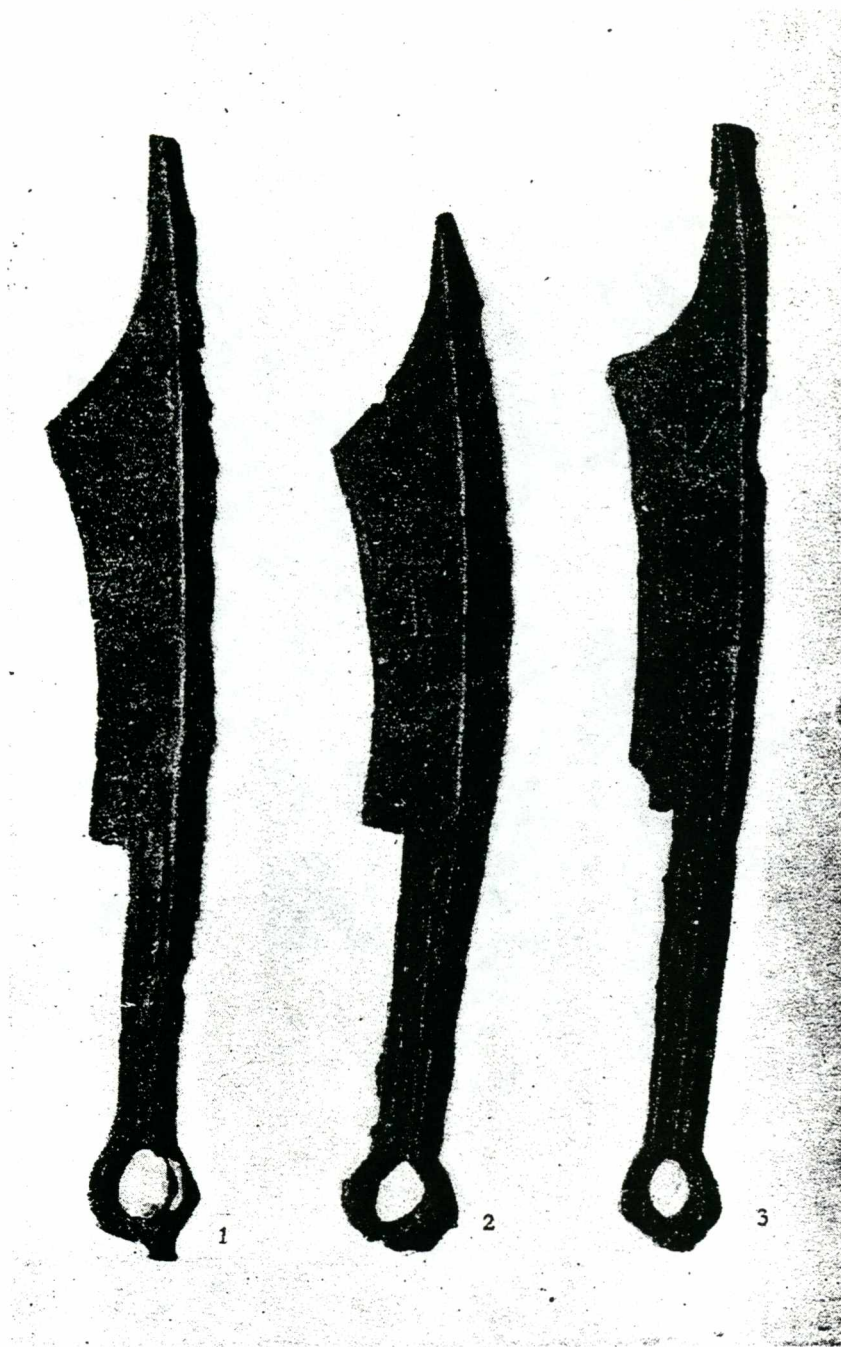
1. 分布。 2. 垂。 3. 施錢當折(舊釋殊布當折)。



PLATE XIII. UNUSUAL SHAPED SPADES

1. *Fen* spade. 2. *Chui*. 3. Pennon Cash Worth Jin [*peiqian dangjin*]. (Formerly transcribed as Special Spade Worth Jin [*shubu dangjin*].)





圖版十四 針首刀

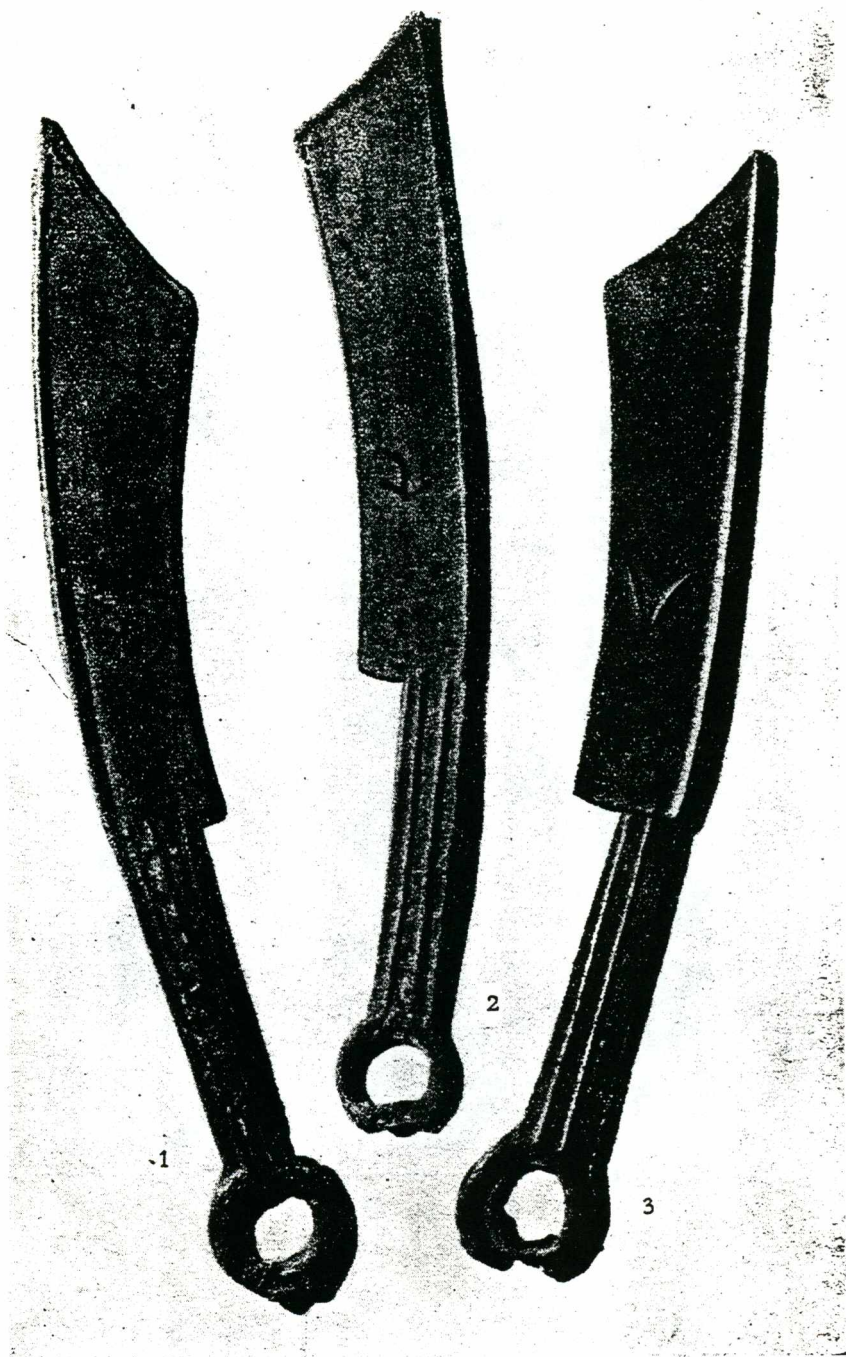
1.五。 2.𠂔。 3.↓。



## PLATE XIV. NEEDLE-TIP KNIVES

1. Five [wu]. 2. [?]. 3. [?].





圖版十五 燕的尖首刀

1.行。 2.六。 3.八。



PLATE XV. YAN'S POINTED-TIP KNIVES

1. *xing*. 2. Six [*liu*] 3. Eight [*ba*]





圖版十六 燕明刀

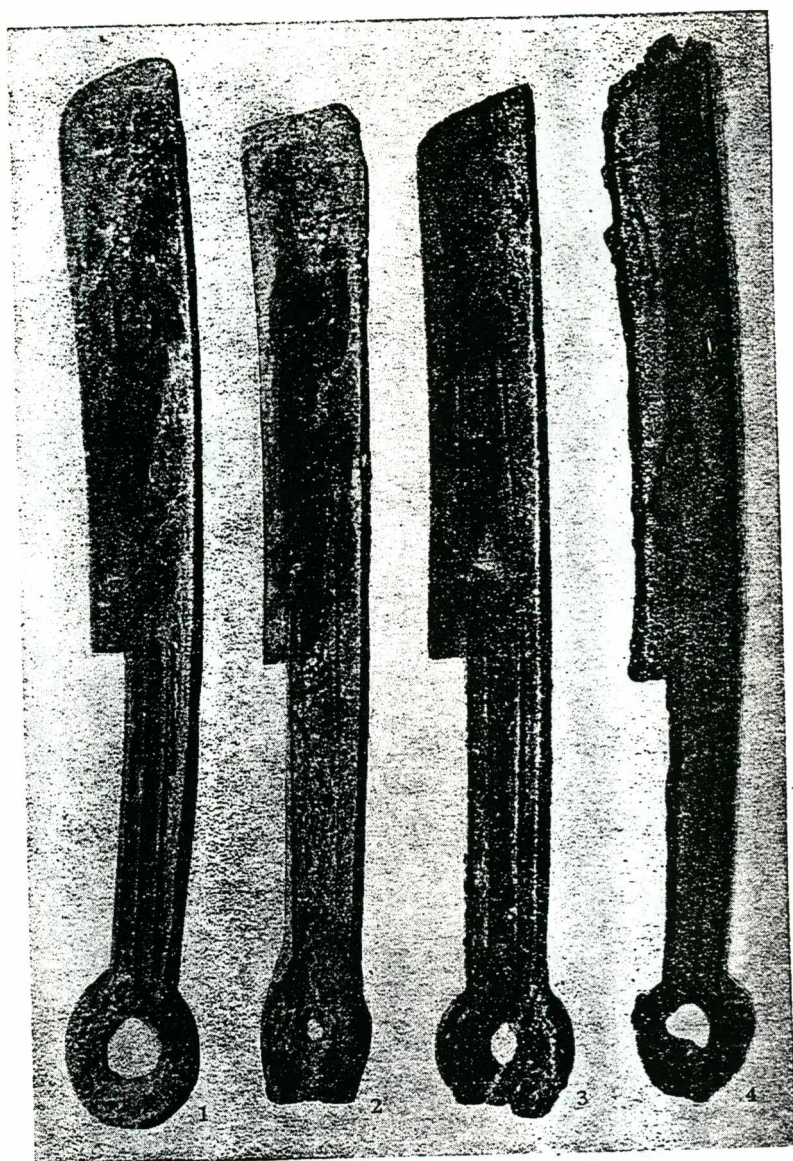
1. 磬折刀。 2—3. 圓折刀。



PLATE XVI. YAN MING KNIVES

1. Chimingstone [*qing*] or Humpbacked [*zhe*] knife. 2-3. Curved back knives [*yuanzhedao*].





圖版十七 趙的圓首刀

1-2. 白人。 3. 甘丹(邯鄲)。 4. 成白。

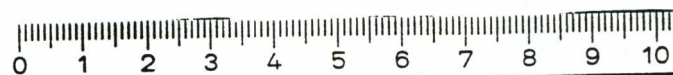
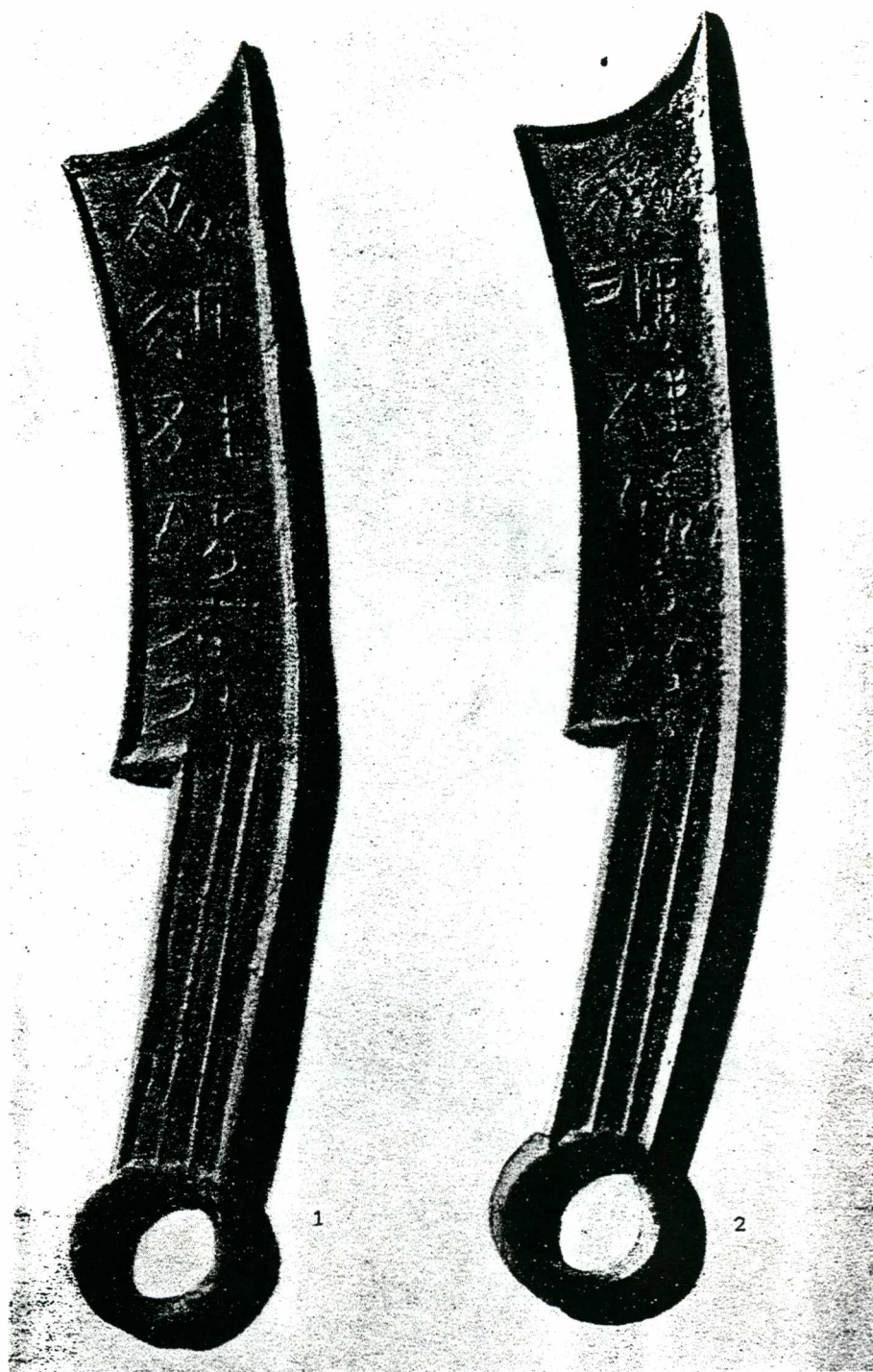


PLATE XVII. ZHAO'S ROUND-TIP KNIVES

1-2. Bairen. 3. Handan. 4. Chengbai.





圖版十八 齊造邦刀

1. 有斷緣痕跡的造邦刀。 2. 不斷緣的造邦刀。

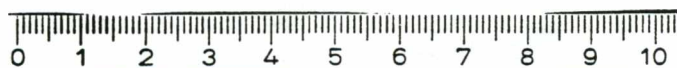


PLATE XVIII. QI CONSTRUCT-THE-NATION KNIVES

1. Construct-the-nation knife with traces of a broken edge. 2. Construct-the nation knife without broken edge.





圖版十九 齊三字刀和四字刀  
1. 齊布幣(俗稱三字刀)。 2. 齊布幣(俗稱四字刀)。



PLATE XIX. QI THREE-CHARACTER AND FOUR-CHARACTER KNIVES

1. Qi money (popularly called Three-character knife. 2. Qi money (popularly called Four-character knife.





圖版二十 即墨刀和安陽刀

1. 即墨刀。 2. 小即墨刀。 3. 安陽刀。

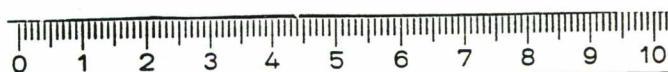
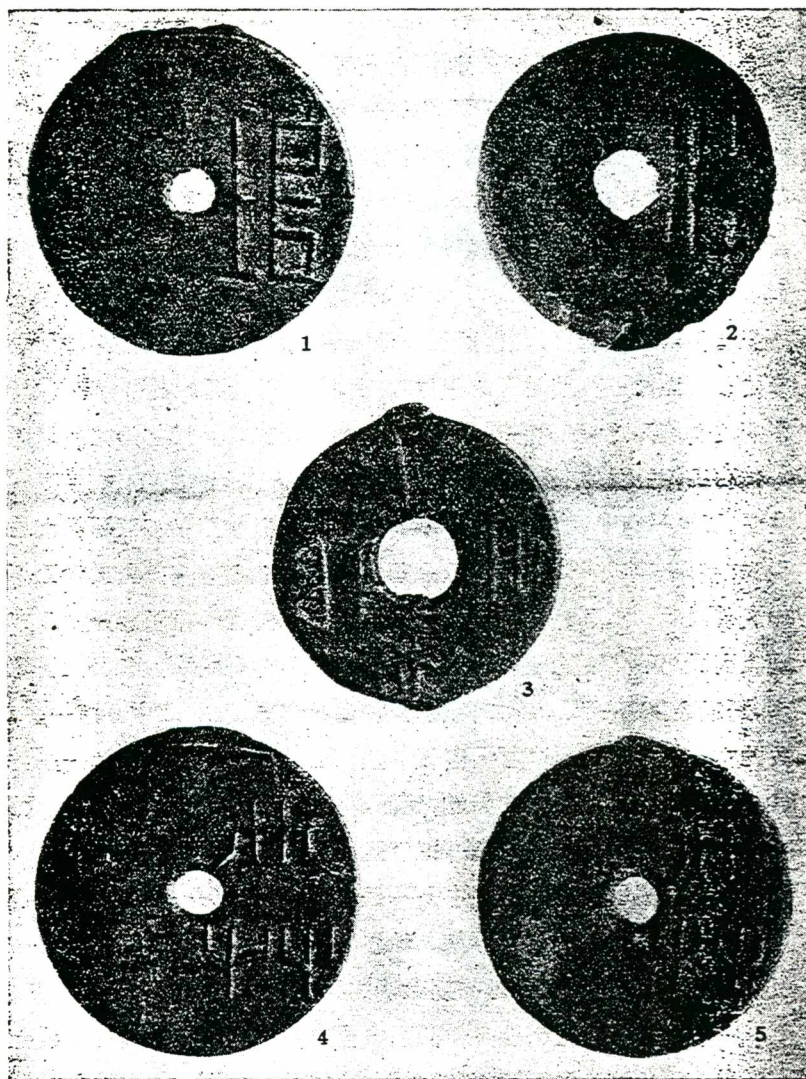


PLATE XX. JIMO AND ANYANG KNIVES

1. Jimo knife. 2. Small Jimo knife. 3. Anyang knife.



圖版二十一 環錢(一)

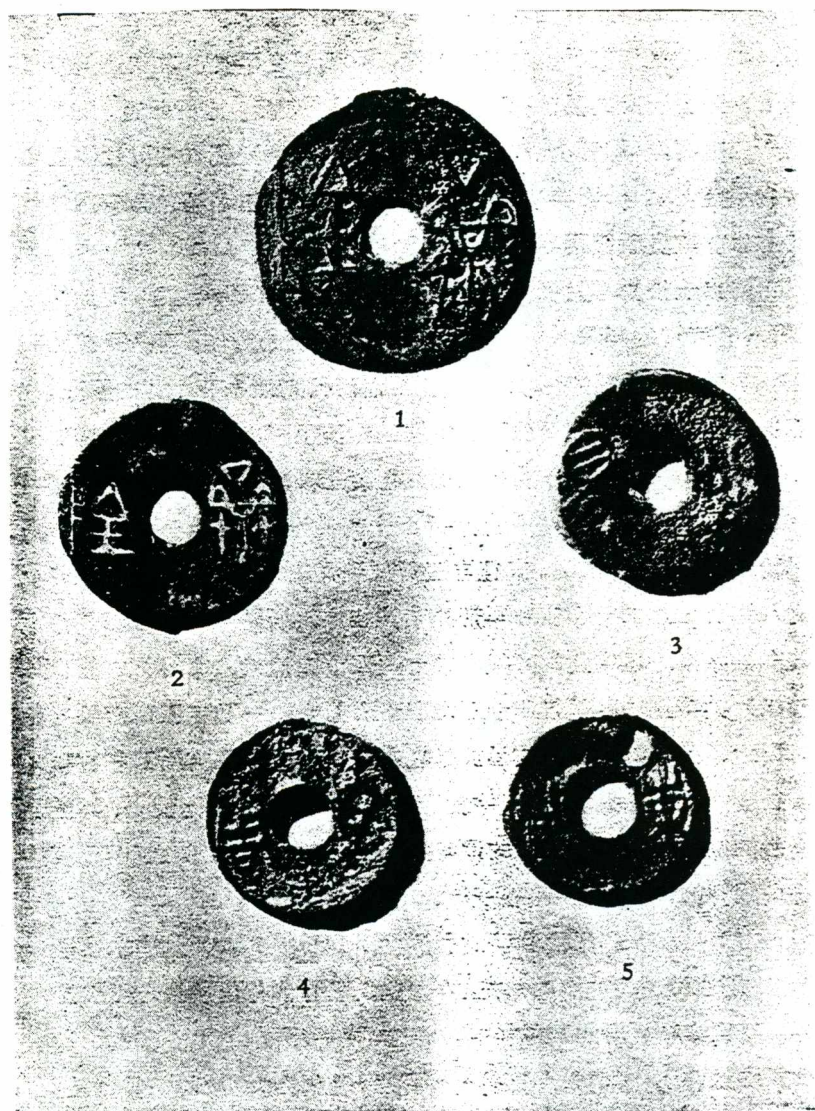
1—2.垣。 3.長垣一鉞。 4—5.共。



PLATE XXI. RING COINS (1)

1-2. Yuan. 3. Changyuan one adz. 4-5. Gong.





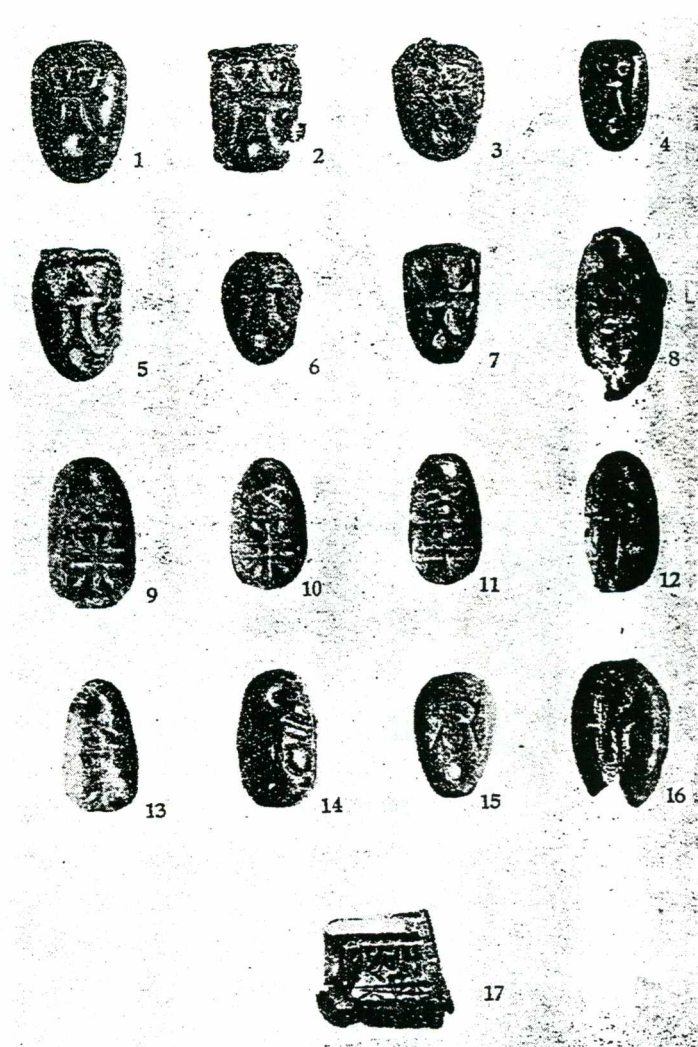
圖版二十二 環錢(二)

1. 濟陰。 2. 小濟陰。 3. 半爰。 4. 西周。 5. 東周。



PLATE XXII. RING COINS (2)

1. Jiyin. 2. Small Jiyin. 3. Half Qiong. 4. Western Zhou. 5. Eastern Zhou.



圖版二十三 楚的蟻鼻錢和爰金

1—7. 鬼臉錢。8—13. 各六朱。14. 行。15. 君。16. 折。17. 鄢爰(沐園藏品)。第16品折字錢僅見舊譜著錄, 未見真品, 這裏的一枚也不可靠。第17品為中國最早的金鑄幣。

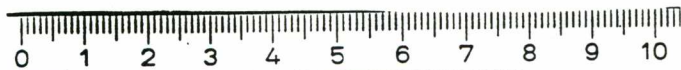
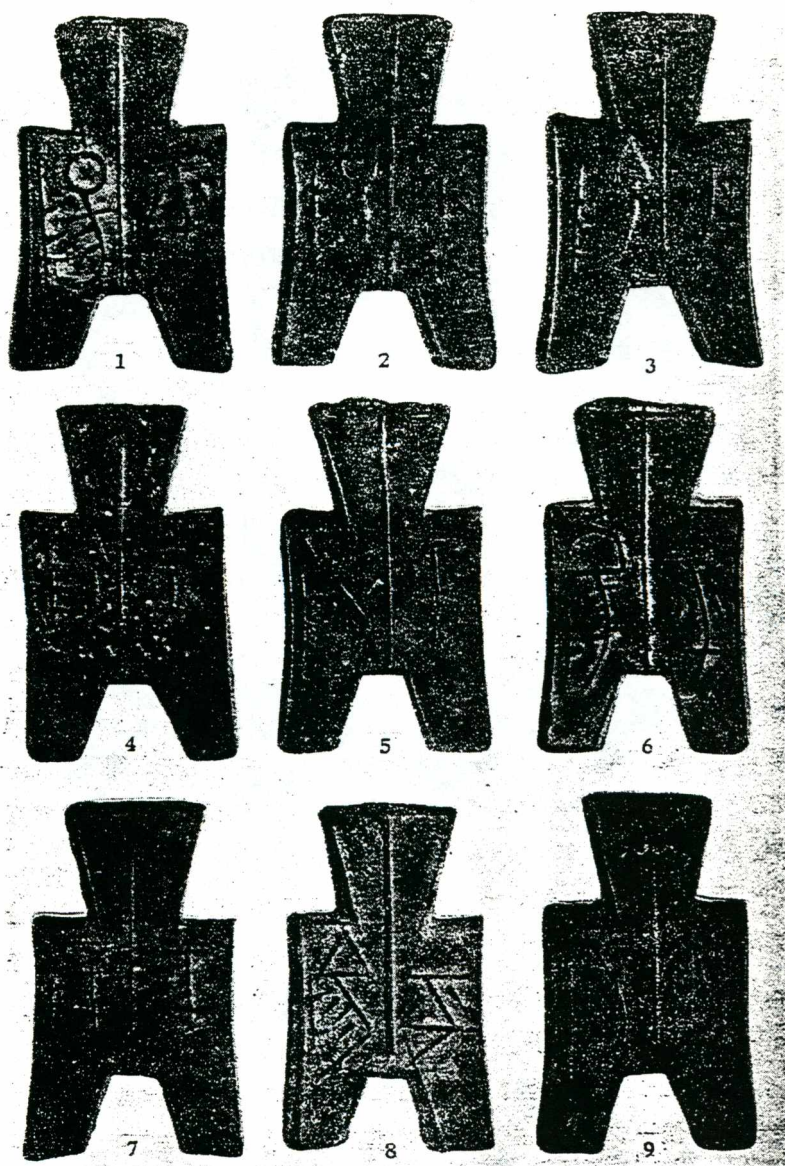


PLATE XXIII. CHU'S ANT-NOSE COINS AND YUAN GOLD

1-7. Demon-face coins. 8-13. *Ge* six-grains. 14. *Xing*. 15. *Jun*. 16. *Xin*. 17. Ying-yuan (from the Muyuan collection). In item 16, I have only seen the *xin* coin in old catalogues. I have never seen the object itself. This coin is of doubtful authenticity. Item 17 is China's earliest gold minted coin.





圖版二十四 平陽布의 各種書法

平陽布上的文字，充分表現出戰國時期中國文字書法的變化多樣。單就陽字來說，就有圓頭陽、碗頭陽、尖頭陽、倒碗頭陽、倒三角頭陽、方頭陽等。細分起來，沒有兩枚完全一樣。



PLATE XXIV. CALLIGRAPHIC VARIATIONS ON PINGYANG SPADES

The inscriptions on Pingyang spades amply illustrate the calligraphic variations on Warring States Chinese inscriptions. To consider the character *yang* alone, there is a round-headed version, a bow-headed, a pointed-head, the upside-down bow-head, the upside-down triangle head, and the square-headed version. When closely examined, no two coins are alike.



## 2. Gold And Gold Coins

The Chinese must have discovered gold very early in their history. The *Guan Zi* quotes Bo Gao's words to the Yellow Emperor: "Above there is cinnabar; below there is yellow gold."<sup>1</sup> The "Tributes of Yu" in the *Book of Documents* contains the words "their tribute was limited to the three metals."<sup>2</sup> Ban Gu writes: "Duke Tai set up the Nine Offices Round System for Zhou. One square inch of gold weighed one catty"<sup>3</sup> Though there is no factual basis for these statements, gold must nevertheless have appeared quite early, because lumps and grains of gold are frequently found in the sand along river banks. In foreign countries gold has sometimes been discovered even before copper,<sup>4</sup> and earlier even than silver, because silver ore is often full of impurities, like copper, lead,

[65]

sulphur, arsenic and antimony. Elemental silver is quite rare in nature, and the techniques for smelting it developed late.

Though ancient Chinese documents often mention silver and gold in the same phrase, and Yin dynasty ritual bronzes of the sort excavated at Anyang and Xinzheng are sometimes inlaid with gold or silver, gold was employed more commonly. Some ancient West Asian states, like Phoenicia, Babylonia and Israel, used more silver than gold for the particular reason that the Phoenicians discovered and brought back from foreign lands large quantities of silver.<sup>5</sup> Among the objects excavated at Xinzheng in China are convex-concave gold leaves stamped with flowers.<sup>6</sup> Gold-clad cowries, gilded cowries and pure gold cowries have also been excavated.

<sup>1</sup> *Guan Zi*, "Enumeration of the Lands" [*Dishu*].

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<sup>2</sup> *Historical Records*, "Treatise on the Balanced Standard."

[The three metals were gold, silver and copper. EHK]

<sup>3</sup> *Han History*, "Treatise on Food and Money."

<sup>4</sup> A. R. Burns, *Money and Monetary Policy in Early Times*.

<sup>5</sup> By around 1000 B.C., Phoenicia and its neighbors had been circulating silver for more than a millennium, and silver was more expensive than gold. The ancient Greeks believed that gold was only one-tenth the worth of silver. The *Old Testament* records the same situation for the seventh century B.C. In "The Book of Genesis," a silver offering was valued at twenty times an equivalent amount of gold. Though the Egyptians used gold, silver and copper, when they traded with the Phoenicians, they employed silver. "Silver and Gold in Antiquity as Money," *The Historians' History of the World*, Vol. II, part V, *Phoenicia*, chapter VII, "Phoenician Commerce," pp. 339-342.

<sup>6</sup> J. G. Anderson, "The Goldsmith in Ancient China," *Bulletin of the Museum of Far Eastern Antiquities*, no. 7 (Stock-

holm, 1935). Gold was valued by primitive man not because of legal regulations or popular vote, but because mankind developed a passion for gold for symbolic use. Since gold cannot be made into weapons or tools, its beautiful luster would alone have been insufficient to move the heart of ancient man. Foreigners have said that in ancient times gold could be used to symbolize the sun, and silver the moon.<sup>7</sup> Foreign countries in ancient times made artificial cowries out of gold. It is said that in 4,000 B.C. the people living between the Red Sea and the Nile River did this.<sup>8</sup> In Egyptian writing the hieroglyph for gold was a pictograph of a chain of cowries. The oldest gold ornaments excavated from *Tel Yi* [Peng's transliteration. EHK] in Asia Minor are coarsely made gold cowries used as hair ornaments.<sup>9</sup>

As stated above, gold cowries have also been excavated in China. For this reason some have conflated mankind's superstitious belief in gold with its superstitious belief in cowry shells. Ancient Chinese records do not mention gold as being precious, but the ancient Chinese were also superstitious. Since they believed that "jade is sufficient to harbor good grain so that there will be no disaster from flood or drought," and "pearls are sufficient to ward off fires,"<sup>10</sup> they could also have believed that gold had some mysterious power.

When gold was discovered and collected, it must first have been used to make articles of adornment. By Warring States times it had gradually come into use as a store of value and as an instrument for making payments. Though a system of private property had been established in China prior to Spring-Autumn times, its scope was still very narrow, and land was still as a rule held collectively, so there were no large landlords. Commerce had not yet developed. An individual's wealth was limited to his

holm, 1935).

<sup>7</sup> A. R. Burns, *Money and Monetary Policy in Early Times*, p. 19.

<sup>8</sup> Elliot Smith, letter to the *Times*, March 15, 1924.

<sup>9</sup> Elliot Smith, *Evolution of the Dragon*, p. 222.

<sup>10</sup> *Dialogues of the States*, "Dialogues of Chu," latter part, 18: "I have heard that the treasures of a state number only six. Enlightened kings and sages can control the hundred things so as to aid the state, and so these things are treasured. Jade is sufficient to harbor good grain, so that there will be no disaster from flood or drought. Thus it is treasured. Turtle plastrons are sufficient to evaluate the laws, and so they are treasured. Pearls can ward off fire, and so they are treasured. Metal can ward off military disorder, and so it is treasured. Mountains, forests and marshes can prepare wealth for use, and so they are treasured. As for things of clamorous beauty, even though the Chu are barbarians, they cannot treasure them." Metal here means copper.



personal holdings of agricultural produce, which was of no great quantity, and inconvenient to save.

Later, either because of gifts or the opening up of virgin land, collective fields were supplemented by private fields. As time went on, the quantity of the private fields increased, and a tendency appeared to concentrate the ownership of land. This probably was going on by the time of the transition from Spring-Autumn to Warring States. At the same time, because of technological progress such as the adoption of iron agricultural tools,

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productive power rose, and the landlords' private wealth also increased.

With this increase, it began to be realized that agricultural commodities were not the ideal instruments for storing value. Nor were copper coins ideal stores of value. Even if people did not begrudge the space needed to store agricultural commodities, such goods would not keep for very long, and so gold took on its function as the instrument for the store of value.

There are a number of places in Warring States sources where the word "metal" (*jin*) occurs. Most often copper is being referred to.<sup>11</sup> Sometimes, however, it means gold. Hitherto scholars have mostly supposed it referred to one catty of gold.<sup>12</sup> Others have said it refers to ten-thousand cash (*qian*).<sup>13</sup> The meaning of the character *jin* has changed considerably. In ancient times gold, silver and copper were all called *jin*, metal. On bronze inscriptions the character mostly refers to copper. During the Spring-Autumn to Warring States transition it sometimes meant copper, and sometimes some kind of monetary unit.

Sometimes, however, it meant gold. The *Gongyang Chronicle*'s reference to "a hundred *jin* of fish" and the *Annals of Master Lü*'s "a thousand *jin* of swords" would not seem to be references to gold, since in these contexts gold would have been valued too low. Here coins were probably intended, with one *jin* being one coin. But not all uses of *jin* should be so interpreted. For example, the *Guan Zi* tells how Duke Huan of Qi sold salt and "obtained gold to the amount of over 11,000 catties," and also says that "when the price of grain is level at forty, then the price of *jin* is 4,000."

One ounce of copper, or even one catty of copper could never reach 4,000 cash, even if the coins

in question were thick and heavy knives or spades. Therefore we cannot deny that in such cases gold was being used, particularly since some sources clearly refer to a certain number of *yi* or catties of gold. The *Guan Zi* states that "gold is used to measure," and that "gold, knives and spades are the people's circulatory medium." The *Lie Zi* and *Annals of Master Lü* both tell the story of the man of Qi who went to the gold-seller's booth to steal *jin*.<sup>14</sup> Here *jin* obviously means gold. The story also shows that there were already goldsmith shops in Warring States times.

It is hard to doubt that gold was in use during Warring States times. This is not to say, however, that by then gold had become fully monetized. Still less can we say that all references in Warring States sources to gold were to its use as money. The ancients did not distinguish between money and wealth, and not all forms of wealth were necessarily money. For example, the cowries in the *Book of Changes*' "countless numbers of cowries were lost" and the strings [presumably of cowries] in its "in the southwest strings are obtained, and in the northeast they are lost" may both be said to have been allusions to forms of wealth, but not necessarily to money.

Similarly, there is the story in the *Stratagems of the Warring States* of how Su Qin returned to his home town wearing brocaded garments, and asked his sister-in-law why she had formerly been haughty to him, but had now turned respectful. The lady replied that it was "because your position has become honorable, and you have much *jin*." The *jin* here must be a form of wealth, but is not necessarily money.

In addition to its use as a store of value, gold has mainly been employed as an instrument for making payments, whether as rewards,<sup>15</sup>

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gifts to superiors,<sup>16</sup> or bribes.<sup>17</sup>

dred *jin* of fish."

<sup>14</sup>*Lie Zi*, "On Tallies," no. 8: "Formerly there was a man of Qi who desired gold. One bright morning, he donned his clothes and hat and went to the market, where he encountered a goldseller's booth, from which he snatched some gold and fled. The clerk stopped him and asked: 'Why did you snatch the gold with people standing all around?' The man replied: 'When I took the gold, I did not see the people. I only saw the gold.'" The *Annals of Master Lü*, 16, "Investigation of Minor Matters," has the same story.

<sup>15</sup>*Stratagems of the Warring States*, "King Xi of Yan": "The King of Qin has for a long time been confused. He rewards his ministers and officeholders differentially, but the gifts he confers do not exceed 200 *yi* of gold."

<sup>11</sup>Cf. page 19 of the original Chinese text of this book.

<sup>12</sup>*Zhuang Zi*, "Leisurely Travels": "Only several of *jin*." Note in conjunction with the second note to the phrase "thirty catties" in the *Stratagems of the Warring States*, "Eastern Zhou."

<sup>13</sup>*Gongyang Chronicle*, 5th year of Duke Yin: "one hun-



The next two uses are hard to distinguish from each other. Gold does not fulfill the two most important functions of money, to serve as measure of value and as instrument of purchase or circulation. If the "hundred *jin* of fish" and "thousand *jin* of swords" had involved gold, the metal would have been serving as a measure of value, but *jin* must not have been used in the sense of gold in these contexts. There are instances in the sources of gold being used as the standard for expressing rewards for the capture of criminals, as when the First Emperor of Qin offered a thousand catties of gold for the head of Fan Yuqi.<sup>18</sup> This might seem to be using it as an instrument for making purchases, but actually this was not a normal exchange, and so we cannot from this evidence reckon gold to have been an instrument for making payments.

Therefore, gold's function during the Spring-Autumn to Warring States transition was almost the same as during Homeric times in Greece. In the *Iliad*, gold is a precious good, an object sought by men, sometimes used as an instrument of payment, but not used to indicate value or as a medium for making purchases. Oxen were used as the measure of value and as purchasing medium. An object's price was stated as being a certain number of oxen.<sup>19</sup>

The earliest Chinese units of weight were the *yuan* and *jun* found in bronze inscriptions, but we

have no way of knowing the size of the *yuan* or its relationship to the *jun*. Both of these units of weight were clearly still in use during Warring States times, but Qin and early Han sources are not consistent on the weight of the *yuan*.<sup>20</sup> Probably customs differed by locality, just as was the case with the shekel and mina units used by the ancient Assyrians. There were two standards for the shekel, 17 grams and 8.5 grams. Later, the Phoenicians and Syrians adopted this unit, also with various differing standards. Fifty shekels equalled one mina. Sixty mina equalled one talent. This system of weights was transmitted from Babylon to Greece, but the size of the Greek talent also varied by locality.

Although the Chinese *yuan* came in two weights, the most commonly used was likely the heavy one, with three *yuan* weighing 20 ounces. This can be shown from the phrase "took thirty *yuan*" on the Duke Mao bronze *ding*. In that context the *yuan* could not have been merely 11 grains in weight. There were only two units of weight during the Warring States Era, the catty and the *yi*. One catty was 16 ounces; one *yi* was 20 ounces. Judging from contemporary sources, these two units appear to have been used haphazardly.<sup>21</sup>

<sup>20</sup>Cf. p. 7 of the Chinese edition of this work.

<sup>21</sup>The following are examples from ancient records of Warring States Era gold units:

Zhou...*yi*: *Han History*: "A thousand *yi* of gold were used to seek out the precious goods of the world."

Qin...*yi*: *Annals of Master Lü*: "A thousand *yi* of gold." *Stratagems of the Warring States*: "Ten-thousand *yi* of gold were used." *Historical Records*, "Biography of Lord Mengchang": "The King of Qin was greatly pleased . . . and welcomed him with a hundred *yi* of gold." *Historical Records*, "Biography of Jing Ke": "Two hundred *yi* of gold were conferred on Xia Wuqie."

catty: *Historical Records*, "Biography of Lord Xinling": "The King of Qin was distressed by it, and so sent ten-thousand catties of gold to Wei." "Biography of Lü Buwei": "The prince consulted with Lü Buwei, and sent six-hundred catties of gold to the commanders." "Biography of Jing Ke": "The King of Qin bought it for a thousand catties of gold." *Stratagems of the Warring States*, "Qin: Su Qin": "A hundred catties of gold was exhausted." "King Zhuangxiang, the First Emperor": "A thousand catties of gold."

Song...*yi*: *Mencius*: "Seventy *yi*." *Stratagems of the Warring States*, "Song": "Three-hundred *yi* of gold."

Jin...*yi*: *Dialogues of the States*: "Forty *yi* of gold."

Qin...*yi*: *Guan Zi*: "One *yi* of gold is exhausted overnight by a hundred teams." *Historical Records*, "Biography of Nie Zheng": "Master Yan Zhong received a hundred *yi* of gold."

<sup>16</sup>*Dialogues of the States*, "Dialogues of Jin, 2": "With but forty *yi* of gold, six pairs of white jade girdle pendants, I dare not face Your Grace. Please offer them to those on the left and right."

<sup>17</sup>*Stratagems of the Warring States*, "King Huai of Chu": "When the Southern Queen, Zheng Bao heard it, she was in great fear, and had someone say to Zizhang that she had heard that when the General reached the state of Jin, he happened to have a thousand catties of gold, which he gave to those around him for provender. Zheng Bao was also given 500 catties of gold."

<sup>18</sup>*Stratagems of the Warring States*, "King Xi of Yan": "Jing Ke knew that the Heir Apparent could not bear to do so, and so surreptitiously went to see Fan Yuqi, and said to him: 'Your confrontation, general, with Qin may be said to be deep. Your parents and clan have all been exterminated. Now I hear there is a price on your head of a thousand catties of gold and a city of ten-thousand families. What are you to do?'"

<sup>19</sup>The *Iliad* (in Alexander Pope's English translation), chapter 4, p. 81, has the following lines:

For Diomed's brass arms, of mean device,

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For which nine oxen paid, (a vulgar price)

He gave his own, of gold divinely wrought,

A hundred beeves the shining purchase bought.



These two units, like the *jun* and *yuan*, seem not to have been formally connected, which is rather hard to explain. Though posterity has linked these four units by way of the grain and ounce, expressing all four as multiples of the grain or ounce, the grain and ounce units do not seem to be present in oracle bone texts or on Yin and Zhou bronze inscriptions.

catty: *Guan Zi*: "A hundred catties of gold is worth 8 piculs of food." "I have a hundred catties of gold hidden." "Succeeded in gaining over 11,000 catties of gold." *Sun Zi*: Wu Qi "was victorious in archery, and obtained 5,000 catties." *Historical Records*, "Biography of Fan Sui": "King Xiang of Qi . . . sent men to confer on Sui ten catties of gold." *Stratagems of the Warring States*, "Qi, Feng Xuan": "Five-hundred catties of gold." "Ten catties of gold." "Yan": "With a thousand catties of gold gave thanks to his followers." "The King of Liang . . . with a thousand catties of gold . . . went to present them to Lord Mengchang."

Han...yi: *Han Fei Zi*: "A hundred yi of lustrous metal." *Stratagems of the Warring States*, "Enumeration of the Nobles": "A hundred yi of gold."

Zhao...yi: *Stratagems of the Warring States*: "A thousand yi of gold." "Ten- thousand yi of gold." "A hundred yi of gold." *Xun Zi*: "A thousand yi of treasure." *Historical Records*, "Biography of Su Qin": "The King of Zhao . . . with a hundred decorated chariots and a thousand yi of gold." "Biography of Fan Sui": "The King of Zhao conferred . . . a hundred yi of gold (on Yu Qing)."

catty: *Historical Records*, "Biography of Lü Buwei": "Six-hundred catties of gold were distributed among the commandants."

Yan...yi: *Han Odes Informal Chronicle*: "A hundred yi of gold." *Stratagems of the Warring States*: "A thousand yi of gold for horses and provender." "Two-hundred yi of gold."

catty: *Stratagems of the Warring States*, "Wang Xi": "A thousand catties of gold." *Yan Dan Zi*: "A city of ten-thousand households and a thousand catties of gold."

Liang...yi: *Mencius*: "Ten-thousand yi." *Historical Records*, "Biography of Chun Yukun": "(The King of Liang) a hundred yi of gold."

catty: *Stratagems of the Warring States*, "Qi": "The King of Liang . . . a thousand catties of gold . . . went to present to Lord Mengchang."

Chu...catty: *Stratagems of the Warring States*: "Happening to gain a thousand catties of gold, he advanced it to those around him. . . Zheng Bao also used 500 catties of gold."

Yue...yi: *Historical Records*: "The King of Yue agreed to send Zigong a hundred yi of gold." King Goujian of Yue "loaded a thousand yi of gold into coarse containers, and carried them on ox carts." *Stratagems of the Warring States*: "The King of Yue enfeoffed Su Qin . . . a thousand yi of gold."

The grain and ounce do not appear as units of weight before their use on the three-hole spades. That was in the last years of the Warring States Era, and even then they were only part of the Qin system, and not used by the other states.

Before then, the character for ounce [*liang*] was written [],<sup>a</sup> made up of []<sup>b</sup> and [],<sup>c</sup> meaning a religious offering of sheep. Later on it was used

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in the sense of a joined pair, as in a cart or chariot, because these had two wheels. In bronze inscriptions the character *liang* was used in this sense, and not as a noun signifying a certain weight.<sup>22</sup>

The character for catty, *jin*, was in ancient times the name of a tool, a type of hatchet, and was not a name for a weight. The character *yi* evolved from the character *peng*, which was used to mean "string," as in string of cowries, and it probably only became the name of a unit of weight after the appearance of the grain and ounce units. And so the question of how the Western Zhou bronze inscriptions' *jun* and *yuan* were replaced by the Spring-Autumn and Warring States documents' catty and *yi* is one worthy of study.

There is no record of the shapes taken on by gold during Warring States times, but gold passed into and out of the hands of the ruling class, and must have done so in some particular forms. Sometimes, of course, it took the forms of utensils and ornaments. At other times it could have been processed into other particular shapes. If it was not made into particular shapes, and was merely given and received in the form of various gold objects by weight, then it was still merely a commodity. [This commodity could, however, already have begun to add value in exchange to its value as commodity. It would, in the jargon of modern Austrian School economics, have been a money or near money or commodity-money, but not a coin. EHK]

In ancient times the state of Chu circulated gold in abundance because it produced a great deal of gold.<sup>23</sup> For example, the Ru and Han rivers were famous as producers of gold.<sup>24</sup> Guan Zhong envied

<sup>22</sup>Luo Muyuan, "On the Ounce," *Coins*, no. 26. Nuki Gijiro, "An Hypothesis on the Ideograph Liang", *Money*, no. 135 (Showa 5 [1930], June).

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<sup>23</sup>*Stratagems of the Warring States*, "Chu, 3": "The king said: 'Gold, pearls, rhinoceros horn and ivory are produced by Chu. I need not seek them from Jin.'"

<sup>24</sup>*Guan Zi*, "Calculations": "Gold comes from the right side of the Ru and Han rivers." Wang Chong, *Balanced Discourses*, "Section on Unusual Things": "Yongzhou produces pearls, Jingyang produces gold."



the gold of Chu.<sup>25</sup> At least a portion of the gold used in the north came from Chu. The "Tribute of Yu" section of the *Book of Documents* alludes to Yangzhou giving tribute of three objects of gold.

Chu gold was made into a particular shape, a small cake of gold resembling a dried bean curd, the upper surface of which bore an inscription. [Cf. Plate xxii.17 at end of preceding subsection.] Most inscriptions were incised, as was the case on the Ant-nose coins. It is said that occasionally there are ones with raised inscriptions, but these are extremely rare, and were not the norm under the Chu system. These small gold cakes were not minted separately, but rather in the form of large flat sheets of gold stamped with a number of seal marks. Pieces were broken off when needed for use. These marks resemble personal seals, and so in Song times these objects were called seal-gold.<sup>26</sup>

Judging from the objects themselves and clay molds, there was no fixed number of gold cakes per sheet. Sometimes there are 16, or 20, or 24 squares. On the basis of a small number of examples, some have concluded that one square was equal to one ounce, and one sheet equal to one catty or one *yi*. This is implausible, because there are sheets with different numbers of squares.

Actually, the number of seals was determined by the size of the sheets. Large plates had more seal marks; small ones had fewer of them. Nor were the seal marks laid out evenly. Uniform pieces could not be broken off. Nor have all excavated gold cakes been perfectly square. Sometimes a corner was lacking, or there is only half or a third of a square. Sometimes two half squares were joined together, or

there is one and a half squares. Sometimes a number of squares are joined together, with some damaged or incomplete.<sup>27</sup> Hence when circulated they would

<sup>27</sup>The weights set down in Gong Xinming's *Small Record of the Pukou Spring* are as follows:

- Yingyuan 1.5 squares, 0.45 oz.
- Yingyuan 1 + squares, 0.38 oz.
- Chenyuan 6 squares, all broken and incomplete: 1 oz.
- Yingyuan 1 square incomplete: 0.34 oz.
- Yingyuan 1 + squares, 0.34 market oz.
- Yingyuan 1 + squares, 0.39 market oz.
- Yingyuan 1 square incomplete, reverse seal [ ],<sup>d</sup> 0.25 oz.
- Yingyuan 2 squares, 0.9 market oz.
- Chenyuan 1 square incomplete, 0.25 oz.
- Yingyuan 2 squares incomplete, 0.95 market oz.
- Yingyuan 1 square, raised small sealmark [ ]<sup>e</sup> below, 0.54 oz.
- Yingyuan 1 square, 0.4 oz.
- Yingyuan 1 square, raised sealmark [ ]<sup>f</sup> on side, 0.3 oz.
- Chenyuan small half square, 0.1 oz.
- [ ]<sup>g</sup> 2 squares, 0.69 oz.
- Yingyuan 1 square, 0.3 oz.
- Yingyuan 1.5 squares, 0.7 market oz.
- Yingyuan 1 square, 0.42 oz.
- Yingyuan half square, 0.19 oz.
- Yingyuan 1 square irregular, 0.3 oz.
- Yingyuan 5 squares, only one complete, 1.07 oz.
- Yingyuan large half square, 0.3 oz.
- Label unclear, large half square, 0.24 oz.
- Yingyuan 1 square, 0.49 oz.
- [ ]<sup>g</sup> 4 squares incomplete, 0.95 market oz.

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Fragment, below the yuan a small " [ ]<sup>h</sup>", 0.1 oz.

Zhuanyuan 2 squares incomplete, reverse sealmark [ ],<sup>i</sup> 0.54 oz.

Chenyuan fragment, 0.13 oz.

Yingyuan 1 square, 0.4 oz.

Yingyuan 1 square, 0.4 oz.

Yingyuan 4 squares incomplete, 1.77 oz.

Yingyuan 1 square, 0.28 oz.

Yingyuan 1 square, 0.43 oz.

Yingyuan 1 square, traditional shape, excavated in Henan, 0.416 oz.

[ ]<sup>j</sup> 1 fragment of a square, 0.428 oz.

Yingyuan 1 square, 0.505 oz.

In addition to these, there are the 35 squares investigated in the Japanese Mitsui collection by Kato Shigashi, four squares in the Chinese collection of Luo Zhenyu, and one held by Fang Ru, making forty altogether. All of these are Yingyuan. We have only their weights. Wu Jie (trans.), "Investigation of Yingyuan" in *Investigations of Chinese Economic History*. Judging by a few accompanied by illustrations, only three or four of this number are relatively intact. Individual squares weigh from 3.2 to 4.6 *momme*. The *momme* is a Japanese unit of weight, the equivalent

<sup>25</sup>Guan Zi, "Enumeration of the Lands": "If I were to obtain the gold of Chu, I could provide food without the farmers plowing, and clothing without the women weaving."

<sup>26</sup>*Collectanea of Ancient and Modern Books and Illustrations*, 337, "Gold, Miscellaneous Records," quotes *Mountain Stream Dream Jottings*: "In Shouzhou, by the side of Bagong Mountain, from the earth and from mountain streams there have frequently been obtained small gold cakes, which bear in seal script the words 'Master Liu.' These are pharmaceutical gold come down to posterity from the King of Huainan. Very many people have found these. This is what everyone calls seal gold. Those bearing only one seal mark weigh only half an ounce each. Large ones are rare. I once got a cake in Shouchun, from a fisherman. He said he had found it in the Huai River. It weighed more than seven ounces, and bore more than twenty seal marks. Its back bore traces of five fingers and a palm, the outline of which was clearly visible. Such things are traditionally believed to have been transformed by the soil, but the outline of a hand is what a clay mold would capture." [Bruce W. Smith notes that the gold sheets were often highly irregular in shape.]



have had to be weighed at each exchange. Even a relatively intact square,

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because of variations in thickness of the plates and sizes of the seal marks, could not have attained a standard weight.

Even if this is the case, the people who made these objects could not have deliberately sought such lack of uniformity. They must have had some standard in mind. The low technical level and the fact that these objects were produced at different locations would account for such large variations. Aside, however, from the especially large Yingyuan, most gold cakes, when intact, weighed no more than from 0.3 to 0.5 ounces, averaging 15 grams apiece.

As far as is known, there are five types of inscription on the Yingyuan, Chenyuan, Zhuanyuan,<sup>g</sup> yuan, and one fragment of a square of which only half a character remains, which is written as [ ],<sup>l</sup> resembling the character wen.<sup>k</sup> [Bruce W. Smith notes that other types have been discovered in recent years.] Ying (the present Jiangling county in Hubei) was the capital of Chu until the 21st year of King Xiang (278 B.C.), when the Qin general Bai Qi captured it, and the capital was moved to Chen (the present Huaiyang county in Henan). In the 22nd year of King Kaolie (241 B.C.), the capital was moved once more to Shouchun (the present Shou county in Anhui). The name Ying was retained. Zhuanyuan was written [ ].<sup>m</sup> The character for yuan seems to have a radical on its left side, perhaps the metal radical. Zhuanyuan, written with the radical for "town" omitted from the right side (the present Yanzhou in Shandong), was the name of a place which belonged to Lu in Spring-Autumn times, but during the Warring States Era was joined to Chu.<sup>28</sup> It too was probably an important city then.

The character [ ]<sup>g</sup> is transcribed into modern script by some people as *ying*.<sup>n29</sup> Even if this reading is correct, it would be hard to link this to a par-

ticular place. There was an Yingzhou (that is, Fuyang) in Anhui, and an Yingshang. There was a Linying in Henan, but its location is not known. It so happens that all three of these places lay along the course of the Ying River.

We do not know what place is represented by the half a character on that last fragment. It merely attests to the existence of a fifth type of gold cake.

Nor is it easy to fix the date when gold cakes were first minted. Theories have been appearing since antiquity.<sup>30</sup> During Northern Song times quite a few of them were unearthed in Shouzhou. They have also been excavated in modern times in Anhui, Henan, Shandong and Jiangsu. Hunan has only yielded funerary versions made of pottery, but there must have existed gold ones as well. Nevertheless none have been excavated in Hubei. If that continues to be the case, that will show that they were not minted until after the move of the capital, probably not until after King Kaolie moved the capital to Shouchun. Shouchun was their center of production. The other large cities would have followed its lead.

Nor was the production of gold cakes limited to the cities named in their inscriptions, most of which bore the characters Yingyuan. This follows from the fact that the inscription Yingyuan is the one most commonly found on gold cakes excavated from a variety of places, and the other place names are found on gold cakes unearthed at Shou county. The latter, however, are quite few. It is said that the Yingyuan unearthed in Henan are in a different style of sealscript than those from Shou county, and that their gold content is somewhat diluted.<sup>31</sup> The quality of the metal in gold cakes is, however, in general very good, sometimes approaching absolute purity.

Because the Yingyuan are the most frequently seen of the gold cakes, and the other types are also called yuan, this type of

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gold cake is universally called yuan gold or gold yuan. With or without the metal radical, this is the same character. Hitherto scholars have also identified [ ]<sup>o</sup> as its abbreviated version.<sup>32</sup> Others,

of 3.75 grams, slightly heavier than 0.1 Chinese treasury ounces, which is 3.73 grams. A tenth of a market ounce is 3.665 grams. In addition, I have myself weighed one coin which was 1.25 squares large. It weighed 15 grams. There are others held by collectors and museums, and some unearthed in recent years, amounting to a hundred odd coins in all. Of these, only nine are Chenyuan, none of which is intact, six squares are [ ]<sup>g</sup> of which only one is intact. There are two Zhuanyuan, neither complete. In addition one fragment bears the character wen,<sup>k</sup> and there is one fragment whose inscription is unclear. All the rest are Yingyuan.

<sup>28</sup>Gong Xinming, *Small Record of the Pukou Spring*.

<sup>29</sup>Gong Xinming, *Small Record of the Pukou Spring*.

<sup>30</sup>*Taiping Youlan*, 810, "Gold," quotes the *Record of Activity and Repose of the Yonghe Era of Jin*: "The Commandant of Lujiang, Lu Yongbiao, said that north of Gucheng he had seen a purplish-red glint on the riverbank, and found a gold coin with an inscription like a seal impression." This might have been yuan gold.

<sup>31</sup>Gong Xinming, *Small Record of the Pukou Spring*.

<sup>32</sup>*Rituals of Zhou*, "Record of Investigations of Artisans." The smelterer Zhen Xuan's notes quote the *Explanations of Words*: "Xu Shuzhong's *Explanations of Words* says that [ ]<sup>p</sup> is the same as [ ]<sup>q</sup>."



however, disagree, arguing that in ancient times these two characters were written quite differently, and that it was not until Han times that they were erroneously conflated into a single character.<sup>33</sup>

This problem is resolved by the calligraphy of the character *yuan* on *yuan* gold. There are two main ways of writing it. On Yingyuan and Chenyuan it is written as [ ],<sup>u</sup> which must be [ ].<sup>r</sup> On Zhuanyuan it is written as [ ],<sup>v</sup> which must be [ ].<sup>o</sup> Evidently the two must be alternate forms of the same character.

*Yuan* must originally have been a unit of weight, and later also became a monetary unit. Similarly, the Babylonian *shekel* was originally a unit of weight, and later turned into a monetary unit. The same character, but with the metal radical, encountered in Warring States sources, must have been a unit of value. That it was also a unit of weight is not so clear from the sources. The isolated statement "his fine is a hundred *yuan*" may be explained in terms of a unit of value as well as a unit of weight, but the former seems more appropriate. It can even be taken here as a monetary unit, and so the *yuan* of *yuan* gold might also be taken as a unit of value.

The broken and irregular character of these objects would not have hindered the *yuan* from functioning as a unit of value or monetary unit. Several centuries ago the Tierhengmu silver coins of Central Asia and English silver pence were frequently cut up into halves or quarters to make change, but this did not destroy the value of these two coins as units of value or monetary units.

It is said that there are Yingyuan made of silver,<sup>34</sup> as well as lead ones clad in gold. The latter, like the pottery versions, were funerary coins.

The knives and spades of the north evolved from tools. Chu's Ant-nose coins evolved from bronze cowries. *Yuan* gold is harder to explain. It does not

seem to have evolved from any tool. Nor does it seem to have been an article of adornment. Only India seems to have employed a coin of such a shape. Some time around the fourth century B.C. there circulated in India square shaped silver and bronze cakes, the surfaces of which also bore various seal marks, and which were also broken into pieces.

Might there have been some connection between these and Chu's gold cakes? Why did the Chu coinage simultaneously embrace the most backward and most advanced of elements? The only way to satisfactorily explain this phenomenon is by linkage with external influences. The use of Ant-nose coins as successors to cowry shells was a retrogressive element in the Chinese monetary system of that time, but gold coins were a progressive element.

a 𠄎 b 𠄎 c 𠄎 d 𠄎 e 𠄎 f 𠄎 g 𠄎 h 𠄎  
i 𠄎 j 𠄎 k 𠄎 l 𠄎 m 𠄎 n 𠄎 o 𠄎  
p 𠄎 q 𠄎 r 𠄎 s 𠄎 t 𠄎 u 𠄎 v 𠄎

[75]

### 3. The First Emperor of Qin Unifies China's Coinage

The First Emperor of Qin's unification of the nation in 221 B.C. was not only a significant turning point in Chinese political history, it also opened a new chapter in Chinese monetary history. He abolished the great variety of Warring States Era coins, and spread the square-holed round Half-ounce throughout the nation. This monetary system based on the grain and ounce units of weight remained in use within China for over a millennium. It did not, however, begin with the First Emperor, but rather had been evolving in Qin all through the Warring States Era in interaction with the moneys of the other states of the time. The Qin political unification was short-lived, and so we should not treat it as the beginning of a new era, but rather as the conclusion of the old one. Actually, it was but an episode in a continuous process.

Unification of the coinage was a political act, the consequence of the military unification and consequent cultural melding. When we unfold the map of Spring-Autumn and Warring States times, we see its central area occupied by a number of small states surrounding the territory of the royal Zhou house,

<sup>33</sup>Dai Zhen's *Record of Investigation of Artisans Illustrated* had already raised such doubts. Guo Moruo's *Collected Investigations of Bronze Inscriptions*, p. 288, says: "The identification of [ ]<sup>r</sup> with [ ]<sup>o</sup> is mistaken. In ancient times [ ]<sup>o</sup> was written as [ ],<sup>s</sup> and [ ]<sup>r</sup> as [ ],<sup>t</sup> which are clearly two different characters. Han scholars read them erroneously and blurred them together. Cf. also note 29 of subsection one of this chapter above.

<sup>34</sup>*Literary Evidence on Zhou Gold*, 6, latter part, displays an ancient cake of silver, on which is a seal mark the meaning of which is not easy to distinguish. It is larger than the late Qing double bronze dollar. Zou Anfu notes: "It is like cake gold, and is newly excavated in Shandong." Zheng Jiaxiang, *History of the Development of China's Ancient Money*, pp. 198-199. [Bruce W. Smith notes that the American Numismatic Society in New York has Yingyuan in lead and in copper, the former clearly being a funeral piece. He also notes that many imitations in clay have been excavated in recent years.]



which preserved the ancient cultural traditions. These states lacked space to develop, and could only grow by annexing each other's territory. They were surrounded by several large states: Yan, Zhao, Qin and Chu, all of which possessed hinterlands of limitless extent. Yan and Zhao were, however, isolated in the north. Their climate was cold, their cultures backward, and they were not very productive.

Only Qin and Chu were truly wealthy and strong, especially Chu. Eventually Qin established temporary superiority, but Chu still believed that the three successor states of Jin could destroy Qin.

The other states then mainly used knife and spade coins. Qin employed ring coins, and Chu gold. The later Chinese coinage was an amalgamation of the Qin and Chu systems. Qin also used gold. We are told that "when Qin was prospering, tens of thousands of *yi* of gold were in use."<sup>1</sup> Qin was not, however, notable as a gold producer. Only Chu was, and there are Chu gold coins surviving to attest to this.

The history of the Qin coinage is still not entirely clear. We are told that in the 2nd year of King Huiwen (336 B.C.) coins were first circulated.<sup>2</sup> Does this imply that before this no coins were being circulated in Qin? Not necessarily. In the time of Duke Xiao, Wei Yang [i.e. Shang Yang] used a system of rewards in metal so as to establish the government's prestige. There are accounts of ten and fifty in metal [unit not specified] being so disposed.<sup>3</sup> Dong Zhongshu wrote that Qin used Shang Yang's methods, abolished the well-fields, and allowed the people to buy and sell.<sup>4</sup>

#### [76]

All of this clearly shows that money was employed then. It may be that other states' coins were being used. [It is also possible, observes Bruce W. Smith, that the money may have been cloth.]

What this reference to the beginning of the circulation of money in the 2nd year of King Huiwen must mean is that it was then that an independent Qin monetary system was first set up. This system probably employed the grain-ounce weight units. These units could either have been adopted by Shang Yang or reworked by him. What was the shape of the earliest such coins? Some say they were the

three-holed round-foot spade; others make them ring coins.

Advocates of the three-hole round-foot spade theory give three reasons for their choice: First, the place names on these coins were all later taken over by Qin. Second, their shapes are uniform and their inscriptions regular, something that only the power of Qin could have enforced. Third, their monetary units were the grain and ounce, the Qin units. These arguments are not, however, entirely persuasive.

First of all, the other six great powers were all eventually taken over by Qin, and so sooner or later every place would have belonged to Qin. One would hardly ascribe all knife and spade coins to Qin through similar reasoning.

Second, uniformity of shape and regularity of inscription was not unique to Qin coins. This is evident from the Weight One-ounce Fourteen-grain and Half-ounce ring coins, and it is debatable whether the three-hole spade inscriptions were truly regular, since too few of them have been excavated to provide a basis for judgment. The characters for grain and ounce are not actually uniform. Nor is the character *yang* uniform on the Anyang, Luyang or Biyang coins.

There remain some other difficult problems for the advocates of the three-hole spade theory to resolve. First, the inscriptions on the spades are not easy to read. For example, there is one which is written as [ ]<sup>a</sup> (deciphered by some as "Wenyan Township" [ ]<sup>b</sup>) but which has not yet been reliably rendered into modern characters. If we grant that the characters abolished by Li Si were those of the other six states which were not in harmony with the Qin seal script, the ones he would have changed were those with complicated arrangements of strokes. Qin's own original characters would not have undergone many changes. Why, then, are these characters so unfamiliar to us?

Second, even for those inscriptions we can read, it is not easy to find the places to which the names refer. In principle, Qin place names would not have been changed so drastically. This would only have happened to places taken over by Qin from the other states.

Third, the three-hole spades are extremely rare, and so would not seem to have been minted and in use for a long period. If, however, the name Anyang on one such spade is the place Qin took over from Wei and which was originally called Ningxinzhong, that event only occurred during the 50th year of King Zhaoxiang (257 B.C.), eighty years after King Huiwen. Naturally, the Anyang spade would have been made after the place's name was changed, and eighty years is not a short period of time. Why have fewer of the three-hole spades been unearthed even

<sup>1</sup> *Stratagems of the Warring States*, "Stratagems of Qin," 3.

<sup>2</sup> *Historical Records*, 15, "Chronological Table of the Six States." [Bruce W. Smith observes that "actually what it says is that the Zhou ruler congratulated Qin for issuing money. Commentators assume this was the first time Qin issued money."]

<sup>3</sup> *Historical Records*, "Biography of Lord Shang."

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<sup>4</sup> *Han History*, "Treatise on Food and Money."



than of any of the hollow-socket spades? Before Liberation, only twenty or thirty of them had been excavated. [According to Bruce W. Smith, "it is now thought that at least some of the 25 or so different kinds of three-hole spades were made by the state of Zhongshan. This would explain the difficulty in reading some of the inscriptions; Zhongshan was a state of the Di barbarians."]

Fourth, if

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the three-hole spade was Qin money, then so too were the Weight One-ounce Fourteen-grain, Weight One-ounce Twelve-grain and Half-*qiong*, and when did Qin carry out so important a monetary reform as to start making these latter coins?

Advocates of the ring coin theory encounter fewer difficulties. They view the three-hole spade as an outgrowth of the round-foot spade. Beginning in the 2nd year of King Huiwen, they say, Qin adopted the Weight One-ounce Fourteen-grain ring coin. Eventually, the First Emperor merely turned the round hole into a square one and produced the Half-ouncer. Though there are not many ring coins, they are much more numerous than the three-hole spades. The inscriptions on ring coins are remarkably similar to those on Half-ouncers, and much different from those on the three-hole spades. [Cf. Plates xxi-xxii at end of preceding subsection. According to Bruce W. Smith, "since 1980, archaeological excavations have shown that the Half-ouncer was in circulation as early as 306 B.C. Thus, the coinage of 336 B.C. mentioned in the *Historical Records* could be the Half-ouncer."]

The problem is, if the coins of the 2nd year of King Huiwen were ring coins, and not three-hole spades, then the grain and ounce monetary units used on the latter were not the creation of Qin, but borrowed from some other state's system. What state could that have been? Aside from Qin, only Wei carried out a major reform during Warring States times. Marquis Wen of Wei employed Li Kui as his chief minister and carried out a major reform, but I have not heard that this involved the system of weights and measures. In any event, Wei used square-foot spades and adz-spades, and never used the grain or ounce as monetary units on these. Nor at that time was the storm-shaken Zhou house capable of carrying out such a reform. Hence it is most logical to ascribe it to Qin.

But if the three-hole spade was the money adopted by King Huiwen, that would prove that money was only in very limited circulation then in Qin. Perhaps these coins were only circulated symbolically, in far smaller numbers than coins were in Yan, Zhao, Qi or Wei. Though the Lin and Lishi were modeled on the round-foot spade, those made

in just one locality were more numerous than those made in all of Qin during many decades. Hence perhaps the three-hole spade's period is later than that of the Weight One-ounce Fourteen-grains, and it was not made by King Huiwen, but rather in some locality near a place making round-foot spades.

Study of the inscriptions on these coins is also of interest. Large seal script is employed on the three-hole spade, and small seal script on the ring coins. For example, the character for ounce, *liang*, is written as [ ]<sup>c</sup> on the three-hole spade, and as [ ]<sup>d</sup> on the ring coin. In oracle bone script it is written [ ]<sup>e</sup> where it means the sacrifice of a sheep. Later, when it was borrowed to transcribe the word meaning cart wheel, it was written [ ]<sup>f</sup>. Perhaps it was not until the time of Duke Xiao or King Huiwen, or even still later, that it was used to represent a weight or monetary unit. Therefore, some believe that the inscription on the three-hole spade should be read as two characters, meaning "one ounce," and not as just the single character for ounce. The later small seal version of the character added a stroke on the top, and this supposedly caused people to misread the two characters on the earlier three-hole spade as a single character. Perhaps, though, when Qin adopted the character for ounce as its monetary unit,

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it added a stroke on the top to distinguish its new use, but there is no way to know if that was the case. The *Explanation of Words* considers [ ]<sup>g</sup> and [ ]<sup>h</sup> to be two separate characters.

Sima Qian says that after the Qin unification there were two classes of money, but that pearls, jade, tortoise shell, cowry, silver and tin were only used to make articles of adornment and as treasures, and were not used as money. That would suggest that before unification these things were used as money, but the sources do not attest to such use, and in principle it would not have been possible to simultaneously use so many different kinds of money. Actually, by that time all the states were minting coins, and there was no need to use these objects as money. Probably Sima Qian was just taking this for granted. What he wrote was not incorrect, but merely easily misunderstood by posterity.

The First Emperor not only banned the use of various forms of wealth as money, he likely also banned the knives and spades and ring coins of the states as money too. He extended to the entire country the gold-cash coin bimetallic system originally used inside Qin. The two metals were gold and bronze cash, using gold as the upper money, with the *yi* as its unit (equal to twenty ounces), and bronze cash as the lower money, with the Half-ouncer as the monetary unit. The upper money was likely limited to making such large pay-



ments as imperial gifts and gifts among the aristocrats. Exchanges in daily life employed the Half-ounce.

Though the Half-ounce [Cf. Plate xxv at end of this subsection.] was minted before the unification, it could not have been long before the First Emperor assumed the throne, and it was probably created during the reign of the First Emperor as King of Qin. Of course quite a few Half-ounces exist, but from the time the First Emperor came to the throne of Qin state until the fall of the Qin empire was some forty years. That many coins would have been minted during such a time of continuous military activity is understandable.

During the eighty or ninety years before the First Emperor's time, the three-hole spade and ring coin must have been in use. That was not a time of peace either, so the survival of so few ring coins is hard to explain.

In fact the Zhou and Qin epochs witnessed first the beginnings of money and then the first high tide of its circulation. Production of coins grew at an accelerating rate. Their production during the last decade or two of Qin could have been as great as during the several preceding centuries. After the First Emperor's unification, the Half-ounce became the standard money of the entire country. It had to satisfy the needs of the whole nation. Naturally its quantity would be large, and since the entire nation was using the Half-ounce, all the knives, spades and ring coins would have had to be reminted. One Qi knife would have made five Half-ounces, and reminting would have increased the numbers of the latter.

The First Emperor's measure calling in all weapons could also have influenced the quantity of coins. When the people handed over their weapons, the best thing to do with them would have been to recast them into coins.

There is no clear textual evidence as to how the First Emperor carried out the monetary unification. Was it only a unification

[79] of monetary types and units? Or was even the right to manufacture the coins unified? In principle, under so centralized a government, the minting and distribution of coins should have been a national monopoly. The histories tell of Xiang Liang's subordinates privately minting large coins,<sup>5</sup> so it is evident that private minting was a crime.

But even if the right to mint coins was a government monopoly, this monopoly would only

have been nominal. Surviving Half-ounces, like peony leaves, are each unique. Up to now no standard for their manufacture or rule for their inscriptions has been discovered which would enable one to tell at a glance that a particular Half-ounce was minted at an official smelter. Hence it is difficult to determine the Qin weight standard from the weights of Qin Half-ounces.<sup>6</sup>

The lightest Qin Half-ounce weighs only around 6 grams; the heaviest over 20 grams. Obviously some of them are not up to standard and some exceed the standard. During Warring States times weight standards varied by locality. Though the First Emperor promulgated unified standards of weights and measures, under the circumstances of the times, it would have been hard to abolish past practices. This is one reason for such weight discrepancies. Another reason is that the concept of value was not yet very well developed. Those who cast coins did not take weight very seriously. That is why there were coins heavier than the standard. [Bruce W. Smith doubts this explanation. "No one," he says, "makes overweight coins. The overweight coins, if genuine, are probably special issues or burial pieces."]

I experimented with sixty-four Qin Half-ounces. The average weight per coin was around 10 grams. This figure is probably biased toward the high side because collectors tend to prefer the heavier Half-ounces. Based on my experience, the Qin ounce was probably less than 20 grams. [According to Bruce W. Smith, judging from excavated weights, the Qin ounce was around 15 grams. "Thus Half-ounces should weigh no more than 7.5 grams. However, it is possible the weight standard was reduced from the time of Qin state to the the Qin empire."] To determine the weight of the Qin ounce, it is best to first determine the weight of the Han ounce, since the Western Han Five-grainer coin was very uniform.

As far as the purity of the metal is concerned, there is no way to establish any sort of standard. Virgin copper of varying degrees of purity was used

<sup>6</sup>Wu Dacheng sought to determine the weight of the Qin ounce by weighing eight Qin Half-ounces, and found it to be 16.1398557 grams. This figure was adopted by Wu Chengluo in his *History of Chinese Weight Measures*, but this figure is extremely unreliable. I have personally conducted such an experiment using sixty-four Qin Half-ounces, and found the average weight of a coin to be 10.192 grams, which would make the Qin ounce 20.384 grams. I believe, however, that this figure cannot be used either. [Bruce W. Smith states "I've never had a genuine piece weighing more than 7.5 grams. Many large and heavy fakes exist."]

<sup>5</sup>Taiping Yulan, 835, "Capital, 15, Cash Coins," quoting the *Annals of Chu to Han*.



then to cast coins. Sometimes bronze tools were re-cast into coins. Judging from surviving Qin Half-ouncers, quality of the metal was very uneven.<sup>7</sup>

One peculiarity of the Qin Half-ouncers was the high relief of their inscriptions, which made them wear out easily, because they lacked the protection of a raised outer edge. In this respect they resembled ancient Greek coins, but it was not until several thousand years later that the Occident learned how to use an outer rim to protect the image on a coin, whereas the Qin Half-ouncer was only a temporary regression. Warring States knives and spades already had such rims, and beginning with the Western Han Five-grainer, the raised rim became an invariable feature of Chinese coins.

If the regulations on coins attributed to the First Emperor by the history books were indeed based on the laws of those times, then this was the earliest monetary code in Chinese history. Though Chinese money appeared very early, it was accompanied by no system to speak of. Ban Gu says that Duke Tai of Qi's Nine Offices Round System was a genuinely complete system, but I fear there is no basis for this statement. As for the large and small coins of King Jing of Zhou spoken of in the *Dialogues of the States*,

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there is no evidence for these either. Hence the monetary reform of the First Emperor is of great historical significance.

His monetary system may be described as a bi-metallic gold-cash coin or gold-copper standard, because the cash coins were based on units of weight, roughly equivalent to those used for metallic copper. The only thing we do not know is whether or not there was a legally fixed exchange price between gold and bronze cash.<sup>8</sup> Gold and bronze cash probably constituted two independent forms of money. By that time, buying and selling in gold was already occurring. If the two metals had a fixed price each in terms of the other, that was not a mat-

ter of the one buying or selling the other, but a matter of exchange of currencies.

The First Emperor's monetary reform is also of historical significance for its reform in the shape of money, its change from the variety of primeval shapes to a standard round coin with a square hole in its middle. The square-holed round coin may not have been a creation of the time of the First Emperor.<sup>9</sup> Once he adopted it, however, the shape of Chinese money remained fixed for the next two millennia, and this shape influenced the coins of a number of other peoples. Down through the ages historians have claimed that the round coin containing a square hole was instituted by Duke Tai of Qi, but there is no material evidence for this. Before this innovation, whether in three-hole spades, knife coin handles, ring coins, or Ant-nose coins, all holes in coins were round. Why was there a change to square holes?

Some say that ancient coins were kept on square-cross-sectioned lengths of bamboo, and the square holes kept the coins from rotating and rubbing against each other. Such an explanation is hard to believe. First, ancient coins might not have been placed on such sticks. They might have been threaded onto strings. Second, the ancients could not have been very concerned about coins being effaced through rubbing against each other. This was of great concern in Europe during the Middle Ages, because coins were of gold and silver. China employed bronze coins of very little value, and so their wearing down was of no great concern. [Bruce W. Smith notes that coins could have been placed on square bars by the Han mints as an aid to filing their edges smooth. Qin Half-ouncers, however, did not have filed edges, and Han coins were already being put on strings.]

We can speculate that the First Emperor adopted this square-holed round coin for symbolic reasons. The outer roundness and inner squareness symbolized the round Heaven and the square Earth. This is how things were viewed by ancient cosmology, and the First Emperor was a great believer in the alchemists who held such concepts.

Both before and after the First Emperor's monetary reform, there were other square-holed round coins. [Plate xxvi] The first belonged to the *ming*

<sup>7</sup>The Japanese have assayed two Qin Half-ouncers. Their copper content ranged from 74.2% to 78.85%. The remainder was composed of metals like lead and tin. Katō Shigashi, *Investigations of Chinese Economic History* (tr. Wu Jie), p. 150. The results of a test of only two coins is not, however, representative.

<sup>8</sup>*Gongyang Chronicle*, 5th year of Duke Yin: "A hundred *jin* in fish." The note states that one *jin* was worth ten-thousand cash, but this remark is not credible. The commentator is probably applying Western Han standards to Warring States times. The character *jin* here must refer here to the unit for a single coin at that time, so that a hundred *jin* would simply mean a hundred such coins.

<sup>9</sup>*Han History*, "Treatise on Food and Money," states that the First Emperor's bronze coins "in substance resembled Zhou cash," which would seem to make the square-holed coin a Zhou system. This statement may not be credible. Probably because Ban Gu saw the *yihuo* coin as King Jing of Zhou's money, he would naturally have thought of the Half-ouncer as imitating the Zhou system.



knife category, and embraced three coins: the one-knife [*yidao*], the *ming* knife, and the *ming* four. Because the character *ming* on these coins resembles the character on the chimingstone or humpbacked knife, they must have been minted in Yan, and have been replacements for the original knife coins minted during the generation before Qin's destruction of Yan. Probably the *ming* knife was minted first, and then the one-knife. The character for knife on these resembles the character for moon, and so some read this inscription as "bright moon" [*ming yue*]. Some even read it as "bright evening" [*ming xi*].

The character four on the *ming* four is written with four slanted vertical lines, which some say resemble the four lines on the reverse of the chimingstone knife. Very few of these coins were produced. This may have been the very first transformation of the *ming* knife into a square-holed coin, and so was probably experimental in nature. Before long it was transformed into the *ming* knife square-holed coin, and its weight was reduced. In any event, these three types of coins were not [81]

minted at the same time, nor is it even certain that they were three variants of a single coin. The one-knife was similar to the coins to be discussed next.

The second was the *yihuo*, which also included three subtypes: the *yihuo*, the *yi* four *huo*, and the *yi* six *huo*. Because this short form of the character *huo* used on these coins is the same as the last character on Qi knives, and because these coins were unearthed in Shandong, they must have been minted by Qi. They too were probably used to replace Qi knives prior to Qin's destruction of Qi. Ban Gu probably misread the character *yi* as *bao* [treasure] and therefore attributed them to King Jing of Zhou. Later numismatists also believed this.

The character *yi* on these coins is written as [j].<sup>1</sup> It has two components, [j] and [k].<sup>2</sup> The former is frequently encountered in oracle bone texts, where it means twenty strings of cowries. It was later transformed into *yi*.<sup>110</sup> This is interesting because it links the character *yi* to the idea of the number twenty. During Warring States times, twenty ounces made an *yi* (with or without the metal radical), so evidently the word *yi* retained something of its original flavor. Probably during late Yin and early Zhou it meant twenty strings of cowries, and gradually converged in pronunciation with the version of the character with the second element, and by Spring-Autumn-Warring States times, the two had become a single character which was also used as a place

name. This must be so because the character *yi* on hollow-socket spades is surely a place name. [k] is the old form for cowry. The two side by side must be [j],<sup>n</sup> the Qi place name Yidu.

Most ancient place names added the radical [n] [city] and not the signific for cowry. Hence it was plausible to read this character as *bao* [treasure] since twenty strings of cowry could be called a treasure. But it would make no sense to have inscriptions reading "treasure four *huo*" or "treasure six *huo*." Perhaps Qi followed the practice of adding the radical for cowry to its place names. For example, if the Fei adz spades were minted in Shandong's Fei county, that would show that during Warring States times both Qi and Lu place names could append both the signific for city and the one for cowry to their place names. Sometimes the two of them could even be used interchangeably.<sup>11</sup>

Those who believe that the marks on the backs of Qi knives are numerals representing their values suppose that five of the *yi* six *huo* were equal to one large knife, and that three of the *pei* cash equal to *jin* [*peiqiandangjin*] were the equivalent of one large knife. They evidently suppose that these coins were all in circulation together at the same time.

In terms of their quality of construction, all of these coins could have come before the Half-ouncer. The one-knife coin has often been unearthed in the company of hump-backed knives. The inscriptions on all of the others are more archaic than those on the Half-ouncers. In terms of appearance, therefore, the First Emperor of Qin's Half-ouncer could have been an imitation of these coins, but for coins of that time chronological sequence cannot be inferred solely from appearances. This is because of local variations in level of technology and culture. Qin was close to the territory of the Zhou house, and was rich in reforming spirit. The *ming* knife coin and *yihuo* coin were local moneys which would have been somewhat more conservative.

Even if the Half-ouncer had come before these other coins, the latter could still have been more archaic, especially in terms of their inscriptions. The historical significance of these coins may be that if they were prior to the Half-ouncer, that would prove the Half-ouncer was not the earliest

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square-holed coin, and that square-holed coins were not created by a victorious Qin.

<sup>11</sup>The section on "Jade" states that in the *Analekts* the place name Fei is written without the signific for city. Luo Bi's *History of the Circuits*, "Record of State Names," Part D, states: "Fei, sometimes written without the city signific, was in Henan, and was not the same place as the Fei in Lu."

<sup>10</sup>*Explanations of Words.*



If they were minted after Qi's destruction at the hands of Qin, that would prove that the First Emperor of Qin had not, after all, unified the entire nation's coinage.

Perhaps, however, the Half-ouncers began to be minted before the unification, and these coins were Yan and Qi imitations of early Half-ouncers.

There are also the two-*zai* (written with or without the metal signfic), the *wenxin*, the *chang'an* and the *changyi*, which are also square-holed coins. *Zai* is the name of a Warring States unit of weight. Some say six grains made one *zai*. If that is the case, two *zai* would be half an ounce. Others say that eight grains made a *zai*, which would make two *zai* equal to 16 grains. This coin is thinner than the Qin Half-ouncer, its inscription is raised less, and it weighs less, ranging from 5 to 7 grams. Both sides have raised rims. Those without rims probably had them worn down in use.

Some say these are early Han period local coins, since their construction somewhat resembles that of the Western Han Eight-grain Half-ouncer, but there are no Half-ouncers with raised rims on their reverses. Only pre-Qin knives and spades have this feature, as for example the Yu one-adz spade. Of Warring States ring coins like the Qi Yin, very few have inscriptions in high relief. This is also true of the Weight One-ounce Fourteen-grains Qin coin. In terms of weight, the two-*zai* coin is much like the Weight One-ounce Twelve-grain coin, except that its hole is square rather than round.

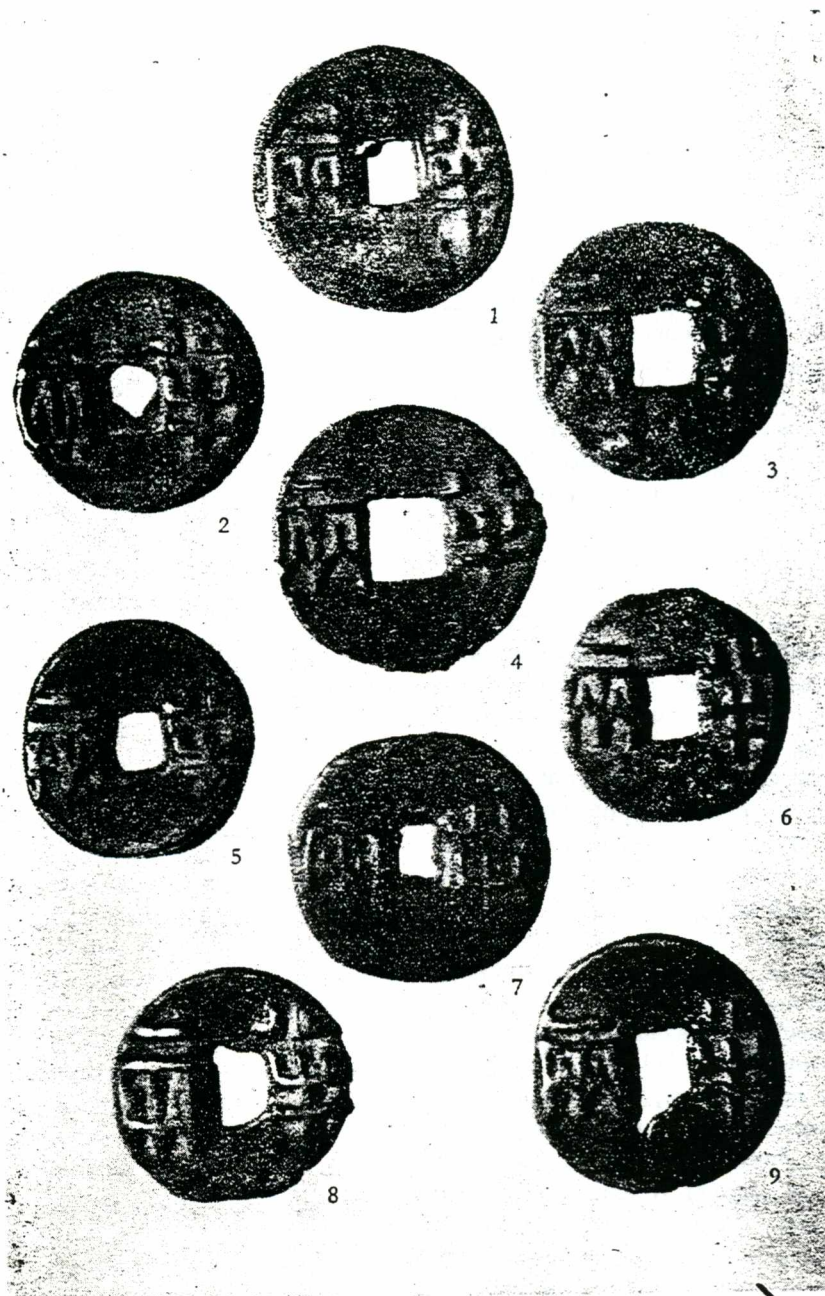
The *wenxin*'s obverse bears a rectangularly shaped mark with its corners extending outward. This is a bit peculiar, but I have not investigated it. Such shapes are frequently encountered on Han mirrors, where it is commonly called a ruled line. There is a Western Han Five-grainer commemorative coin whose reverse also contains this motif as part of its decorative design. Some say that since Lü Buwei was enfeoffed as Marquis of Wenxin, perhaps this was minted by him. Others interpret the second character as *yang*,<sup>o</sup> and say it was minted in Wenyang. [According to Bruce W. Smith, "a mold for the Wenxin coin has been found in Luoyang, which was the capital of the feudal territory of Wenxin. Lü Buwei was apparently the only Lord of Wenxin."]

The arrangement of the *chang'an* coin's inscription is unusual. The *chang* is on the right of the hole and the *an* is below the hole. The coin itself is a little smaller than the *ming* knife coin. There is supposed to be another coin bearing the three characters *chang xiang si* which are arranged in the same fashion. This would not seem to have been a coin actually circulated. There is, however, a *chang'an* square-foot spade coin, so this place name evidently existed during Warring States times.

The *chang'yi* inscription is very odd. The strokes are quite thick. Putting place names on coins was a Warring States practice. The character *chang* has also been interpreted as *shen*.<sup>p</sup>

a 父后邑 b 文雁鄉 c 鳳 d 兩 e 罕  
f 用 g 兩 h 兩 i 貨 j 貨 k 貨 l 益  
m 陽 n 邑 o 陽 p 申





圖版二十五 秦半兩

秦半兩和以前一樣，是用泥範鑄造，一範只鑄造一次，所以鑄出的錢，枚枚不同，輕重也相差很大。

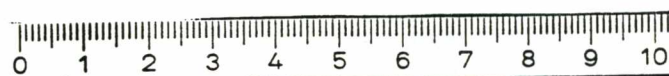
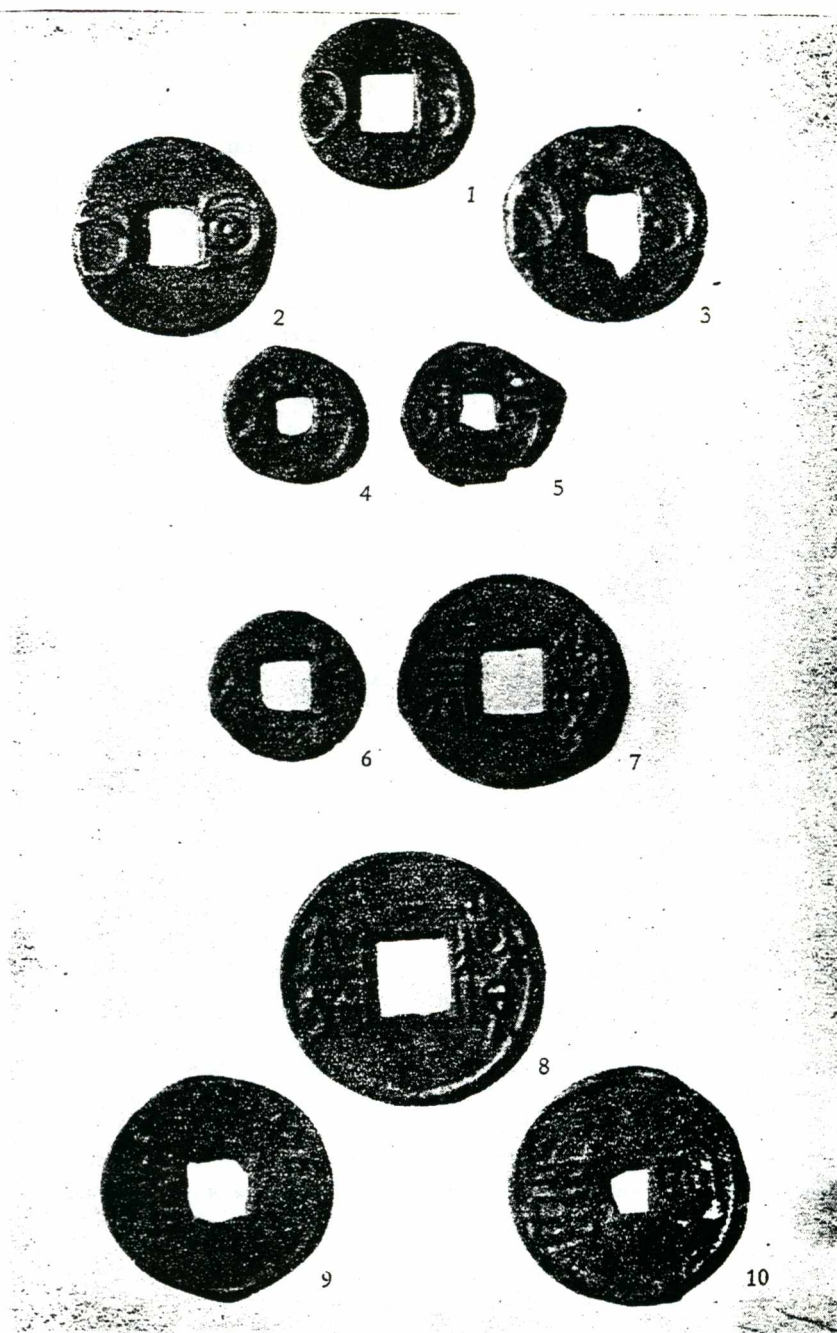


PLATE XXV, QIN HALF-OUNCER COINS

Qin Half-ouncers, like previous coins, were cast from clay molds. Each mold was only used once. Hence no two coins were identical, and also differed considerably in weight.





圖版二十六 初期的方孔錢

1—3. 明刀 (或釋明月、明夕)。4—5. 一刀 (或釋一月、一夕)。6. 陰化 (舊釋寶化)。7. 陰四化。8. 陰六化。9—10. 兩甬。

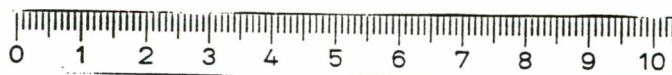


PLATE XXVI, EARLY SQUARE-HOLED COINS

1-3. *Ming Knife* (also read as *Bright Moon* or *Bright Evening*). 4-5. *One-Knife* (or *One-Moon* or *One-Evening*). 6. *Yihuo* (old reading *Treasure Money baohuo*). 7. *Yi Four huo*. 8. *Yi Six huo*. 9-10. *Two zai*.



#### 4. Effects of Establishment of the Money Economy

During the transition from Spring-Autumn to Warring States, probably because of the use of iron tools --what the *Mencius* called "the use of iron to plow"-- productive power rose, commerce increased and economic exchanges became frequent. The histories tell us that there were many merchants or trade in manufactured goods in Yan, Han, Wei, Qi, Chu, Chen and Qin. This is clear proof that commodity production had increased. Landless peasants or peasants who had particular skills moved into the neighborhoods of markets and came to depend on artisanship to earn a living. With agricultural and handicraft products increasing daily, use of money also began to increase. The increasing frequency of exchange caused wealth to pile up in the hands of merchants, and a tendency for land ownership to become concentrated.

Land, however, could not be increased without limit, and such commodities as grain were not very good stores of value. As a consequence, the gold of Chu gradually took on this function, and was even used for making large payments. In addition, the concentration of population in the neighborhood of markets led to the formation of a number of market towns, like Qi's Linzi, Jiang in Jin, and the capitals of the other states. The population of one such place might be as much as three

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thousand families.<sup>1</sup>

Use of money is confirmed for the Spring-Autumn period, but is not much reflected in written sources for that time. The Qiong you bronze's use of the two characters "cowries and spades" is not entirely clear. In late Spring-Autumn and early Warring States sources, the word *bu* [spade] cannot always be taken unambiguously as a reference to a coin. The statement "a hundred ounces makes one *bu*" in the *Zuo Chronicle*,<sup>2</sup> and the references to *bu*

in the *Record of Rituals*<sup>3</sup> are equally ambiguous. A natural economy predominated during those times.

During Warring States times commerce developed to a remarkable degree, and of course this was a reflection of the growth in production. The Spring-Autumn era market towns gradually increased in size, some of them having as many as ten-thousand households. Qi's Linzi, for example, had a very complex life.<sup>4</sup> The development of cities accel-

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5,000 *yu* of grain for the descendants of the Gao clan.' Gao Yi took the brocade to show Ziyou, and Ziyou approved of it. Yi said: 'The man of Lu bought it, a hundred ounces for one *bu* [i.e. roll of cloth, in this context]. Because the way is not open, this wealth was sent on in first.' Ziyou accepted it." [Legge's translation, *The Chinese Classics*, V, p. 716, is modified somewhat here.]

This story reflects the following:

First of all, the important place of the natural economy, because payment here is made in cloth and grain, not money. The words "the man of Lu bought it, a hundred ounces for one *bu*" connote the existence of buying and selling, but the meaning of this phrase is not very clear, and it would be very difficult to draw a reliable conclusion from it. If *bu* here meant a spade coin, first of all, brocade could not have been so cheap. Productivity then could not have developed to so high a degree.

Second, if money's purchasing power was really that high, why wasn't money itself used in the transaction? Would not use of money have resolved the difficulty of communication between the two? If it is objected that Qi and Lu used different monetary standards, one using knives, the other spades, then why was not gold employed? Would not gold have been more convenient to carry? If one says that Gao Yi was swindling Ziyou, that would be rating Ziyou's reasoning power as too low.

The *Guan Zi*, "Teams of Horses, 5," contains the statement "one *yi* of yellow gold will be used up for a hundred teams of horses staying over one night. If there is no gold, then use thin silk. Thirty-three of the finest silk gauze is worth one *yi*. If that is lacking, then use *bu*. One hundred ounces of exposed-warp *bu* is worth one *yi*." If thirty-three ounces of the finest silk gauze was worth one *yi* of gold, one hundred ounces was worth three *yi* of gold, and brocade must have been higher in price than thin silk.

The *Zuo Chronicle*'s use of the character *bu* could be the result of a copyist's error. The textual verification school scholars of the Qing dynasty were not versed in numismatics, and did not understand the circumstances of society's development. Reading such a text literally, they had great difficulty making sense of such a sentence.

<sup>3</sup>*Record of Rituals*, "Sandlewood Bows": "Zishuo wished to use the remaining *bu* contributions for sacrificial implements." *Ibid.*: "At the death of Meng Xian Zi, his disciples brought back four *bu*."

<sup>4</sup>*Stratagems of the Warring States*, "Stratagems of Qi, 1": "Linzi is so rich and substantial that its population lacks not for

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<sup>1</sup>*Stratagems of the Warring States*, "Stratagems of Zhao, 3": "Of old, all within the Four Seas was divided into ten-thousand states. Even the biggest city did not exceed three-hundred able-bodied men. The most populous did not

[91]

exceed three thousand families. . . Now, cities with a thousand able-bodied men and ten-thousand families are visible everywhere."

<sup>2</sup>The *Zuo Chronicle* contains a story under Duke Zhao 26th year: "In summer, the Marquis of Qi was about to receive the Duke. He ordered that bribes in goods from Lu should not be accepted. Shen Feng had a Ru merchant roll up two ounces of brocade and one of thin silk to bring to the Qi commander. He said to Ziyou's man Gao Yi: 'I can provide goods for Ziyou, and



erated the circulation of money. Warring States Era sources reflect this phenomenon. The "one *bu*" mentioned in the *Mo Zi*,<sup>5</sup> the "knives and spades" alluded to in the *Guan Zi* and *Xun Zi*,<sup>6</sup> and the "hundred bundles of spades" mentioned in the *Han Fei Zi*<sup>7</sup> are all references to manufactured money. Not only was money employed by merchants, it was also used for such everyday life activities as selling alcoholic beverages<sup>8</sup> and grain.<sup>9</sup>

It was not until Warring States times that China's monetary economy took off. We can understand this by comparing the quantity of money during Spring-Autumn with that during Warring States times. We may take the hollow-socket spade as broadly representative of Spring-Autumn era money and the flat handle spade as representative of Warring States coins. The two periods are of approximately equal length, but there is a very great difference in the quantity of coins surviving from each. Of course we have no statistics on the quantity of spade coins produced or excavated, but comparison of current market prices suggests that there must be from ten to a hundred times more flat handle than hollow-socket spades. This demonstrates that China's monetary economy was firmly established only during Warring States times, and shows still more definitely that the first high tide in the circulation of Chinese coins occurred then.

It was because of this that a number of instances of money fetishism appeared then. Guan Zhong coveted the gold of Chu. He said that if he could obtain the gold of Chu, there would be food to eat without the peasants plowing the soil, and clothes to wear without the women weaving cloth. When Su Qin returned home in poverty, his relatives all treated him with contempt. Later, when he became chief minis-

ter of a great power, his family looked upon him with awe because his position was high and he had much gold. From that time on, the feudal rulers took advantage of this propensity, and adopted a policy of employing bribes of gold to gain their political ends. This shows just how rampant was money fetishism becoming.

[85]

There were many forms of money during Warring States times, and there must have been a number of different monetary units, but their nature is not very clear. Theoretically, ancient Chinese monetary units ought to correspond with the forms of the coins, with the knife and the spade as the units, but very few sources speak of particular quantities of knives or spades. Only the *Mo Zi* mentions one spade as though it was a monetary unit. Appellations like *huo/hua*, *adz*, *yuan*, grain and ounce are found on knives and spades. The *huo* was a name and unit for knife coins. All Qi knives employed it. Later, when Qi knives evolved into square-holed coins, these were also called *yihuo*, *yi* four *huo* and *yi* six *huo*. The small Jinyang knife also bore this unit. A few spade coins did too. *Adz*, *yuan*, grain and ounce were spade coin names and units. The *adz* was probably a local Jin monetary unit, later also adopted by Wei and some neighboring states.

But why were such labels used? In the past there have been no good explanations for this. Recently some have suggested that *huo* originally named a kind of sickle, and the character *jin* [*adz*] was a type of ax, also an agricultural tool. There must already have been a unit of value affixed to hollow-socket spades, because among them there are identical large and small-sized coins bearing the inscriptions *fujin* and *wuyuan*. The *yuan* was originally a unit of weight encountered on late Yin and early Zhou ceremonial bronze inscriptions. Later it also became a unit of value or monetary unit. By Warring States times, the *yuan* of different localities were all different. Some say that in the Yellow River valley, a hundred *yuan* was equal to three catties, and in the north, three *yuan* weighed one catty four-ounces.<sup>10</sup>

The ounce as a non-monetary unit of weight does not, however, seem to be present during Warring States times. The grain and ounce units are seen on three-hole spades and ring coins, with 24 grains to the ounce. This unit seems to have been adopted by Qin.

In addition, there are the short and long forms of *yuan* and related characters, with and without the metal radical. Oddly enough, these all seem to be

players of the reed pipes, strummers on the large lute, strikers of the strings of the *zhu*, pluckers of the strings of the zither, fighters of cocks, runners of dogs, and throwers of dice. On the lanes of Linzi, cart wheels thunder, and men rub shoulders. Sleeping mats adjoin as though they were curtains, and sleeves as though screens. Sweat wiped off is as plentiful as rain. Families are substantial and rich, and men walk with a swagger." *Historical Records*, "Biography of Su Qin," is substantially the same.

<sup>5</sup>*Mo Zi*, "Nobility and Righteousness": "Nowadays knights do not use their bodies as carefully as a merchant uses one *bu*."

<sup>6</sup>*Guan Zi*: "Knives and spades were the lower money."

<sup>7</sup>*Han Fei Zi*, "Inner Stores, latter part": "If I were for no reason to obtain a hundred bundles of spades."

<sup>8</sup>*Han Fei Zi*: "Perhaps one orders a boy to take up a jug and some cash coins to go buy wine."

<sup>9</sup>*Guan Zi*: "In a year of middling harvest, grain sells for ten cash per picul."

<sup>10</sup>*Record of Investigation of Artisans*, Zheng's notes on the smelterer families.



variations on a single character. In ancient times their pronunciation was the same, all being read as *shua*. During Western Han, the two characters [ ]<sup>a</sup> and [ ]<sup>b</sup> were also both read as *shua*. These units seem at first to have been units of weight. Some say that one *yuan* was equal to 11 13/25 grains, and a hundred *yuan* made three catties. Others doubt this, objecting to the mixed number.<sup>11</sup> Some simply say that one *yuan* was equal to half an ounce, or 12 grains. Though this might be convenient, I am afraid it does not correspond to the facts. That one *yuan* could equal 11 13/25 grains might show that the *yuan* and grain were units from two different places. This is like China's treasury ounce having a fraction left over when it is converted into an English unit. Some say that in Donglai three *yuan* were one catty four ounces.<sup>12</sup> Others, for the sake of convenience, make it six ounces to the *yuan*.<sup>13</sup> Given the statement in the *Record of Investigation of Artisans* "the sword weighed nine *yuan*," this theory must be the correct one. Perhaps Chu had yet another standard.

Perhaps, however, during Warring States times these units were not just units of weight, but also units of value. This is suggested by the existence of a Worth-*yuan* spade. The sources contain references [86]

to fines expressed in *yuan*. The *Book of Documents*, "The Punishments of Lü" contains the words "his fine was a hundred *yuan*." The "Punishments of Fu" says "his fine was five-hundred *zhuan*." The "Great Transmittal" alludes to "Mu's fine was 2,000 *zhuan*." The *Historical Records*, "Basic Annals of Zhou" says "his fine was a hundred *shuai*." What are these all referring to? Was it a specific weight of copper? Or was it a definite value, as in Worth-*yuan* spades?

For the time when cowries were in use, there are frequent references in the records to given quantities of cowries or strings of cowries. For Warring States times, we have only labels or units of money, and not amounts of metal. The written sources do not record particular quantities of knives, spades, *huo*, adzes, grains, or ounces. The inscription on the Lord Ping'an *ding* tripod mentions 5 *yi* and 6 *adz*. These would seem to be weights, not values. Fines in *yuan* might imply values, but there are very few examples of this. Given these circumstances, one might almost doubt that there was in fact a high tide

in the circulation of money during Warring States times.

Such doubts are not necessary. Written sources record only the lives of the ruling class, not those of the common people. The Yin and early Zhou ruling class employed strings of cowries to make payments, and so the oracle bones and bronze inscriptions frequently mention numbers of cowries and strings of cowries. These are even mentioned in the ancient Odes. By Warring States times, the ruling classes mainly employed gold, particularly for large payments. Hence the written sources often mention particular amounts of *yi* or catties of gold. Knives and spades were merely the instruments circulated among the common people, and their use would not easily find reflection in the written sources. Actually such references are not entirely absent. For example, allusions to quantities of metal could be to bronze coins. The price of grain in the quote from *Guan Zi* was clearly being reckoned in terms of bronze coins.

Circulation of cash coins was not limited to the main cities. The farming villages also rose into the stage of a monetary economy. Describing the early Warring States situation, Li Kui said that the peasant male in a standard family of five worked a field of around a hundred *mu*. Each *mu* would annually yield 1.5 piculs of grain, for a total of 150 piculs. Deducting ten percent for taxation would leave 135 piculs. Each person in the family would consume 1.5 piculs per month. Over the year the whole family would consume 90 piculs, leaving a surplus of 45 piculs. At a price of 30 cash per picul, this could be sold for 1,350 cash. The annual cost of the spring and autumn sacrifices to the spirits of the soil and gates would be 300, leaving 1,050. It would require 300 cash per person per year for clothing. A family of five would require 1,500 for the year, leaving a deficit of 450. If someone in the family took sick or died, the deficit would be still larger.<sup>14</sup> Under these circumstances, if the peasants could not get a higher price for their grain, they would have to abandon agriculture or carry on a subsidiary occupation.

Most peasants probably had secondary occupations as well so as to keep body and soul together. As Mencius put it, "A farmstead of five *mu*, [87]

if planted in mulberry trees, will allow those aged over fifty to wear silk. If timely care is taken of chickens, pigs, and dogs, those over seventy can eat meat. If a field of a hundred *mu* is cultivated according to the seasons, a family of several members can avoid hunger."<sup>15</sup> But even so hand-to-mouth an

<sup>11</sup>Cai Yun, *Habitual Conversations*.

<sup>12</sup>*Record of Investigation of Artisans*, Zheng's notes on the smelterer families.

<sup>13</sup>Lu Deming, *Meaning of the Sounds in the Book of Documents*.

<sup>14</sup>*Han History*, 24, "Treatise on Food and Money."

<sup>15</sup>*Mencius*, 1, "King Hui of Liang," first part.



existence remained subject to the vagaries of the weather. Hence the fate of the peasantry was: "By the end of a good year one suffers; in a bad year death is unavoidable."

According to the *Guan Zi*, if a farmer tilled a hundred *mu*, by the end of the year his harvest would be 20 *zhong*, or 128 piculs, which could be sold for 8,000 cash. In monetary terms, this would seem to be somewhat better than the position of a peasant under Marquis Wen of Wei. But if the price of grain rises, and income increases, prices of other goods will also increase, and so too will expenditures. Hence many peasants then were in debt. "Households which lent at interest put out money by the thousands and tens of thousands. They lent grain to the amount of 3,000-10,000 *zhong*. Thirty-thousand households among the people received interest."<sup>16</sup>

It is necessary to point out that even by the Warring States Era, circulation of money was still far from having penetrated all aspects of life. Life still rested on the foundation of a natural economy. The peasantry still led a self-sufficient existence, and the peasantry constituted the great majority of the population. The income of officials basically also was in real goods. To speak a bit more concretely, ordinary official income or salary was paid in foodstuffs. Extraordinary income or rewards and gifts were paid in gold. This is amply attested by pre-Qin written sources. When Confucius lived in Lu, he received 60,000 in grain.<sup>17</sup> Mencius said: "Master Zhong is of the hereditary house of Qi. His elder brother Dai receives a salary of 10,000 *zhong*."<sup>18</sup> The *Guan Zi* contains the statement "given a salary of 1,000 *zhong*."<sup>19</sup> Special gifts and rewards might be in gold, as when Mencius was given 70 *yi* by Song Kui, and received 50 *yi* from Bi.<sup>20</sup> The King of Liang gave 1,000 catties of gold to Lord Mengchang.<sup>21</sup>

There are very few instances of giving or receiving cash coins. This shows that coins then were not minted by the government, for even taxes were rarely paid in cash, real goods like cloth and grain and labor being used instead,<sup>22</sup> though there was also

something called the knife and spade collection.<sup>23</sup> That was probably limited to particular states or government departments. If coins had been minted by the government, or if governments normally had large monetary incomes, the government could certainly have used coins to pay official salaries, which would then have been used by officials to purchase goods or services, allowing this money to flow back into the government's hands through the collection of taxes. Such were the channels through which money flowed in later ages.

During Warring States times, however, the manufacture of money was probably organized by merchants, and coins mainly served as tokens in the domain of the circulation of commodities. Merchants would use coins to buy commodities from small producers. These producers, who were also consumers, would use them to buy consumption goods from merchants. Hence documents written by [88]

the elite rarely mention coins, and when they do mention them, the context involves only merchants or small payments.

By the Qin Dynasty, a fixed system of salaries appears to have been established, but it still involved only gold and foodstuffs, not copper coins. Someone attaining to a scepter of office would have "a salary of 10,000 *zhong*, and of gold 1,000 *yi*."<sup>24</sup> Hence Qin used gold as its upper money, and bronze cash as its lower money. The lower money was probably something that high officials did not encounter. When they needed to make small payments, the matter was handled by their servants.

Even so, I still believe that a monetary economy had been established. That does not mean that no trace of a premonetary economy would remain, and that all of society had been monetized. Such a situation has never existed. Nor is this to say that the monetary economy was dominant. That would be hard to calculate. Not only was each locality different, each period of time was different. I am here merely pointing to the phenomenon of the circulation of money, particularly during this first high tide of its circulation during the Warring States Era.

This situation not only gave rise to the idea of calculating in terms of prices, but also to the phenomenon of seeking to obtain money. Even if in quantitative terms or relative weight the natural

<sup>16</sup> *Guan Zi*, "Light and Heavy, Part D."

<sup>17</sup> *Historical Records*, 47, "Hereditary House of Confucius."

Though this is not a pre-Qin work, Sima Qian must have based it on pre-Qin materials.

[92]

<sup>18</sup> *Mencius*, "Duke Wen of Teng," latter part.

<sup>19</sup> *Guan Zi*, "Minor Questions."

<sup>20</sup> *Mencius*, "Gongsun Chou," latter part.

<sup>21</sup> *Stratagems of the Warring States*, "Stratagems of Qi, 4."

<sup>22</sup> *Mencius*.

<sup>23</sup> *Xun Zi*, "Enriching the State": "The collection of thick knives and spades, so as to confiscate their wealth."

<sup>24</sup> *Annals of Master Lü*, "Unusual Treasures": "Under the laws of the state of Jing, those who obtained the five obligations were honored with a sceptre of office, a salary of 10,000 *zhong* and of gold 1,000 *yi*."



economy still was more important, the monetary economy was more important in developmental terms because it was destined to assume a dominant position later.

Though once the circulation of coins began, the concept of calculating prices gradually took shape, the significance of records of prices during Warring States times is not great.

First, Warring States monetary systems were complex, there were great discrepancies in weight between various coins, and we do not know in terms of which coins prices were being expressed. This prevents comparisons with prices of later times.

Second, sovereignty was fragmented and communications inconvenient, so that prices varied greatly from place to place. For example, within Qi the price of grain in the western section of the state was sometimes a hundred coins per *fu* when it was only ten coins in the eastern section, a ten-fold difference.<sup>25</sup> According to various written sources of that time, the normal price of grain probably ranged from ten to sixty coins per picul.<sup>26</sup> If we reckon on 4,000 coins as equal to one catty of gold, then the price of a picul in terms of gold ranged from 0.04 ounces to 0.25 ounces, but this assumes the use of the measures of volume and weight of that time.

The gold price of thin silk then was 14.5 grains per bolt. Linen ran around 5 grains of gold per bolt.<sup>27</sup> The price of gold was given as one to four-

thousand.<sup>28</sup> If we assume that the one was a catty,<sup>29</sup> then the price of a bolt of thin silk was 150 coins, and of linen 50 coins.

As coins were issued by localities, not only was there no way to limit their quantity, it was also hard to avoid reductions in their weight.

[89]

The histories state that in year 21 of the reign of King Jing of Zhou (524 B.C.) large coins were minted. There is no way to tell if that is so, or if the story was fabricated later, whether it reflected conditions at the time it was concocted. The presence of light and heavy, large and small coins, is intimately related to the prices of goods.

According to another tradition, in the time of King Zhuang of Chu, because the coins were light, small coins were replaced with large ones, and because the masses found these inconvenient, there were complaints made to Sun Shu'ao, who in turn spoke to the king and secured a return to the old system.<sup>30</sup> This is as worthy of suspicion as the story about King Jing of Zhou minting large coins. Probably both of them were the work of Qin or early Han period writers.

Even if accounts in the written sources about reductions in coins' weights are not reliable, judging from surviving coins, this phenomenon must have occurred during Warring States times. Daliang's Worth-yuan spade was at first worth five thick and heavy Worth-one yuan. Later, it was equal to one light and small Worth-one-yuan. The *ming*-knife round coin, when first minted, weighed 5 grams. After later weight reductions, the lightest ran to less than 2.5 grams. The original version was itself the result of weight reduction of the heavier knife coins.

Under unusual circumstances, prices might jump to very high levels. For example in year 31 of the First Emperor (216 B.C.), because of an assassination plot, the Qin home territory west of the Great

<sup>25</sup>Guan Zi, "Light and Heavy, Part D," 83. Qing Mao advised: "Western Qi's grain is a hundred *quan* per *fu*, or twenty per *ou*. Eastern Qi's grain is ten *quan*, or two cash per *ou*."

<sup>26</sup>Li Kui said the price of grain was 30 per picul at the time of Marquis Wen of Wei. The *Guan Zi*, "Light and Heavy, Part A" contains the statement "When the price of grain is normally 40, then metal is 4,000. When a *fu* of grain is 40, then a *zhong* is 400." A *fu* was 6 *dou* 4 *sheng*, so a picul was 62 cash. Elsewhere the same book states that in a middling year grain sold for 10 cash a picul, and in a bad year for 20 cash. The first figure must be for some other time or place. The picul used by the *Guan Zi* must also not be the same as the one assumed by Li Kui. Li Kui said one person could eat 1.5 piculs per month, but the *Guan Zi* said that an adult male could eat 4 piculs, an adult female 3 piculs, and a child 2 piculs, for an average per capita monthly consumption of 3 piculs.

The picul used by the *Guan Zi* must have been half the size of the one employed by Li Kui. Anyway, before Han, the picul was not employed, so there is some question about both accounts.

The *Historical Records*, "Biographies of the Money Makers," quotes Ji Ran: "If it is no higher than eighty, and no lower than thirty, then the peasant in the end will obtain a profit." On the average it was nearly sixty cash. The unit here was probably also the picul.

<sup>27</sup>Guan Zi, "Teams of Horses, 5." Cf. note 2 above.

<sup>28</sup>Guan Zi. Cf. note 26 above.

<sup>29</sup>In the *Guan Zi*, gold is sometimes measured in *yi* and sometimes in catties, but when that book merely speaks of a certain amount of *jin*,<sup>e</sup> it probably means catty, first because the catty was a Zhou unit (cf. *Han History*, "Treatise on Food and Money"'s quote from Shi Gu), and the *yi* was a Qin unit, and second because in the section in which a gold price of 4,000 is discussed, there is also a reference to selling salt for "over 11,000 catties of *jin*<sup>e</sup> [gold]."

<sup>30</sup>*Historical Records*, 119, "Biography of Sun Shu'ao." [Bruce W. Smith notes, "if there is any basis to this story, the coins would have been Ant-nose coins. I've weighed many pieces and found the heaviest to be three times the weight of the lightest."]



Bend of the Yellow River was sealed off for twenty days. The price of rice jumped to 1,600 cash per picul.<sup>31</sup> Such price jumps did not, however, have monetary causes.

The establishment of a monetary economy produced deep and far-reaching effects on human life. In positive terms, it not only stimulated commodity production by promoting the preservation of individual purchasing power and security, its use also obtained for human life a freedom and independence never before present. It enabled men to more fully develop their knowledge, and so caused human culture to undergo a quantum jump in development. This can be proven from mankind's history. We need only compare three archetypical human societies to understand this.

The Mayas and Incas of the American continent were at the highest cultural level of those civilizations lacking money. Egypt and Babylonia were at the highest cultural level of all civilizations at the beginning stages of a monetary economy. From the fifth century B.C. on, China and Greece were the highest civilizations to enjoy the first high tide in the circulation of money. The cultural level of each of these three is known by all, so there is no need here to make any detailed comparisons.

We can, however, compare Homeric Greece (before the establishment of a monetary economy) with the situation in Aristotle's time, after the establishment of a money economy. The difference in cultural levels is startling. Sculpture was Greek culture's

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most conspicuous accomplishment. Before the money economy, blocks of stone were used to represent the gods, thirty such blocks representing thirty gods. After the appearance of a money economy, the situation was greatly changed. The creative force welled up like a spring of water, and poured up like a volcanic eruption.

Some say the circulation of money is merely a reflection of the circulation of commodities. The rise in the cultural level was not stimulated by money but by commodity production. It was the result of a rise in productive power. Money was the inevitable consequence of commodity production. Basically, such a statement is correct, but not entirely so. At most it is a literal narration of what actually happened, but does not bring out the internal connections of these events. Why is commodity production inevitably accompanied by money? Why is not barter resorted to? Can it be that it is because

money has some positive function in its own right? Is it not that the appearance of money encourages the production and circulation of commodities, and even promotes rises in productivity?

Money's influence on culture rests precisely on its possession of these powers. Under the circumstances of a natural economy, man cannot separate himself from his group or from his native place. He cannot move his wealth to some other location. Hence his body is not free, and as a consequence, neither is his mind. His ideas are shackled by religion, the traditional customs of his native place, and its prejudices.

After the appearance of money, all such bonds are gradually weakened, because a man can then walk far and fly high. Just as Chao Cuo said: "It causes the servant to treat his master with contempt, and the people to easily leave their native places." It lets a man think, and dare to speak. Novelties from strange places easily put his imagination and creativity into motion. This is a necessary precondition for a high tide of culture. The "hundred schools contending" within China's Warring States Era culture were thereby set in motion.

Nevertheless, use of money was not entirely positive and constructive. It also had its negative and destructive side. Money's appearance fragmented society and increased the degree of inequality between poor and rich. As one of the ancients put it, it caused "the peasantry to be fewer in number, and the itinerant merchants to be more numerous. Grain was insufficient, and there was a surplus of goods [money?]." "Licentious fellows committed transgressions and lusted after profit."<sup>32</sup> Money even came to be used as an instrument of exploitation by the ruling class, and this allowed very great encroachment on the lives of the people. Such phenomena are frequently encountered in the history of both China and foreign countries.

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<sup>31</sup>Historical Records, 6, "Basic Annals of the First Emperor of Qin."

<sup>32</sup>Han History, 91, "Biographies of the Money-makers."