

**THE BRONZE  
WEAPONS OF THE LATE SHANG PERIOD**

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## ABSTRACT

Bronze weapons are one of the two most important products of the Chinese Bronze Age. Both ritual vessels and weapons were utilized for the two most crucial affairs of the state during the Bronze Age in China.

From 1937 up to the present day, a period of almost sixty years, archaeologists have continuously been revealing a more detailed picture of Yinxu bronze culture. In comparison with bronze ritual vessels, the bronze weapons of Bronze Age China remain relatively unexplored. On the basis of the archaeological excavations the Late Shang bronze weapons in this thesis have been studied from the points of view of the history of bronze art, sacrificial rituals and cultural relationships between Anyang and the peripheral areas.

The Late Shang period was a turning point in bronze weaponry. Clear changes occurred in their quantity, quality and regional distribution. The bronze weapons became a common element among the tomb furnishings. This reflects parallels between the development of weapons and political and social changes. The transformation from the use of jade to the use of bronze for weapons, could reflect the formation or increase of a certain class which required a burial to include bronze weapons. For reasons of social or political status members of this class received a degree of ritualized burial. At the same time, the high-ranking members of the military had their own ritual code for burial, producing a situation where weapons and status were even more subtly differentiated.

Bronze weapons were not widely and relatively densely distributed in China until the Late Shang period. There was an imbalance in the distribution of Late Shang bronze weapons and Anyang was one of the largest centres. The importance of the bronze *ge* in the burial system at Anyang was established. At the same time, the rudiments of regional characteristics are clearly seen in this period in regions outside Anyang and regional styles of the bronze weapon became obvious.

The distribution of regional styles of bronze weapons reflects the very important cultural phenomenon that some regional characteristics are limited to a single area. Other indigenous styles are not restricted to their area of origin, but are dispersed over wider regions, typically encompassing two or more areas creating "a phenomenon where distinct cultural regions share selective stylistic characteristics." In contrast to those regional styles of bronze weapons which are limited in their range of distribution, the metropolitan style centered around Anyang was distributed over a much larger area.

A complex system of designs on the bronze weapons was formed and a new phase in casting techniques was achieved through the changes of their social and

political roles. There was an increase in the diversity of their types and forms. The various motifs, the inlay, openwork and mixing materials were used in the art of bronze weapons. The bronze weapons in Late Shang, as manifestations of artistic, political, and social phenomenon, found their place in the art history of bronzes.



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## Chronology of Shang China

Dynasty	King's reign	Archaeological phases cultures		Phases and Sites	Centuries (B.C.)
Xia		period of Erlitou culture		Erlitou I stratum	c.21 <sup>st</sup> -c.16 <sup>th</sup>
					c.19 <sup>th</sup> -c.16 <sup>th</sup>
Early Shang		period of Erligang culture		Zhengzhou Yanshi	c.16 <sup>th</sup> -c.14 <sup>th</sup>
Late Shang	Pan Geng	Yinxu <sup>1</sup> Period	I	Xiaotun	c.13 <sup>th</sup> -c.11 <sup>th</sup>
	Xiao Xin			Wuguancun	
	Xiao Yi			Wuguan Da Mu	
	Wu Ding			Houjiazhuang	
	Zu Geng		II	M5 Anyang	
	Zu Jia			W.S of Yinxu	
	Bing Xin		III		
	Kang Ding				
	Wu Yi				
	Wen Ding		IV		
	Di Yi				
	Di Xin				

<sup>1</sup> See Chapter III table 3:2.

# The Bronze Weapons of the Late Shang Period

## Prologue

### 1. The importance of the study of bronze weapons: an archaeological perspective

Bronze weapons are one of the two most important products of the Chinese Bronze Age. The *Zuozhuan* contains a passage that reads: "The great affairs of a state are sacrifice and war."<sup>1</sup> During the Shang and Zhou dynasties bronze was used to create both ritual vessels and weapons. The former were used primarily to sacrifice to the ancestors and the latter were produced to protect the living. Both were utilized for the two most crucial affairs of the state during the Bronze age in China.

#### 1.1. The neglect of bronze weapons in the history of bronze studies

In comparison with bronze ritual vessels, the bronze weapons of Bronze Age China remain relatively unexplored. Since the eleventh century, scholars have traditionally overlooked bronze weapons in favor of bronze ritual vessels. Both *Kaogutu*, the earliest surviving writing on bronzes, and *Xuanhe Bogutu*, the earliest account of the imperial bronze collection, give little attention to bronze weapons.<sup>2</sup> This tendency became a tradition which has continued until recently. Research was much influenced by the objects contained in collections. During the Song Dynasty, the study of ancient bronzes reached its first apogee. Scholars were eager to understand the Three Dynasties: Xia, Shang and Zhou, the period of utopia, when the various sages lived. However, records regarding the Three Dynasties were burnt under Qin, a fact that made understanding the Three Dynasties far more difficult for the Song scholars. Accordingly, bronze ritual vessels became the main medium for them to touch the spirit of the Three Dynasties and to realize their dream.<sup>3</sup>

In this trend during the Song period, when scholars displayed keen interest in the bronze ritual vessels, why was less attention paid to the bronze weapons? An answer to this question would probably have to refer to their concept and function. Firstly, as regards ancient concepts concerning weapons, those promoted by Confucius and Laozi are the most significant. Confucius taught two of his favorite students, Zi Lu and Ran Qiu to win over distant peoples by means of civic virtue and culture, instead of by weapons.<sup>4</sup> Confucius gave the highest praise to ritual vessels rather than to

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<sup>1</sup> *Zuozhuan* Cheng Gong 13, James Legge, *The Chinese Classics* vol. V, p.382

<sup>2</sup> cf. Chapter 1 pp.33-34.

<sup>3</sup> Ou Yangxiu, *Qigulu*

<sup>4</sup> "If remoter people are not submissive, all the influences of civil culture and virtue are to be cultivated to attract them to be so," Legge, *Analects*, Book XVI, p.173.

weapons: when Duke Ling of Wei asked him about tactics, Confucius replied: "I have heard all about sacrificial vessels, but I have not learned military matters."<sup>5,6</sup> Laozi also conveyed similar ideas regarding weapons: "It is only because weapons are inauspicious things that all things despise them, and thus, those in possession of the Tao do not abide in them."<sup>7</sup>

Because weapons were considered inauspicious, the role of the military general was treated in another way:

The superior man ordinarily regards the left as the seat of honor, but in using weapons, he honors the right. Weapons are not auspicious things and are not the instruments of the superior man. Only when he has no other choice will he use them, regarding tranquillity and peacefulness as the highest good.

君子居則貴左;用兵則貴右。兵者不祥之器,非君子之器,不得已而用之,恬淡爲上。

Auspicious affairs are placed on the left; inauspicious affairs are placed on the right, but a lieutenant general dwells on the left while the commanding general dwells on the right. This means that we should treat this affair as a funeral ceremony.

吉事尙左,凶事尙右,言以喪禮處之,殺人之衆,以悲哀泣之,戰勝,以喪禮處之。

Here, 'this affair' in fact refers to a victory, which it is proposed to treat as a funeral ceremony: when the battle has been victorious, we should treat it as a funeral ceremony."<sup>8</sup>

The concept of weapons as inauspicious, as espoused by Confucius and Laozi, possibly influenced the royal and private collectors of Chinese bronzes in later periods, and has created an impact so strong over time that only a scant proportion of Chinese weapons have been recorded from the Song dynasty until now.

A second reason for the neglect of bronze weapons is perhaps related to their function. Bronze weapons were used in practical matters such as war. In contrast,

<sup>5</sup> Legge, *Analects*, Book XV, Wei Ling Kung, p. 158.

<sup>6</sup> Attitudes which parallel those of Confucius regarding ritual objects and weapons can also be found in another story: Nangong Guo submitting an inquiry to Confucius said "E was skillful at archery, and Ngau could move a boat along upon the land, but neither of them died a natural death. Yu and Tseih personally wrought at the toils of husbandry, and they became possessors of the empire." The Master made no reply; but when Nan-kung Kuo went out, he said, "A superior man indeed is this." Legge, *Analects*, Chapter VI, p. 141.

<sup>7</sup> Laozi Chapter 31.

<sup>8</sup> Rheet Y.W. Ycung, Roger T. Ames trans., *Lao Tzu Text*, note and comments by Chen Ku-ying, XXXI, p. 167.

bronze vessels were more intimately related to ritual ceremonies such as ancestral worship, the latter being recorded in the classic texts such as *Yili*. Longer inscriptions for ancestral purposes appear on vessels rather than on bronze weapons. Although one can also find inscriptions on weapons, the contents are not as varied as those seen on vessels and there are few if any long inscriptions on them. Some bronze weapons do have longer inscriptions in bird script, however, this script was so difficult to understand that even the Song scholars failed to recognize it.<sup>9</sup> Lu Dalin, a representative Song scholar, mentioned three reasons for studying bronze objects: firstly, to trace the origin of the object and when it was made; secondly, to supplement the loss of the classics; thirdly, to correct the errors of previous Confucian scholars.<sup>10</sup> In regard to these three purposes, the ritual vessels prove to be more informative than weapons.

A third reason for the secondary role of weapons may be explained by the lack of a comparable aesthetic standard. Because bronze weapons were intended for practical use, most are plain with little variation in shape.

## 1.2. The rediscovery of the importance of bronze weapons

There are, however, unique advantages to using weapons as research material. For one, they furnish materials for examining simultaneously the development of technology, art, and culture. The importance of bronze weapons can be revealed in the following aspects.

Firstly, from the point of view of the technology, as bronze weapons were decisive factors in the momentary balance between survival or death, weapon technology appears to have been more sensitive to developments in the manipulation of new materials, in contrast to bronze ritual vessels. In China, the first experiment in copper casting and copper/tin alloys involved tools and weapons.<sup>11</sup>

Such experiments mark a milestone in the entrance of Chinese civilization into the Bronze Age. In addition, meteoric iron was first used in the manufacture of bronze weapons. Weapons were so intimately related to new sources of material that they marked the beginning of the new era of the Iron Age.

Secondly, from the point of view of ritual and art history, weapons were

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<sup>9</sup> The bird script on the bronze weapons were simply recorded without interpretation. *Kaogutu*, vol 6, p16

<sup>10</sup> *Kaogutu* preface.

<sup>11</sup> These include a bronze knife unearthed in Linjia, Dongxiang, Gansu, of the Majiayao Culture (ca. 3700-3000 B.C.); remnants of a bronze knife from Jiangping, Lianzheng, Yongdeng, Gansu of the Machang Culture (ca. 2300-3000 B.C.), (Beijing 1979a, p. 141); a bronze knife excavated at the Huangniangniangtai Site in Wuwei, Gansu of the Qijia Culture (ca. 3700-2000 B.C.), (KGXB, 1978.4, p. 435.) The first two of the aforementioned knives were discovered upon chemical analysis to be composed of bronze; while the remaining one was discovered to be of copper. KGXB 1981.3, p. 294-9.

decisive factors in a ruler's ascent to power and the survival or demise of the various feudal states. Consequently, bronze weapons developed fully during the Bronze Age, occupying a place of primary importance in the history of technology. In addition, a proportion of bronze weapons also were treated as ritual implements, demarcations of noble rank. In Shang and Zhou society, with strong structures of feudalism and ancestor worship, bronze weapons clearly played an important role. Not only are they significant to the history of Chinese culture, but they furnish a vital chapter in the history of bronze art. They were among the most important items buried in the tombs of nobles, either having the same importance as bronze ritual vessels or, in a warrior's tomb, acting as the major burial item. As scientifically-held excavations continually increase in number, not only are more weapons being found than ritual vessels, but in their essence, they reflect more vividly a number of contemporary cultural phenomena.

Thirdly, from the study of inter-cultural relations, in comparison to bronze ritual vessels, weapons are more likely to inspire discussions of the relations between different cultures, particularly in border regions. This is true because, for one, they reveal certain things that ritual vessels do not easily reveal. History shows that as humankind gradually learned to master bronze, a chain of ancient civilizations passed on their knowledge of this material through their weapons. In contrast, China alone has used bronze ritual vessels as symbols of the consolidation of political power. Since bronze weapons were common to a greater variety of cultures and regions than were bronze ritual vessels, they are more appropriate for cross-cultural comparisons, illustrating the possible mutual influences of different cultures upon each other. At the same time, because weapons had to meet high demands for functional capability, they had to be adapted to specific environmental and cultural conditions. Nevertheless, through migration, inter-marriage, and war, there was a measure of inter-cultural exchange. Some weapon types existed in different forms in different cultural systems.

Due to the ever-increasing accumulation of archaeological finds in the last forty to fifty years, the number of topics currently being researched in the field of bronze weapons has accordingly increased dramatically. From the Song to the Qing dynasties, research was mainly directed towards typology, the matching of names with shapes and the determination of the functions of various weapon types.<sup>12</sup> In modern times this field has widened to include art history, the history of culture, and the history of technology.

From an art-historical perspective, the decor, inscription and forms of weapons

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<sup>12</sup> Cheng Yaotian, "Kao gongzhi chuanguwu xiaoji," *Tongyi lu*,<sup>1931</sup> Ma Heng, 1929.5, pp.745-54; Guo Moruo, 1954b, p.104.

are statements of the development of aesthetic concepts in each region. Consequently they form a branch of the art-historical study of Chinese bronzes that is not to be overlooked, but which awaits further research.

In the field of cultural history, scholars have traditionally based their finer discriminations of categorization and dating on the location at which pieces were excavated. This exploration has been performed in hopes of determining more exactly the regional characteristics of each of the many cultures of Shang and Zhou China<sup>13</sup>, as well as tracing the complex web of cultural interchanges during those periods<sup>14</sup>. Even more importantly, the methods of warfare, organization of armies, as well as the development of social structure and government are matters which can be explored in a more organic manner in relation to the development of bronze weapons<sup>15</sup>.

From the technological viewpoint, as early as the *Zhouli* the unique bronze alloy for weapons was treated in the chapter entitled *Kaogongji*, as in "four parts are copper and one part is tin, this is the complete alloy for *ge* and halberd." Already, some modern analyses of the metal content of weapons have been made, in order to understand their special properties and the developments made in different periods.<sup>16</sup> Further experiments are being performed on the surface chemistry of bronze weapons.<sup>17</sup>

Likewise, scholars are paying ever increasing attention to publications dealing specifically with the excavation of bronze weapons.

## 2. Reasons for limiting the present study to the Late Shang period

Records from archaeological excavations show that by the third period of the Erlitou culture, China had already begun using bronze weapons.<sup>18</sup> Recent finds indicate that iron weapons made their appearance by the early Spring and Autumn period.<sup>19</sup> By the Han dynasty bronze weapons had been completely outmoded. The era of bronze weapons is therefore a period of approximately 1,500 years, beginning with the seventeenth century BC. The focus of this study is the Late Shang period, approximately 13th-11th century BC. The reasons for this choice will be analyzed on the basis of the following three aspects:

Firstly, from the point of view of the development of the bronze weapons,

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<sup>13</sup> Xiao Menglong, *KGXB*, 1991.2, pp. 141-165; He Gang., *KG*, 1991.3, p. 252-62; *KGXB*, 1988.3, p. 277-298.

<sup>14</sup> Li Boqian, *WW*, 1982.1, pp. 44-47; Lin Yun, 1987, pp. 129-55.

<sup>15</sup> Yang Hong, 1980.

<sup>16</sup> Chen Peifen, *Bulletin of the Shanghai Museum*, 1981.1, pp. 143-50; Chase, 1979, pp. 215-58.

<sup>17</sup> Ma Zhaozeng and Han Rubin, *Chemistry*, 1988, 8, pp. 59-61.

<sup>18</sup> *KG* 1976:4, pp.259-263.

<sup>19</sup> *Zhongguo Wenwubao* January 6, 1991; *Zhongguo Wenwubao* February 2, 1992.

although the Late Shang period is in the earlier stage of the development, it is the time when the foundations of the development were laid and when its main tendencies were becoming apparent. During this period, weapons were to a certain extent more varied in both kind and style than those of the earlier stages. Although the variation of the weapons of this period is not as complex as in the later period, the tendency of the later development had taken root. During this period, the bronze weapons began to develop variations in kind such as *ge*, spearhead (*mao*), knife, arrowhead and sword. These became the main kinds of weapons of the later development. Moreover, the *ge*, as the most vividly representative of the Central Plains Chinese culture, was most fully developed during this period. It came to be the most important of all bronze weapon types, remaining the longest in circulation. The direction of the later development of the *ge* was mainly settled during this period.

Secondly, from the aspect of the history of cultural relationships, the study of the Late Shang bronze weapons will provide another aspect for understanding the cultural relationships between Anyang and the peripheral areas during the Late Shang period. From the Neolithic period, Chinese civilization was made up of a rich variety of regional cultures. These expanded and came into contact with each other, forming "spheres of interaction."<sup>20</sup> For example, in the lower reaches of the Huanghe, the Dawenkou culture evolved into the Shandong Longshan culture; in the lower reaches of the Yangtze, the Majiabing culture developed, followed by the Liangzhu culture. In the middle reaches of the Huanghe valley, the sphere of Yangshao culture passed through the second stage of Miaodigou culture of the Central Plains, developing into Henan, Shaanxi, and Shanxi, and the Longshan-type cultures of Shandong and Jiangsu.<sup>21</sup> The pottery or jade excavated from these areas can be said to show clear indigenous characteristics.

In the early stages of the Bronze Age, especially during the Late Shang and early Western Zhou, an unbalanced relationship is evident between the different regions. The Central Plains culture was the core of Shang-Zhou culture. The Yinxu civilization held a key position in this culture.

From 1937 up to the present day, a period almost sixty years, archaeologists have continuously been revealing a more detailed picture of Yinxu bronze culture. It is generally recognized by scholars that Yinxu was an important cultural manifestation of the phenomena of Late Shang culture and this has influenced them in their explanations of the latter. Recently, from Guanghan Sanxingdui in Sichuan and Xin'gan in Jiangxi, large quantities of what many scholars believe to be late

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<sup>20</sup> Chang, 1987 p., Yan Wenming 1987, pp38-50, Su Bingqi 1991, pp.1109-1118.

<sup>21</sup> Yan Wenming, 1987, pp.44-50.

Shang bronzes were excavated. These provide the opportunity to establish a better understanding of the relationship between the central and the peripheral areas in the Late Shang period.

The study of the development of the style of bronze weapons is one way to approach the issue of the relationship between Anyang and the marginal areas. The development of bronze weapons reached a height of complexity in some kinds, a zenith of refinement in some other kinds, and led to the emergence of additional kinds during the Late Shang period. From the point of view of their historical development, geographical distribution and style, bronze weapons attained a level of complexity previously unseen.

Thirdly, from the point of view of the history of bronze art, the high achievements of the late Shang bronze vessels have been studied to a certain extent, however, the comparable achievements of the Late Shang bronze weapons have been neglected. In fact, some kinds of bronze weapon such as *yue*, *ge*, and *mao* have been decorated in a particular way as regards both motif and technique. They play an important role for the understanding of Late Shang bronze art.

Finally, from the aspects of the history of sacrificial ritual, bronze weapons, particularly the *ge*, on account of its use in burials of different classes obviously reveal features of sacrificial ritual during the late Shang period. Among weapons the *ge* thus corresponds to the place of *gu* and *jue* among the ritual vessels.

## Chapter 1: Introduction: The history of the study of Late Shang bronze weaponry: approaches and methodology

### 1.1. The first stage: prior to the appearance of documented scientifically-excavated materials

In comparison with the ritual vessels, bronze weapons have been less well studied. This is especially the case with Late Shang bronze weapons. However, when the first Chinese scientific excavations began at Yinxu, late Shang bronze weapons were studied to a certain degree along with the bronze vessels, as archaeological data began to reveal their characteristics and meaning. Past studies of Late Shang bronze weapons will be discussed in two different stages: stage 1, before 1928 and stage 2, after 1928.

Stage 1 spans the period from the Song Dynasty, in about the tenth century, up to 1928. During this period of nine hundred years or more, the main topics of the study of Late Shang bronze weapons, such as their terminology, were partially addressed. Issues of dating have also been touched on, but have remained ambiguous, because of the lack of a firm foundation for dating.

*Kaogutu*, written by Lu Dalin in the seventh year of the Yuanyou reign (1102 A.D.), is the earliest remaining illustrated catalogue of ancient bronze objects. Lu Dalin recorded each object including with it the basic measurements such as length, width, height and capacity. He was also concerned about the place from which the object was excavated, and any records about the collection in which it was kept. With such an archaeological approach, his catalogue has been praised as an important piece of writing in the cultural history of the world.<sup>1</sup> The concept and the term "Shang" (商) was established in the *Kaogutu*. The basis for Lu's dating was generally based on the form and decoration of the object and the place from which it was excavated. As an example, we take the *Yi ding* which had been excavated from Tanjiazheng (亶甲城), Yechun (鄴郡).<sup>2</sup> Tanjiazheng of Yechun was the place of which Hetanjia was in charge before he became King.<sup>3</sup> Lu Dalin adopted the shape, inscriptions, and the find-place of the vessel as the criterion for its dating in order to define the concept of "Shang" vessel. He tried to establish his method and system of dating, but there was no concept of "Late Shang" during the Song. Moreover, in his collection of Shang bronze objects, there are no Shang weapons, only vessels. In other

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<sup>1</sup> Li Chi, 1950, pp.64-5

<sup>2</sup> *Kaogutu* vol.1, pp.28-29.

<sup>3</sup> According to the *Shiji*, (the Records of the Historian, by Sima Qian), Hetanjia was the name of the Shang King. Sima Qian, "Yin ben ji" chapter of the *Shiji*, p.3.

words as Shang bronze weapons are not seen in *Kaogutu*, the cultural meaning of Shang bronze weapons had not been analyzed in Lu's time.

The *Bogutu* of the Xuanhe reign (1119-1125A.D.) of the Song Dynasty is the earliest extant catalogue of the imperial bronze collection. Over four thousand bronze ritual vessels and instruments of the periods from the Shang to Han Dynasty were recorded in this catalogue. Among these, only eight were bronze weapons, and only two of these were said to date from the Shang. This shows the extent to which bronze weapons were neglected in comparison to bronze vessels in the publications of the Song Dynasty.<sup>4</sup>

The neglect of weapons from the Song to the Qing dynasties as seen in the imperial collections, is also reflected in the writings of scholars, particularly during the Qing Dynasty, although by this time studies of bronze objects had advanced considerably. Some scholars such as Ruan Yuan<sup>5</sup> and Wu Dazheng<sup>6</sup> showed their interest in bronze weapons, including them in their catalogues. Liu Tizhi in particular catalogued the bronze weapons in his collection in two separate chapters of his catalogue.<sup>7</sup> According to his illustrations, some Late Shang bronze weapons, although not dated as such, were included in his catalogue, being simply recorded individually with their measurements.

Although the Qing scholars did little about dating Late Shang bronze weapons, they paid considerable attention to their terminology. This phenomenon probably evolved from their cultural historical background. During the Qing, there was no new excavated evidence for dating. However, the Qing scholars were more concerned with the exact meaning and explanations of the classic texts. Because bronze weapon terms occur without illustration in the classic texts, the exact meaning that the terms implied were commonly discussed among Qing scholars. They tried to draw illustrations of the weapons based on the meaning and description of the terms found in the ancient texts. They tried to connect the pictorial shape of a weapon with the term found in the ancient text in order to name a bronze weapon as it was known in its own time. Further scientific study of bronze weapons became possible through the establishment of the terminology. However, in the case of some of the terms there still remained contradictions between the form and the ancient text.

Hence, from the Song to the Qing dynasty, although many bronze objects were published, there was little understanding of Late Shang weapons. This phenomenon

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<sup>4</sup> Two *yue*-axes and six cross-bows dating to the Han were listed. (*Bogutu* vol. 26, pp. 7-11). However, the two *yue*-axes can probably be redated to the period from Late Shang to early Western Zhou according to excavated materials.

<sup>5</sup> Ruan Yuan, 1872.

<sup>6</sup> Wu Dazheng, 1885.

<sup>7</sup> Liu Tizhi, 1934.

began to change once scientific excavations began in 1928. The second stage of the study of bronze weapons began with archaeological excavations.

## **1.2. The second stage: after the appearance of documented and scientifically-excavated materials**

In 1899, the oracle bones first became known in the world. In 1927, the Institute of History and Philology of Academia Sinica started scientific diggings at Anyang. Bronze weapons were excavated at Anyang together with bronze vessels, oracle bones, jade and pottery. The reigns of the kings recorded in the oracle bone inscriptions were paralleled by those in the "Yinbenji" chapter of *Shiji*. Yin, the Late Shang period, became a distinct stage in the development of Shang bronze culture and Late Shang bronze weapons became a particular topic for study. Over a period of about sixty years from 1928 to the present, excavated materials of Late Shang bronze weapons have increased in both quality and quantity. Because both time and place of excavation are much more precise than before, the quality of the newly-excavated materials has opened and expanded the manner in which this material is dealt with. New topics and methods arise from the basis of the excavated materials and will be discussed as follows.

The excavated materials provide a basis for the discussion of cultural relationships, as the find-places of these materials became known. As Anyang with its advanced development of bronze culture became known to the world through the earliest Chinese scientific excavations, Chinese civilization was shown to be one of the important areas of ancient culture. The origins of ancient Chinese culture were the main concern of scholars who tried to trace back the cultural remains of Anyang. On the other hand, some scholars from Europe and Japan began to pay attention to the archaeological remains in China which were said to be dug from north and northwest China. Some Western Sinologists discussed the origins of Chinese culture from contexts outside Anyang by comparing the styles of the cultural relics of the different cultures, particularly in regard to the shape and decoration of bronze weapons. This is because the characteristic shapes of the bronze weapons were common to different bronze cultures, but their styles were particular to individual cultures. Therefore, bronze weapons have been considered by scholars interested in issues of the origin and the diffusion of cultures. The issues for discussion are mainly focused on the North and the southwest.

### 1.2.1. The relationship of the northern region with Anyang

During the 1920's, the concept of cultural diffusionism spread among anthropologists and historians. The scientific excavations at Anyang took place in the 1930's. The articles on cultural relationships were not written until the reports of the Anyang excavations had been published. Owing to some decorations and shapes of bronze weapons being common to different cultural areas, questions regarding their origin and diffusion became the main issues among scholars. These mainly concerned relationships between the Northern tribes and the people of the Central Plains. Discussion of cultural relationships was thus particularly focused on the northern frontier region.

In 1932, J.G. Andersson pointed out that a particular animal style found mainly on bronze weapons was common in areas from the Pacific Ocean to regions of Europe and Asia including Siberia, Mongolia and the frontier region between China and Mongolia. Through the migrations of the nomad peoples, the animal style spread through both Europe and Asia to connect the two centres of ancient culture, China and Greece.<sup>8</sup> Because the data which Andersson used consisted mainly of surface finds which, not being excavated, could not be given a definite dating, Andersson only indicated the cultural relationships between them rather than dealing with issues of their origins and diffusion among these different cultures. Stylistic factors which are common to different cultures are thus important for research. Moreover, the term "Ordos style" used by Andersson for the animal style influenced the later understanding of this style. The meeting of east and west is reflected in the archaeological remains of Anyang, northern China, and Siberia, particularly the bronze weapons, and their decoration has therefore become an important issue for study. Some scholars have pointed out the intimate stylistic similarity between east and west, and yet have been reluctant to draw direct relationships between them, while others have tried to deal with the issues of origin and influence among them.

In 1935, Egami Namio and Mizuno Seiichi indicated that the northern bronze weapons of the areas along the Great Wall and the Inner Mongolia belong to the Suiyuan culture. The latter has connections with the culture of Minussinsk, although such a connection has not been traced back to the late Shang period.<sup>9</sup> Like Andersson, Mizuno Seiichi and Namio Egami did not definitely deal with the issue of the origin of their stylistic similarity among the different cultures. However, terms such as the "style of Suiyuan" and the "Ordos style" are simply different explanations of the same cultural phenomena.

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<sup>8</sup> J.G. Andersson, 1932, pp.221-3.

<sup>9</sup> Egami Namio and Mizuno Seiichi, 1935, p.31.

Many Russian scholars have tried to deal with the issue of the origin of the animal style which is common on the bronze weapons. Some traced its origins to Iran and Mesopotamia; others to south Siberia.<sup>10</sup> B. Karlgren<sup>11</sup> and Cheng Te-k'un<sup>12</sup> also traced the origins of the animal style which is often seen on bronze weapons to the north of China. However, they did not discuss the origin of some shapes of bronze weapons common to northern China and Siberia.

In 1932, Dr. Li Chi, who was in charge of the excavations at Anyang, published a thesis concerning Late Shang bronze weapons and became the first Chinese scholar to discuss Late Shang bronze weapons by comparing them with Western bronze weapons. In his "Five types of Yinxu bronze objects and their related problems", the five types of Yinxu bronze objects mainly consist of weapons and tools.<sup>13</sup> The issues addressed in the article include not only typology but also the origin of the forms. Since the origin of Late Shang bronze weapons was problematic, it was impossible to study them solely in the context of the Late Shang period. Dr. Li Chi therefore, placed late Shang bronze weapons in the context of both Neolithic culture in China and of other bronze civilizations in the West. During that period, when scientific archaeological excavations had just begun in China, excavations of Neolithic sites included the Yangshao culture in Gansu province,<sup>14</sup> and Chengziyai of the Longshan culture in Shandong province.<sup>15</sup> Therefore, excavations of Neolithic sites were found to be inadequate by Dr. Li Chi for tracing the origin of Late Shang bronze weapons. Consequently, studies of the development of the bronze weapons of the Western bronze civilizations, including those of Egypt, Britain, and Terramara were brought into consideration.<sup>16</sup> By comparing the bronze weapons of Anyang with those of the other western bronze civilizations, Dr. Li Chi indicated the similarities between them. However, he was conservative in drawing conclusions about any direct relationship between them. This conservative attitude remained strong in his later research.

In 1952, Dr. Li Chi published his second article on Late Shang bronze weapons, particularly discussing the bladed weapons excavated at Xiaotun, Anyang.<sup>17</sup> In his

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<sup>10</sup> Leonid Siergievich Vasiliev, 1976.

<sup>11</sup> Karlgren, 1945, pp.101-104.

<sup>12</sup> Cheng, 1963b, pp.129-40.

<sup>13</sup> Li Chi 1932, pp.73-104.

<sup>14</sup> Andersson 1929, pp.65-69.

<sup>15</sup> Fu Sinian, 1934.

<sup>16</sup> W.M. Flinders Petrie, p.10; Canon, Greenwell, *Archaeologia*, vol.61, p.439; F.E. Peet *Bronze Age in Italy*, p.349. In fact the bronze weapon had been treated as a special topic for study in western archaeological research. Dr. Li Chi was probably influenced by this trend. Flinders Petrie in 1917 published his "Tools and Weapons" specifically dealing with the weapons and tools of Egypt. cf. Li Ji, 1932, pp.73-104.

<sup>17</sup> Li Chi 1949b, p.35.

first article, he had tried to deal with problems of the cultural relationship between Anyang and other cultures outside China and pointed out parallel phenomena among them. However, the connection between the animal-pommeled knife style and others at Anyang was drawn. Although the origin of the animal-pommeled knife is still in question, the search for its origin became a topic of study for several Chinese scholars.

In contrast, western Sinologists held differing opinions. In 1956, Max Loehr studied the bronze weapons of the Werner Jannings collection and published his *Chinese Bronze Age Weapons*.<sup>18</sup> He did not use terms such as "Ordos style," "Suiyuan style," or "Siberian style" which many previous scholars had used to describe the particular style of a group of bronze weapons. These names of styles had in fact been adopted from the names of places, and hence may imply the origin of the style. Instead, the term "Northern style," a more vague and hybrid term, was used by Max Loehr to indicate the complexity which may originate from either Ordos or Suiyuan or Siberia. The term "Northern style" was also used by Max Loehr to contrast with the style of Anyang and was dated by him as earlier than the latter. He believed that the socket method of hafting may have originated from the North, and that its use at Anyang, where the tang method of hafting was more common, was influenced by the North. Max Loehr's theories have influenced later scholars such as Leonid Sergeevich Vasiliev. In 1950, six years prior to the publication of Loehr's book, Shang cultural remains were excavated from Erligang, Zhengzhou in Henan. This site has been dated earlier than that of Anyang on the basis of stratigraphic evidence. However, at the time the cultural remains consisted mainly of pottery.<sup>19</sup> In 1955, bronze objects were excavated at Erligang.<sup>20</sup> In 1973, bronze objects were excavated at Erlitou of Yanshi in Henan and were dated earlier than those of both Erligang and Yinxi.<sup>21</sup> These two Central Plain bronze cultures antecedent to the Late Shang were unknown to Max Loehr when he was writing about weapons. *Ge* with tang were excavated from these two sites and the conclusions regarding bronze weapons of the Late Shang period require reconsideration.

In 1972, William Watson used the newly-excavated materials which had been unknown when Loehr was writing. He brought a new focus on the cultural frontier between China and south Siberia, including inner Mongolia, Suiyuan, Northern Shanxi and Shaanxi.<sup>22</sup> According to him, the Northern frontier is the passage between these two different culture areas.

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<sup>18</sup> Max Loehr, 1956.

<sup>19</sup> WWCKZL 1954:12, pp.86-92.

<sup>20</sup> WWCKZL 1955:10, pp.24-42.

<sup>21</sup> KG, 1976:4, p.4.

<sup>22</sup> William Watson, 1972, pp.52-63.

Recently, Chinese scholars such as Wu En<sup>23</sup> and Lin Yun<sup>24</sup> have continued to use the term "Northern bronze" with more definite meaning and vision. They collected the Northern-style bronze weapons which had mainly been newly excavated in northern Shanxi, northern Shaanxi, Liaoning, Hebei, Qinghai and Ningxia. Most of the materials they collected were newly excavated and unknown to previous scholars. In comparison with the materials from southern Siberia, these new materials were excavated from regions closer to Anyang, and some of them were dated to the Late Shang or Early Western Zhou period. The understanding of the cultural relationship between Anyang and other areas was thus further advanced by Lin Yun and Wu En.

On the other hand, the Japanese scholar Takahama Shu still uses the term "Ordos style."<sup>25</sup> Tian Guangjin and Guo Suxin who were in charge of the excavations in Inner Mongolia also used the term "Ordos style bronze" with the new meaning and greater evidence. On the basis of the excavations of the cultural remains of Zhugaigou in Inner Mongolia, they concluded that the "Ordos style" probably originated from the Ordos area and its neighbours.<sup>26</sup>

The above scholars have different opinions about the origin and diffusion of the "northern style." The key point concerns the dating. Scholars may discuss the issues of the origin and diffusion of a culture, but in order to solve these questions completely, it is necessary that excavated materials, including excavated sites, be available for both areas, and that there should also be an agreed chronology on both sides. Objectively, the archaeological materials have increased from relatively few to a large number, spread over a wide area. The archaeological materials on both sides may be dated either roughly or exactly, to an earlier or later period. Any alteration in the quality of the excavated materials will influence scholars' conclusions about the origin and diffusion of the culture. Moreover, subjectively, the degree of the scholars' mastery of the materials of a culture will influence their conclusions about the origins and diffusion of that culture. Therefore, the issue of the origin and diffusion of the "Northern style" is still controversial although this field has been discussed for some sixty years. Despite the recent-increase in excavated materials, it is still not the right time to draw absolute conclusions on this matter.

However, most scholars accept the existence of a cultural relationship between the Central Plains and the peripheral areas. As the archaeological materials increase, a greater level of complexity is revealed in this relationship. Owing to the recent-increase in excavated bronze weapons of "Northern style", the cultural relationship

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<sup>23</sup> Wu En, 1984, pp. 46-59.

<sup>24</sup> Lin Yun, 1987, pp. 129-55.

<sup>25</sup> Takahama Shu, 1983, pp. 95-132

<sup>26</sup> *KGXB* 1988:3, pp. 301-332.

between Anyang and the North has to be considered again. Are these weapons really "Northern style"? How did they exist in the north? How is one to define the "Northern style"? Did they exist in Anyang? What was the attitude of the Anyang people toward the weapons of "Northern style"? If they are outsiders to Yinxu, what attitude did the Yinxu people adopt towards them as foreign elements? Did they play any role in the formation of Yinxu culture? These questions have become the main issues in this research.

### 1.2.2. The issue of the origins of Type I <sup>26a</sup>*ge*: the relationship between Anyang and the Southwest (fig 2:4-1)

In comparison with the issue of the Northern style, this issue was raised somewhat later. Around 1930, two *ge* of Type I were excavated from tombs 232 and 270 of Anyang, Xiaotun in Henan.<sup>27</sup> These are the earliest Type I *ge* from an excavated site with a definitive published dating. The archaeologists noticed that their shape was rare and unusual when compared to the other types of *ge*. However their cultural significance was still unknown owing to the rarity of related evidence from other excavations.

In 1959, the Hunan Museum found the "Ge of the Duke of Chu" of Type I inscribed "楚公蒙戈" from the abandoned bronze workshops.<sup>28</sup> Gao Zhixi considered that its shape was different from those common in Hunan tombs of the Chu state and thus that it had not been manufactured in Hunan. However, according to the inscription, it could have been made in the Chu state during the Late Western Zhou period. Owing to the lack of understanding of the whole history of the Type I *ge* and the peculiarity of the Chu gong bing *ge*, its authenticity was doubted by some scholars.<sup>29</sup> Feng Hanji termed this shape of *ge* as "Shu *shi ge*" (Shu-style *ge*) according to the Type I *ge* which had been excavated in Sichuan. This was the first attribution of the Type I *ge* to the Shu area.<sup>30</sup>

However, as more Type I *ge* were excavated during the 1980's, the complexity of the issues of its origin and cultural relationships increased. By this time, the increase of excavated materials had shown that the Type I *ge* was peculiar to the Sichuan area during the Warring states period.<sup>31</sup> when other shapes of *ge* were common in other areas.

In 1979, Tong Enzheng collected the *ge* of Type I dated to the late Shang and

<sup>27</sup> Shi Zhangru, 1972, p.43.

<sup>28</sup> Gao Zhixi, 1959, p.60.

<sup>29</sup> Yu Xingwu and Yao Xiaosui, 1960, p.80.

<sup>30</sup> Feng Hanji, 1961, pp.32-4.

<sup>31</sup> WW 1981.6, p.9.

26a Type I *ge* is the basic form of *ge*, with a triangular body with two bladed and a third shorter unbladed edge, and a rectangular *nei* for attaching to the shaft. See below, p.57.

Early Eastern Zhou period that had been newly excavated from Anyang<sup>32</sup> and Zhengzhou in Henan,<sup>33</sup> Xi'an<sup>34</sup> and Baoji<sup>35</sup> in Shaanxi, Lingtai in Gansu,<sup>36</sup> Jiaoxian in Shandong,<sup>37</sup> and Hongzhao in Shanxi.<sup>38</sup> He concluded that the Type I *ge* originated from the Central Plains and diffused into the region of Ba and Shu where the Type I *ge* developed as a indigenous shape.<sup>39</sup> He discussed the cultural relationships between the Central Plains and Ba Shu from the point of view that the Central Plains was the centre of culture.

The idea of the Central Plains as the centre of the culture was reconsidered and questioned in the 1980's. Li Boqian firstly ~~argued that~~ the origin of the Ba-Shu culture was Chenggu in the Hanzhong basin in southern Shaanxi and not the Central Plains.

His conclusion was on the basis of the Type I *ge*. He pointed out the high proportion of the Type I *ge* among the *ge* shapes in both the Chenggu and Sichuan areas. The former is about 84%;<sup>40</sup> the latter over a period ranging from Shang to early and middle Western Zhou is about 72%.<sup>41</sup> Therefore, he concluded that Chenggu was probably one of the origins of the Shu culture.<sup>42</sup>

In Rujiazhuang, the excavation of the tomb group of the Yu state at Baoji in Shaanxi yielded many Type I *ge* which have been dated between early and middle Western Zhou. The archaeologist Lu Liancheng also traced the origin of the Type I *ge* from this tomb group back to Chenggu.<sup>43</sup> At the same time, Yang Xizhang who was excavating the sites of Yinxu also traced the origin of the Type I *ge* to a region outside Yinxu.<sup>44</sup>

On the other hand, Huo Wei traced the origin of the Type I *ge* to the river basin of the Jing and Wei rivers instead of the region of Chenggu.<sup>45</sup>

Historically, the origin of the Type I *ge* was first thought to be in the Central Plains. However, around 1980's and 1990's, scholars gradually came to agree that the origin of the Type I *ge* should be in the Jing and Wei Rivers or Hanshui River basin

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<sup>32</sup> Guo Baojun, 1951, pl.24:1; Ma Dezhi, 1955, pl.11:3.

<sup>33</sup> KGXB 1957.1, pl.5:9.

<sup>34</sup> Beijing 1962a, pl.67:3.

<sup>35</sup> Su Bingqi, 1948, p.242, fig. 100:7.

<sup>36</sup> KGXB 1977.2, fig. 10:1.

<sup>37</sup> WW 1977.4, p.67 fig. 6:1.v.

<sup>38</sup> Xie Xigong, 1957, p.42.

<sup>39</sup> Tong Enzheng, 1979, p.445.

<sup>40</sup> Tang Qingyu, 1980, p.212; Zheng Xuehua, 1966, p.2.

<sup>41</sup> Feng Hanji, 1980, p.28; Wang Jiayu, 1961, pp.28-31.

<sup>42</sup> Li Boqian, 1983, p.70.

<sup>43</sup> Lu Liancheng, 1983, pp.50-65; Lu Liancheng and Hu Zhushen, 198, pp.43-143.

<sup>44</sup> Yang Xizhang, 1986, pp.65-8.

<sup>45</sup> Huo Wei and Huang Wei, 1989, pp.254-5.

areas, rather than at Yinxu. The issue of the origin of the Type I *ge* is controversial because of the lack of an absolute earliest dating in any possible place of origin. However, the questions raised by the complex cultural relationships among the different regions during the Late Shang period as seen on the Type I *ge* extend far beyond the issue of its origin. These questions are among those which are examined in this thesis. <sup>46</sup>

### 1.2.3. On Anyang itself

Since 1937, the Late Shang bronze weapons have been mainly excavated from Anyang, which is thus the most important region for the bronze weapons of Late Shang. Therefore the limited studies of Late Shang bronze weapons have mainly concentrated on Anyang itself. In 1952, Dr. Li Chi published an article entitled, "Bronzes with sharp edges from Xiaotun".<sup>47</sup> In the article he traces the origin and typological development of several weapons. He mapped out his famous chart of the typological development of the bronze knife. It was the first time that the bronze weapons from Anyang had been scientifically studied. Although some of his conclusions need to be re-evaluated in light of newly-excavated materials, his approach regarding their origin and typological development still remains important even today.

In 1972, Hayashi Minao published a book entitled *Chinese Bronze Weapons of Yin and Zhou*, in which the Late Shang period played an important part.<sup>48</sup> He particularly emphasized the origin of the terms for the weapons from the ancient texts and ancient commentaries. Why such a connection is important for the study of bronze weapons and what kind of problems will be involved will be discussed in the present study. Hayashi examined most of the excavated materials of his period in order to draw new conclusions. He tried to discuss the bronze weapons not in isolation but in connection with fighting techniques. He opened a lively new way to understand bronze weapons through their usage. However, because his discussion is mainly based on particular types of weapon instead of by period, it is not clear how the various kinds of bronze weapons together express common phenomena of the Late Shang. In addition, although some Late Shang bronze weapons had been excavated outside Anyang at this time, his discussion of Late Shang bronze weapons mainly concentrated on Anyang itself and he was less concerned with regional styles.

In 1989, Chen Zhida wrote an article specifically dealing with Late Shang bronze weapons at Anyang. In this short paper, based on excavated materials

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<sup>46</sup> See Chapter IV pp.290-294.

<sup>47</sup> Li Chi, 1949b, pp.333-394.

<sup>48</sup> Hayashi Minao, 1972a.

gathered up to 1986 he discusses classification and typological developments of the weapons, however other related topics were neglected.<sup>49</sup>

In 1992, in his book *Weapons in Ancient China*, Yang Hong discussed the development of Shang bronze weapons in a special chapter. The newly-excavated materials were collected and the relationship between the Central Plains and the north was noticed.<sup>50</sup> However, the Chenggu group and the Xin'gan group of weapons were not yet brought into consideration. Moreover, the inner complexity of the cultural relationship between Anyang and the north was still neglected.

#### 1.2.4. Special topics

Owing to the increase in the quantity of archaeological materials, specialist studies on particular topics of Late Shang bronze weapons have become possible. Most of these studies of Late Shang bronze weapons have concentrated on the development of typology such as that of the knife etc.<sup>51</sup> However, some studies tried to relate the development of the typology to the cultural relationship.<sup>52</sup> In addition, Shi Zhangru tried to establish the normal set of bronze weapons for the Late Shang ordinary soldier based on the excavations at Xiaotun. While the conclusions are out dated, this line of research is remains an important topic.<sup>53</sup>

#### 1.2.5. New sources

The archaeological materials are increasing day by day. In recent years there have been several notable excavations of Late Shang bronze weapons which have still not been discussed. They were excavated not only at Anyang itself but also outside Anyang. They provide new aspects for the study of Late Shang bronze weapons.

In 1980 at Anyang tomb 539 was excavated from Dasikong.<sup>54</sup> The excavation report on this tomb was not published until 1992. Both Type I and Type II *yue*-axes were excavated from this tomb. The Type II *yue*-axe, a socketed *yue*, while common in the northern regions, was the first of its kind excavated from Anyang. There is a great need to examine the cultural significance of this find.

In 1990, tomb 160, of medium size, was excavated at Guojiazhuang, Anyang.<sup>55</sup> The most important facts about tomb 160 are first, that it is undisturbed, and

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<sup>49</sup> Chen Zhida, 1989, pp.326-337.

<sup>50</sup> Yang Hong, 1992, pp.36-64.

<sup>51</sup> Li Weiming, 1988, pp.42-7; Gao Quxun, 1967, pp.355-381.

<sup>52</sup> Yang Xizhang, 1986 p.65-8.

<sup>53</sup> Shi Zhangru, 1950, pp.19-77.

<sup>54</sup> KG 1992:6, pp.509-517.

<sup>55</sup> KG 1991.5, pp.390-1.

secondly, that the bronze burial objects are mainly weapons.

Excavations of tomb M663 at Dasikong in 1983, M25 and 29 at Dasikong in 1986 and Qijiazhuang M269 in 1981 were important for their contents of numerous and finely-crafted weapons, while their relevant archaeological reports were not published until after 1987. Excavations outside Anyang such as the finds at Xingan, Jiangxi,<sup>56</sup> Chenggu, Shaanxi,<sup>57</sup> Yidu, Shandong,<sup>58</sup> call for a revision in the theories regarding the indigenous styles of the local regions and about the cultural relations between these different areas.

### 1.3. Approach and limitations of the present study

This study will focus on the following topics. Firstly, the development of Late Shang bronze weapons as a part of the history of bronze weapons: a re-evaluation in light of newly excavated materials.

Secondly, the development of Late Shang bronze weapons as an important aspect of the history of Late Shang bronze art: the latter is often analyzed solely on the basis of the bronze vessels, neglecting the ornament of Late Shang bronze weapons. Although most bronze weapons were for practical use and have little ornament, some of them were carefully decorated and their use is considered to relate to the ritual. This indicates that some aspects of the Late Shang bronze art cannot be understood on the basis of the bronze vessels alone.

Thirdly, an up-to-date picture of the cultural relationship between Anyang and other areas through stylistic analysis of Late Shang bronze weapons. Although the cultural relationship between Anyang and other areas has been discussed since the 1930's, this discussion needs to be updated. New archaeological materials, not only increase the quantity of materials available but may also change accepted ideas about the structure of the old materials. Moreover, bronze weapons may more clearly reveal a two-way communication among areas than previous studies of bronze vessels.

However, some of the excavated Late Shang bronze weapons have not been fully reported. Some of the related excavations have been disturbed without scientific reports, and other related tombs have been robbed. Hence the original excavation conditions of the tombs and cultural remains remain unknown. Other tombs and cultural remains wait to be excavated. Therefore the discussion of the

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<sup>56</sup> WW 1991.10, pp.1-24.

<sup>57</sup> WW 1966.1, pp.1-6; Wang Shouzhi, 1988, pp.3-9.

<sup>58</sup> *Haidai Kaogu* 1989:1, pp.254-73; WW 1972:8, pp.17-30.

aforementioned topics will be limited. Cultural phenomena will mainly be discussed on the basis of typology and classification within the framework of the geographical distribution of the Late Shang bronze weapons. The methodology used in this discussion will be described in each chapter.

## Chapter 2: Terminology, functions, and classification of bronze weapons

The style of ancient Chinese weapons can be described under three headings: form, decoration, and inscription.

The decoration and inscriptions found on weapons are characteristics common to other bronze objects. In contrast, bronze weapons often display variations in form. Therefore, the classification in this study is mainly concerned with form. The reason for choosing form is not only for the sake of the form itself, but also because form is often conditioned by function. Weapons were originally designed for practical use and so their function often influenced their shape. The blade of the weapon is the key to its function. The placement of the blade on a weapon is therefore considered as the key point for its categorization and classification. On the other hand, the distance at which a weapon could be used influenced its design. Therefore, both the location of the blade and the distance at which it was to be used are the two characteristics for categorization of a weapon. The late Shang bronze weapons will be categorized on the basis of these two main points. Each category will be further classified into sub-types which will be discussed later.

### 2.1 Categorization

Firstly, based on the distance of the usage of the weapon, the Late Shang bronze weapons can be categorized as follows:

1. Shafted weapons: *ge*, *qi*, *yue*-axes, *mao*-spearheads, large knives. These weapons function properly when fitted with a wooden shaft. They were used when the enemy was at an appropriate distance from the wielder.
2. Close-combat weapons: swords and knives. These weapons could be handled without a wooden shaft and were used for hand-to-hand combat.
3. Long-range weapons: arrow and bows. These weapons were used to attack the enemy at a distance. The bows and arrow shafts have decayed while bronze elements such as bow-shaped implements and arrowheads remain. Because the arrowhead is so small in size and occurs in such numbers, the development of its shape is more complicated to trace. Therefore the arrowhead will be excluded from this study. Defensive implements such as shields, armor and helmets will also be excluded from the present study.

Secondly, on the basis of their form, the Late Shang bronze weapons can be categorized as bladed weapons of the following forms:

1. End-bladed weapons: *yue*-axe
2. Side-bladed: knives
3. Double-bladed weapons: the *ge*, *mao* or spear, *ji*, and sword.

The above categorization of Late Shang bronze weapons is mainly based on previous scholars' research.<sup>1</sup>

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<sup>1</sup> Categorization: Due to the overwhelmingly large scope of bronze weapon types, and the miscellaneous nature of this family, most scholars of the recent fifty to sixty years have found it expedient to create a system of categorization..

Three systems have been suggested:

Firstly, there are simply many different types under the general heading of "weapon", or "sharpened implement". The most prominent scholars employing this method include Umehara Seiichi, B. Karlgren, and Hayashi Minao. (Umehara, pl. 14-28; Karlgren, 1945, pp.101-144; Hayashi, 1972.)

The second system was principally the work of Dr. Li Chi. He suggested an insightful new method, stating that the first system, which takes function as the basis for classification, uses terms which are regrettably imprecise. In order to elucidate the "confused relations between shape and function", he created a new term, "bladed implement" (利器), based on similarities in shape between various specific categories. Some tools were included, as well as weapons proper. Sub-categories were determined according to the position of the sharpened blade.

Bladed implements:

- I. Pointed implements
- II. End-bladed implements
- III. Side-bladed implements
- IV. Double-bladed implements
  - for hooking: the *ge* etc
  - for piercing: the spear etc
  - for long-range: arrowheads (Li, 1949, 1950, p.334).

In general, weapons belong to the category of double-bladed implements. Dr. Li emphasized the importance of categorizing on the basis of shape, using the special characteristics of each shape to create general and sub-categories, creating clusters of finely defined sub-sub-categories, with names both concise and evocative.

Although Dr. Li Chi's list has been criticized as incomplete and although the terms which he used for some kinds of weapon were thought to be unsuitable, the terms such as "bladed weapon," "side-bladed weapon" etc., which he created were adopted by later scholars.

The third system, less creative than the second and more traditional, based its categories on function. The majority of Chinese scholars are accustomed to categorizing and choosing their terminology which was often adopted from ancient records for any given type according to the function they suppose it may have had. This third method of categorization classifies under the general heading "weapons." Implements are divided according to function, and then further divided into subcategories. It is by this method that Guo Baojun devised the following categorization:

- Hooking weapons: the *ge*
- Piercing weapons: the spear
- Weapons with the double function of hooking and piercing: the halberd
- Chopping weapons: axes
- Massively lethal weapons: large knives
- Weapons with the double functions of piercing and killing: the sword
- Long-range weapons: bows, arrows
- Items used in practice and in defence: shields, targets (Guo Baojun 1961, p.111)

Ma Chengyuan created an even simpler classification system:

- For attack:
  1. Long weapons
  2. Short weapons
  3. Long-range weapons

The above include dagger-axes, halberds, spears, *bi*, *yue*-axes, *qi*-axes, *shu*, knives, swords and daggers.

## 2.2. Methodology

Each type of weapon will be discussed in regard to the origin of its nomenclature and function.

### 2.2.1. Terminology

The type of the weapon will be named in this study on the basis of the following principles:

- a) self-named evidence;
- b) evidence from the oracle bone and bronze inscriptions;
- c) terms used in pre-Qin records;
- d) terms used by previous scholars;
- e) terms suggested by art-historical and archaeological considerations.

#### a) The self-named evidence

This method can be used when an object is inscribed with its name. This is considered the most direct and solid evidence for terminology because it represents the term used at the time when the object was cast.

The self-named method can be traced back to the Song Dynasty and to Lu Dalin, the earliest known scholar of ancient bronzes. It became the most important method for establishing the terminology of the ancient bronzes. The study of the ancient bronzes evolved during the Song Dynasty: the bronze object was no longer a mere antique, but an important object of study. The crucial issue first faced by the Song scholars was that the name that appeared on the vessel reflects a relationship between that name and the form at the time when it was made. Therefore, this method, while subject to some criticism, continued to be used by later scholars.

It was Chen Mengjia who first systematically criticized the self-named method by showing how the situation was complicated when the method was applied to the bronze ritual vessels. He discussed the following shortcomings:

1. There are vessels which call themselves *yu*, but which have the shape of *ding*.
2. There are vessels which have the same shape, but which differ in name because of the different dialects in use.
3. There are vessels which have the same shape but have different names in different periods.

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For defence: armour, helmets (Ma Chengyuan, 1988, p.44)

The above studies by earlier scholars cover the period from Shang to the Warring States and provide a broad basis for the present study.

4. There are vessels which have the same shape but have different names because they were intended for different purposes.
5. There are vessels which have the same name but which are slightly different in shape because of local characteristics.
6. There are vessels which have the same name but are slightly different in shape because they belong to different periods.
7. There are vessels which have the same name but are slightly different in shape because of the different uses to which they were put.<sup>2</sup>

In other words, the self-named evidence is not always valid in all circumstances. As contradictions occasionally arose, Chen Mengjia concluded that the self-named system had to be adopted with consideration to the influence of both time and place.<sup>3</sup>

The contradictions indicated by Chen Mengjia as inherent in the self-named system should not be ignored. Although the self-named system was mainly established on the basis of bronze vessels, similar difficulties can also be found when it is applied to bronze weapons. However, the self-named evidence is still used as the primary basis for the terminology in this study, because this evidence directly connects the shape with the term referring to it in the context of its own time. The name is directly inscribed on the object itself and at the time when the object was cast. Although the name which was inscribed on the object is not always consistent in regard to the form, such inconsistencies in the relationship between the name and the shape remain closer to the historical fact than any organized and consistent system.

However, the limitations of the self-named system are obvious and will be analyzed from the following two aspects: Firstly, not all weapon shapes have self-named evidence; and, although inconsistencies between shape and name may be closer to the historical fact, the latter may be difficult to establish.

Secondly, it is difficult to apply the self-named system to the study of Late Shang bronze weapons because bronze objects inscribed with their proper names did not become common until the middle Western Zhou around the mid-tenth century B.C.. When inscriptions on bronzes became more common in the Late Shang period, fourteenth to eleventh centuries B.C., the inscriptions were not long. The content of inscriptions usually consisted only of the name of an ancestor or of a clan. Most of the ritual vessels with such short inscriptions seldom provided the name of the vessel. Often a general term for the bronze vessel *yi* 彝 was used. An exception is a Late Shang bronze *ding* excavated in Hougang of Anyang, with a long inscription which does include the name *ding* 鼎.<sup>4</sup> The absence of self-named vessels continued into the

<sup>2</sup> Chen Mengjia, 1946, p.115.

<sup>3</sup> Chen Mengjia, 1946, p.10.

<sup>4</sup> Guo Moruo 1960, pp.1-5.



early Western Zhou period although the inscription on the vessels became longer than before. Inscriptions using a special term for the specific type of bronze ritual vessel did not become common until the middle Western Zhou period.

The same can also be said of bronze weapons. Generally speaking, inscriptions on bronze weapons are commonly shorter than those on vessels of the same period. Most of the inscriptions on bronze weapons only refer to the names for particular types after the middle Western Zhou. Therefore, the self-named evidence which is used in this study of the Late Shang period is not contemporary evidence but is inferred on the basis of later evidence. Nonetheless, this evidence is still the earliest remaining indirect evidence for the names of Shang weapons. Since it provides names which have been used for bronze weapons at different periods of the bronze age, self-named evidence is still the most important basis for the terminology, despite its unavoidable limitations.

#### **b) Evidence from oracle bones and inscriptions on bronze vessels**

Some pictographs which resemble the shape of bronze weapons are found either on the oracle bones or in the inscriptions on bronze vessels. Although not directly inscribed on the weapons themselves, the similarity between the written form and the shape of the bronze weapon provides important information from the Shang and Zhou periods for the terminology. However, scholars do not always agree about the nomenclature and the interpretation of the characters on either oracle bones or bronze vessel inscriptions, so that this evidence has its limitations.

#### **c) Evidence deriving from the pre-Qin records**

The terms for bronze weapons often appear in the ancient texts, such as *Zuozhuan*, *Zhouli*, *Yili*, *Shijing*. The limitations are that such terms appear in the ancient records without illustration, although the term was actually in use when the text was written. Therefore, it is not always clear what form is being referred to when the term appears in a text. Commentaries by scholars of later periods sometimes have to be considered, although these may be insufficient and are often contradictory.

#### **d) Terms used by previous scholars**

Nevertheless, the terminology used by scholars of the Song period and later, will sometimes be adopted in this study when there is no contemporary evidence and when the term has become a convention used among scholars.

#### **e) Terms suggested by art-historical and archaeological considerations**

Finally, the art historical and the archaeological aspects are sometimes considered,

particularly when the above four aspects are contradictory.

### 2.2.2. Principles of typology

The terminology in fact represents the concept of types, which can be sub-divided according to various criteria. Because different methods of typology have been widely used in the field of archaeology and art history, the principles to be applied have been discussed by some scholars.<sup>5</sup>

In this study, the criteria used for determining typology are mainly based on the following considerations:

- a. Characteristics which reflect changing concepts of use.
- b. Characteristics which reveal changes of time and place.

Changes in the function of a weapon are considered an important factor for typology, because the weapon was originally designed for practical use. Therefore, any change in the practical use of a weapon is considered as a major factor in corresponding changes of its form. Therefore, typology is not used in this study as an end in itself, but is simply considered as necessary for revealing historical changes.

On the basis of the above characteristics, a type consists of two parts: one is the unchangeable part which always remains the same regardless of time or place, the other is the changeable part which alters according to time and place. A type with its particular term such as *ge* may consist of various sub-types which share the unchangeable part as the common foundation under the same term, and which exhibit their own characteristic variations.

In cases where the practical use of a weapon is difficult to trace owing to the lack of ancient records, this study will attempt to determine its function on the basis of the following principles:

- a. Pictographic characters seen on the oracle bones and bronze inscriptions.
- b. War scenes on the bronze vessels of the Warring States period.
- c. The archaeological context from which a weapon was excavated.
- d. The ancient records.

### 2.2.3. Classification of types

Seven types of Late Shang bronze weapon will be discussed in this study. They are the *ge*, *yue*-axe, spearhead or *mao*, knife or *dao*, sword, *ji*, and bow-shaped implement.

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<sup>5</sup> Li Chi, 1948, pp.3-8; Chang 1986, pp.62-73.

### 2.2.3.1. The *ge* 戈

#### a) Early theories about the *ge*

Since the terms for the various parts of the *ge* were used in the ancient classics, most scholars adopted these terms despite the fact that they appear without illustration. Matching the terms used in the classics to the exact parts of the *ge* became a major topic of study for scholars from the Qing to 1930. Through process of trial and error the terminology for the parts of the *ge* has been established with little controversy. This allows further discussion on the basis of style. In the present study, nomenclature for the parts of the *ge* (fig. 2:1) depends mainly on previous studies which already reached a high level, and aims to provide a common terminology to link with those studies.

The earliest account of the parts of the *ge* is from the "Yeshi" of the "Kaogongji" chapter of the *Zhouli*. This chapter is generally accepted as an official record of Qi state around the end of fifth century B.C. in the Warring States period.<sup>6</sup> Although dating about 600 years later than Late Shang, this is the earliest known record of the parts of the *ge*. It contains 42 characters concerning *ge*. Defining the terms used in these 42 characters and understanding their usage have been important topics for scholars since the Han dynasty. Previous studies of these 42 words have paved the way for modern studies.

The 42 characters can be divided into three parts as follows: First, the *ge* is described in 13 characters as "*ge guang er cun, nei bei zhi, hu san zhi, yuan si zhi*" 戈廣二寸，內倍之，胡三之，援四之， meaning "the *ge* is two *cun* wide, and the *nei* is twice that, the *hu* is three times that, and the *yuan* four times [the same measurement]." The 13 characters describe the terms used for the different parts and their relative sizes. The four terms used: *ge*, *nei*, *hu* and *yuan* indicate different parts of the *ge*. The text does not define which parts of the *ge* are meant, but emphasizes their relative sizes: The width of the *ge* is 2 *cun*, the *nei* is twice that (4 *cun*); the *hu* is three times that (6 *cun*); and the *yuan* is four times that (8 *cun*).

A further 26 characters concern the use of the *ge* in reference to its parts as follows: "*Yi ju ze bu ru, yi gou ze bu jue, chang nei ze zhe qian, duan nei ze bu ji, shi gu ju gou wai bo.*" 已倨則不入，已句則不決，長內則折前，短內則不疾，是故倨句外博。(If the *yuan* projected too high, it would be difficult to stab, if the *yuan* projected downward it would be difficult to tear, if the *nei* was too long, the *yuan* would be easily broken off, if the *nei* was too short, the *ge* would be inefficient. Therefore, it is well that the *yuan* is not vertical but projects slightly upward.) The term *nei* (tang) appears twice because the proportion of the different parts of a *ge* was

<sup>6</sup> Guo Moruo, 1947, pp.149-156.

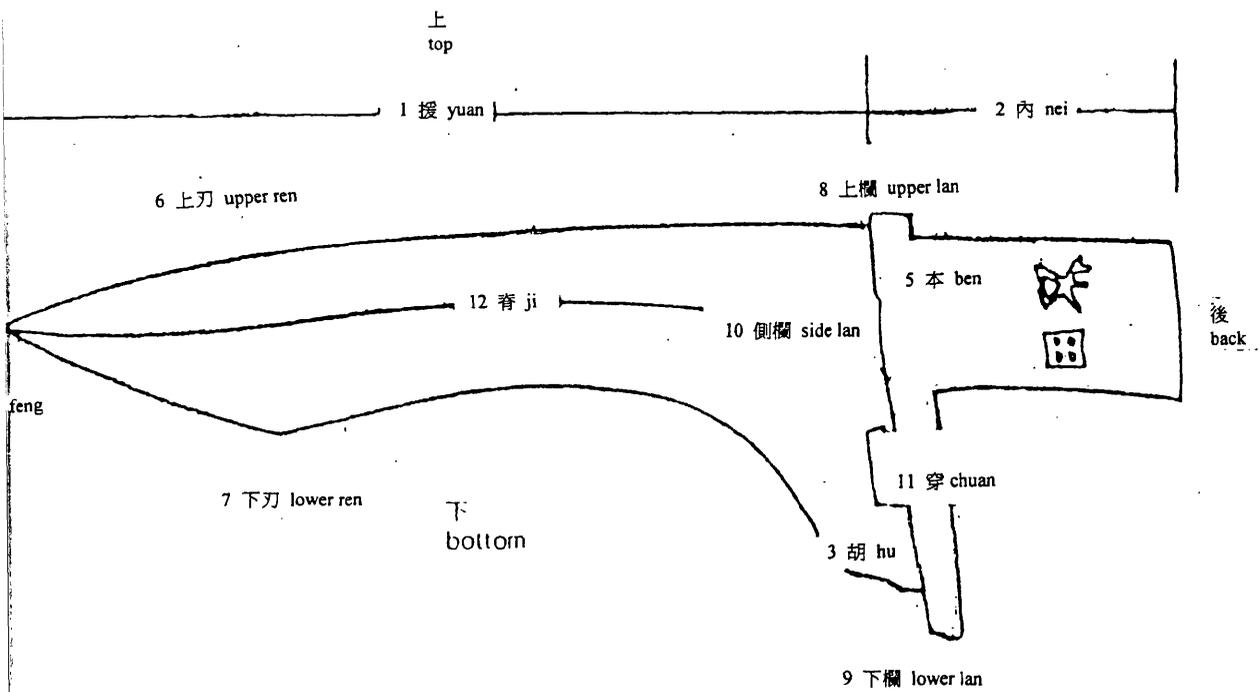


fig. 2:1 Terminology for the parts of the ge, Chen Fang-mei 1994, p.30.



fig. 2:2. Ge illustrated in *San li tu* 9:18.

considered to influence its function and usage.

The final, three characters concern the weight of a *ge* as follows: *Zhong san shua*.  
重三鎛 .

Owing to the lack of illustrations in the "Kaogongji" scholars from the Han dynasty onwards have tried to define the terms by narration or illustrations. Two schools were formed.

The first school was led by Zheng Xuan (127-200), one of the earliest commentators of *Zhouli* in the Han dynasty. He established his theory about the terms for the parts of the *ge* on the basis of his understanding of the text. At the same time, he also referred to the actual related objects seen in his period. Zheng Xuan's explanation for the terms of the parts of the *ge* can be outlined as follows:

Firstly, he confused the *ge* with the *ji* by taking Han Dynasty examples. He commented that "the *ge* is the *goujueji* of today" 戈，今句孑戟也。 How to distinguish the *ge* from the *ji* became an important issue for later scholars. This issue will be discussed later in the *ji* section (see below, chapter 2, section 2.2.3.2).

Secondly, on the basis of his recognition of the *ge* as corresponding to the Han *goujueji*, Zheng Xuan explained the terms of the parts of the *ge*. He considered that "the function of the *hu* was as a *goubing* 'weapon for hooking'. 內謂胡，以內接秘者也; The *nei* was the part used for attaching the shaft, by means of the *hu*. According to Zheng Silong: "The *yuan* is the straight blade and the *hu* is the hook. 援直刃也，胡其孑 Zheng Xuan's theory was followed in the *Sanlitu* by Nie chongyi (fig.2:2)<sup>7</sup> and was illustrated by Cheng Yaotian of the Qing dynasty<sup>8</sup> It is interesting to notice that the illustration drawn by Nie chongyi according to Zheng Xuan's commentary is similar in appearance to the Han *ji* (fig.2:3).<sup>9</sup> This implies a consistency between Zheng Xuan's statement and Nie chongyi's as well as Cheng Yaotian's understanding of Zheng Xuan's theory of the *ge*. Owing to the consistency between Cheng Yaotian's illustration of Zheng Xuan's commentary of the "Kaogongji" with the archaeological excavated *ji* shape, it is possible that Zheng Xuan confused the *ji* and the *ge*.

Such a illustration of the parts of the *ge* is quite different from the shape of excavated *ge* of the Late Shang period. The definition of the terms seen on the illustration is also different from those used in this study, because Zheng Xuan defined the term *ge* in *Zhouli* based on the Han *ji*. He simply agreed with Zheng Silong's idea that the *yuan* is a blade in line with the shaft. This explanation influenced his idea that the function of a *ge* was for piercing but not for hooking. A Song scholar, Huang Bosi (1079-1118 A.D.), who established his theory of *ge* to

<sup>7</sup> Nie chongyi, vol. 9, p.18.

<sup>8</sup> Cheng Yaotian, *Yeshi* 11b

<sup>9</sup> Beijing 1981b, pl.112; Beijing 1980h, p.69:1.

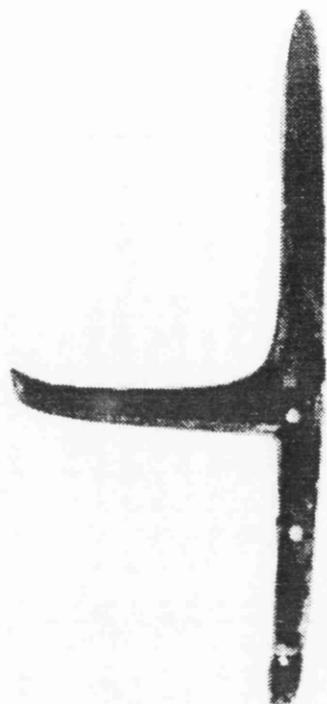


fig. 2:3 *Ji* Guangzhou, Guangdong, Western Han, Beijing 1981b, Pl.112:3.

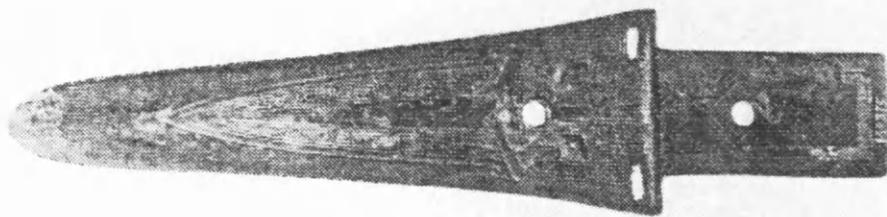


fig. 2:4-1 Type I *ge*, Pingxian Zhuwajie Sichuan length 26 cm. Beijing 1994b, pl.128.

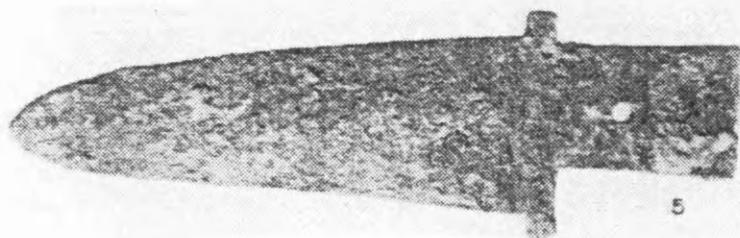


fig. 2:4-2 Type II *ge*. Xiaotun M331, length 23.2 cm. Shi Zhangru 1980, pl.64:5.

contest Zheng Xuan's theory, led the second school. The definitions of the terms of the parts of the *ge* used in this study rely mainly on the theories of the second school.

Huang Bosi tried to understand the meaning of the terms *nei*, *hu* and *yuan* by referring to actual *ge* and to the character *ge* in bronze inscriptions. He emphasized that the function of the *ge* was for hooking and pecking and not for piercing, therefore the *ge* had to be mounted horizontally not vertically as Zheng Xuan had understood.<sup>10</sup> He redefined the parts of the *ge* as follows: "The *yuan* consists of a two-edged blade with a sharp sword-like tip." The horizontal blade, the essential part of the *ge*, was named by Zheng Xuan as *hu*, but was re-named as the *yuan* by Huang Bosi. On an actual *ge*, the horizontal part is usually the longest part. Thus Huang Bosi's redefinition of the terms is consistent with the original description in the "Kaogongji."

Huang Bosi continued to define the terms *hu* and *nei* as follows: "The *hu* is located below the *yuan*. It forms a curve but gradually becomes vertical. This shape looks like the dewlap on a cow. The *nei* is located next to the *hu* where the traces of the shaft can often found." According to the excavated evidence traces of the wooden shaft are often seen on the rectangular part which connects directly with the *yuan*. (fig.2:13-1) If the meaning of *nei* is the area for attaching the shaft as in Zheng Xuan's interpretation, Huang Bosi was also correct in naming this rectangular part *nei*.

Huang Bosi's theory was followed by Cheng Yaotian's, who reinterpreted the context of the *Zhouli* using actual objects. He also referred to the record of *Shuowen*: "The *ge* is a *ji* with a flat head". Therefore he drew the same conclusions as Huang Bosi.

The definition of the parts of the *ge* thus reached a common foundation which match the object with the earliest records of it. The terms in this study follow this theory. However, only three parts of the *ge* are seen in the "Kaogongji": they are *yuan*, *nei* and *hu*. These terms are not enough for a detailed analysis of the shape of the *ge*. Zheng Xuan added the two terms *feng* and *ben* in order to describe the shape of the *ge*. The location of these two terms was illustrated by Zheng Yaotian and I have adopted and redefined them in this paper. The remaining six terms are adopted from Dr. Li Chi's illustration.

#### b) Terminology for the parts of the *ge* (fig.2:1)

In order to classify the typology and describe the characteristics of the various shapes of the *ge* it is necessary to define terminology for its various parts, as follows:

1. *Yuan* 援: the main body of the *ge* which has two horizontal bladed edges. This is the functional and longest part of the *ge*.

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<sup>10</sup> Huang Bosi, vol. 1, pp. 42-3.

2. *Nei* 內: the rectangular part sometimes referred to in English as the tang, smaller than the *yuan* and located directly next to it. The edges are not bladed, except occasionally in later examples. From evidence of remains of wood traces this portion was used for hafting.
3. *Hu* 胡: This portion extends directly from the lower edge of the *yuan*. The bladed side forms an arched shape, while the other side adjoins the *nei* and has no blade.
4. *Feng* 鋒: This is where the two bladed edges of the *yuan* meet together forming a sharp point.
5. *Ben* 本: This is the terminal base of the *yuan* opposite the *feng*.
- 6 & 7. Upper and lower *ren* 上刃, 下刃: the upper and the lower blades of the *yuan*.
- 8, 9 & 10. Upper, lower and side *lan* 上欄, 下欄, 側欄: in some shapes of *ge*, upper *lan* and lower *lan* or *ce lan* appear in the area between *yuan* and *nei*. Upper *lan* often protrude upward to the upper *ren*. Lower *lan* often protrude downward to the lower *ren*. *Ce lan* often protrude in the area between the *yuan* and *nei*.
11. *Chuan* 穿: These perforations normally appear on the *nei* or *hu* for threading the cord to hold the dagger-axe tightly to the wooden shaft.
12. *Ji* (spine) 脊: The median ridge which normally protrudes and is centered on the *yuan*.

The above 12 terms are mainly adopted from ancient texts and previous studies. They have been redefined here, and will be further discussed below.

### c) Typology of the *ge*

Six types of double-bladed *ge* will be grouped together under the name of *ge* on the basis of the following common characteristics:

1. A triangular body with two longer bladed edges and one shorter edge without a blade.
2. A rectangular *nei* (tang) used for attaching to the shaft.

The six types of *ge* are distinguished mainly on the basis of designing the shape for attaching the shaft. They are as follows: (fig.2:4)

Type I: Basic form, having only the above common characteristics (fig.2:4-1)

Type II: As Type I, with a *lan* projecting above and below between the end of the *yuan* and *nei*. (fig.2:4-2)

Type III: As Type I, but with a curved instead of a rectangular *nei*.(fig.2:4-3)

Type IV: As Type I, but with the lower edge of the blade extended downwards as a cutting edge.(fig.2:4-4)

Type V: As Type I, with a socket added between the body and the *nei*. (fig.2:4-5)

Type VI: As Type I, but with a hooked blade on either side. (fig.2:4-6)

The above six types will be named *ge*, not only because they share the common characteristics, but also for the following reasons: the self-named evidence; evidence from 2nd bronze inscriptions; and evidence from oracle bone inscriptions.

The first of these is the most important item in the identification of Chinese bronze weaponry. However, not all of the types provide evidence for self-naming. In fact such evidence only exists for four types, as follows:

1. Some examples of Type V inscribed *ge* have been named as *Gou bing* 勾兵 (fig.2:5 ) probably because the pictorial character *ge* was not interpreted as a type of weapon but simply as a character.<sup>11</sup> On the other hand, this type was thought by some scholars to have a connection with the term *kui* 癸.<sup>12</sup>

2. Some examples of Type IV are inscribed with *ge* but date after the Late Shang period. One example is "The *Tu ge* belonging to Prince Yuan of Guo" found in a tomb of the state of Guo, at present-day Shangcunling (fig.2:6) which was dated no later than 655 B.C.<sup>13</sup> This is proof that the proper name for this type of weapon was indeed *ge* in the mid-seventh century B.C.. The long double-edged blade was used for hooking and killing. The lower edge of the blade curves downwards. The terminal end of the blade area host a flat rectangular *nei*, typically with blunted edges. The wooden shaft was attached to the blade by means of the *nei*. On the blade, near the *nei* was a lashing hole, which functioned to secure the blade of the weapon to its wooden shaft. Type IV is also found at Anyang, dated to the Late Shang period, but without any self-named evidence. Therefore, there is no direct evidence to show how it was named during the Late Shang period, but since Type IV does occur after the Western Zhou period with a consistency between the name and the form, the name can be applied to the same shape of weapon of the Late Shang.

3. One example of Type I has been found inscribed with the character *kui* 癸.(fig.2:7) This example is not an excavated piece, and its site and date are unknown.<sup>14</sup> However, the term *kui* not only occurs on the weapon itself, but

<sup>11</sup> Liu Tizhi, vol.7, p.42. The treatment of the character *ge* as simply a word and not a weapon is also seen in *Jinshisuo*, vol.2, p.2 written by Feng Yanpeng.

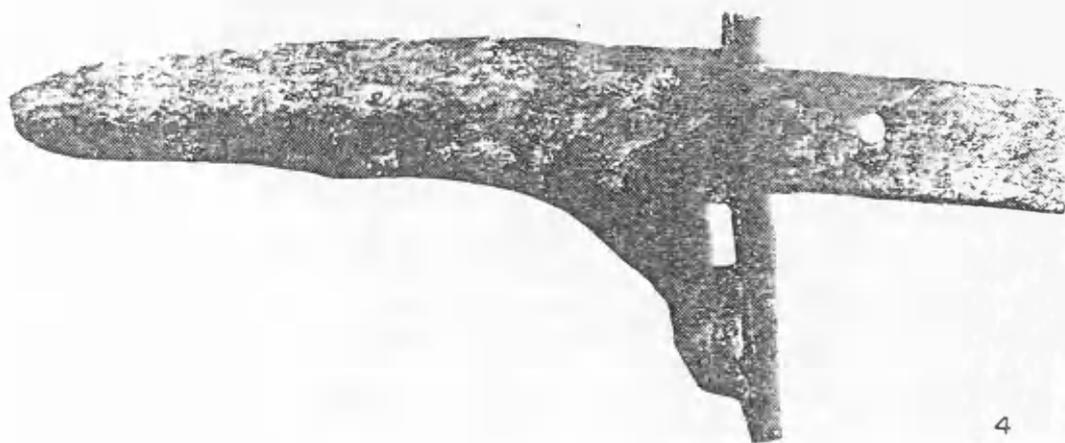
<sup>12</sup> Li Chi 1949, p.46, Yang Xizhang, 1979, p.88.

<sup>13</sup> The meaning of *tu* suggested as a reading in the report is not clear. Beijing 1959c p.28.

<sup>14</sup> Wu Yun, vol.8, p.5.



fig. 2:4-3 Type III *ge*, Xiaotun M232, length 44 cm. Shi Zhangru 1973, pl.26.



4

fig. 2:4-4 Type IV *ge*, Xibeigang M1003, length 24.4 cm. Gao Quxun 1967a, pl.93:4.



fig. 2:4-5 Type V *ge*, Xiaotun M5, length 17 cm. Beijing 1980f, pl.70:6.

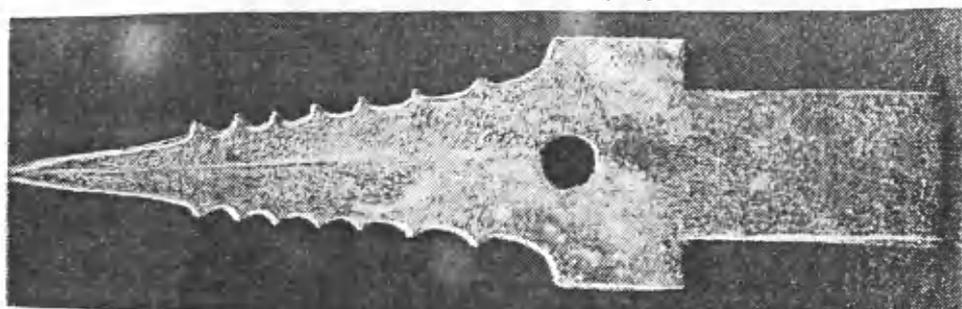


fig. 2:4-6 Type VI *ge*, Sanxingdui Guanghan Sichuan, length 21 cm. Beijing 1994b, pl.127.

戈字句兵長九寸五分廣二寸七分鑿徑一寸一分

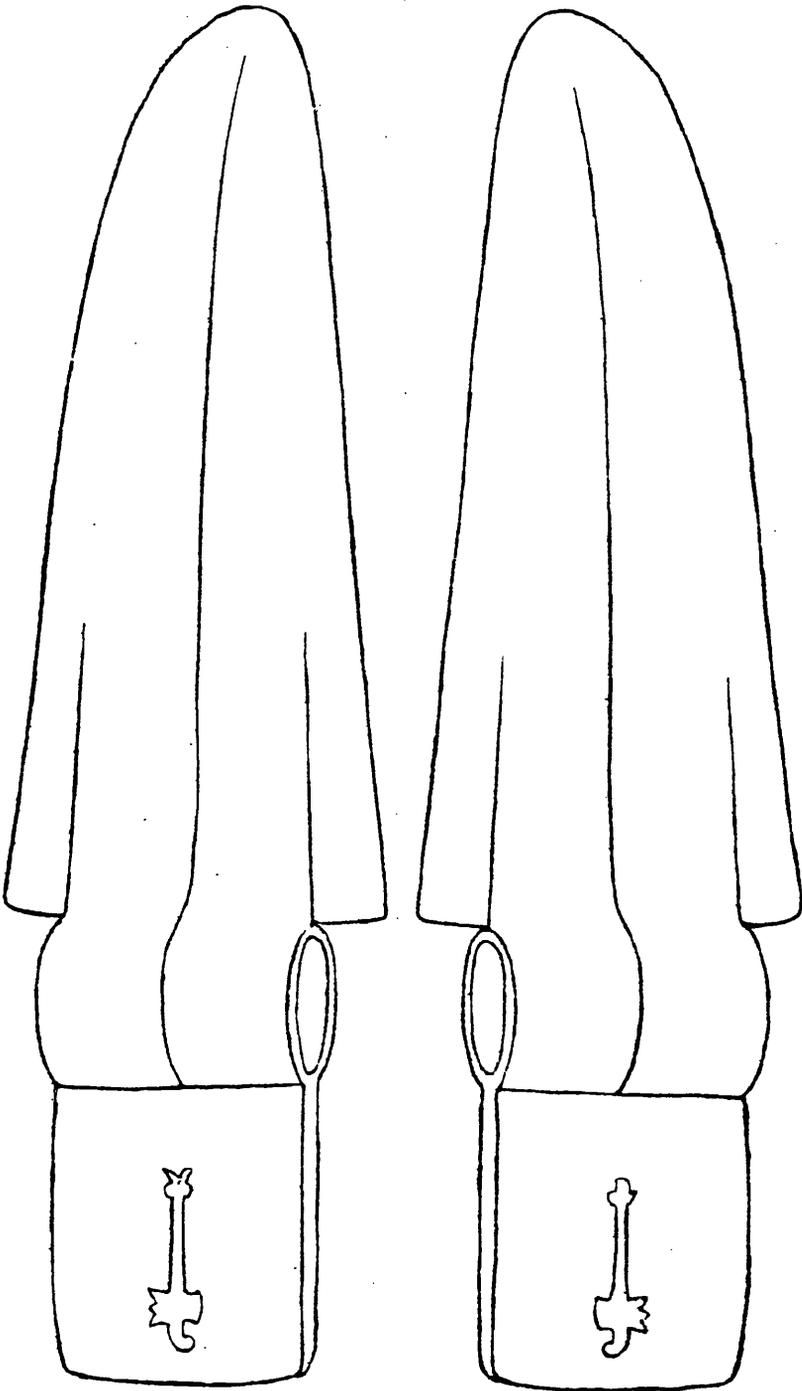


fig. 2:5 Type III ge inscribed "ge". Liu Tizhi 1934, vol.7, p.43.

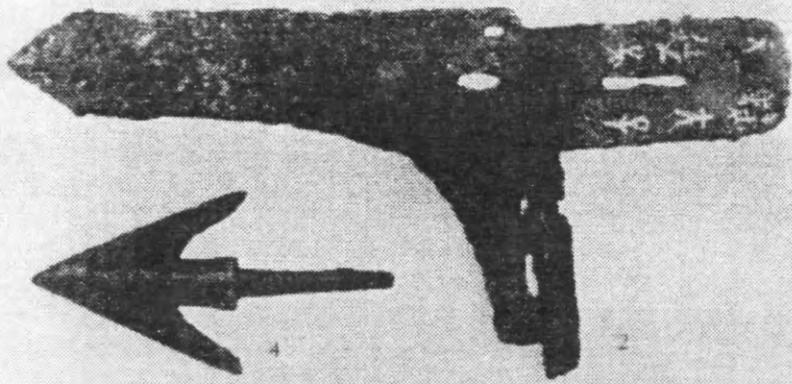


fig. 2:6 *Ge* inscribed "ge". Beijing 1959c, pl 35:2.

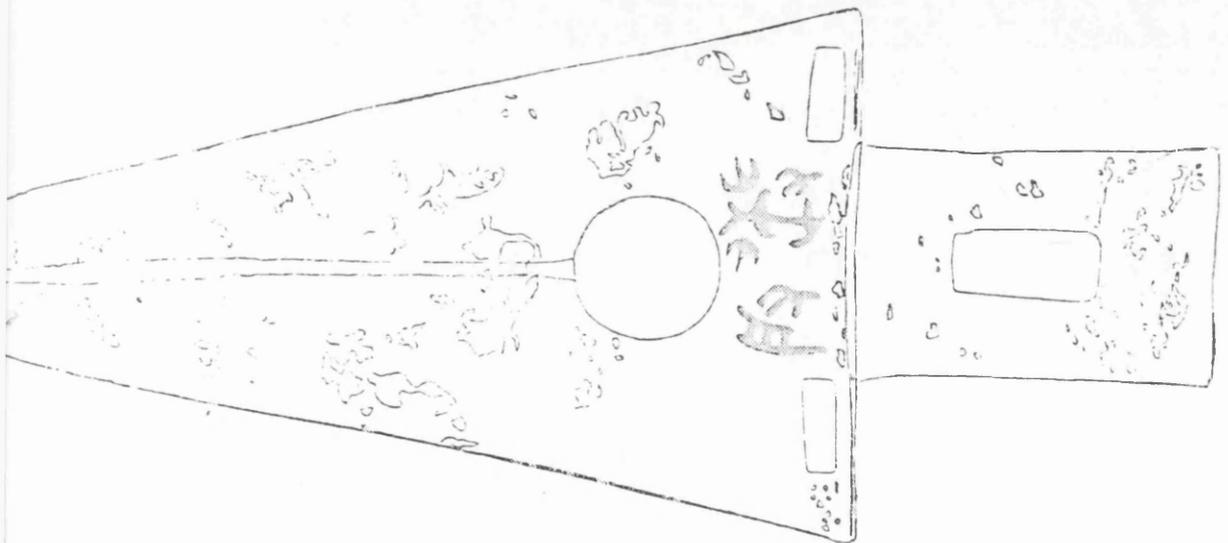


fig. 2:7 Type I *ge* inscribed *kui* “ 戣 ”. Wu Yun 1872, vol.8, p.5.

was also used in the "Guming" chapter of the *Shang Shu* with the commentary by Kong Yingda of the Tang Dynasty, who categorized it among the halberds, *qi*.

Owing to the common characteristics shared between type I and type V, and as the word *ge* has been widely used both in the ancient records and among scholars, *ge* is used in preference to *ku* when referring to type I in this study. It has also been suggested by Cheng Yaotian that the term *ku* might relate to the type V socketed *ge*.

4. A weapon with a broken but probably rectangular *nei* and two hooked angles between blade and *nei* is inscribed as *ge* but named as *ju* 戣 (fig.2:8).<sup>15</sup> This term is also used in the "Guming" chapter of *Shang Shu*. Kong Yingda commented that both *ju* and *ku* were equivalent to the halberd 戣. Cheng Yaotian, on the other hand, suggested that the term *ju* referred to the *ge* with a rectangular *nei*.

halberd  
si

In spite of the complexity and inconsistency of the self-named evidence, the common characteristics of *ge* shapes help to determine the relationship between the term and the different types of this weapon. Secondly, regards other types of inscription, the character *ge* which appears among the bronze inscriptions is (fig.2:9) much closer to the form of the actual bronze weapon *ge* than that found in oracle bone inscriptions (fig.2:10). Qing scholars went even further than the Song scholars, to suggest that the right part of the character represents the tassel of the cord used to tie the weapon to the shaft.<sup>16</sup> However, owing to the fact that the character *ge* is more often found on bronze vessels than on the *ge* itself, scholars tended not to explain this word as a special term for a bronze weapon.<sup>17</sup> Even though the single character *ge* occasionally appeared on Type V *ge*, it was interpreted as the name of a state or clan rather than as a special term for a particular kind of weapon.<sup>18</sup> However, most scholars after the Song dynasty were agreed that this inscription is a pictorial form of the *ge*. In this study, the inscribed form is considered not only as a pictorial form but also as self-named evidence for the bronze *ge*. (fig.2:9)

as

The third source for determining the relationship between the term and shapes of the *ge* is evidence gathered from oracle bones. *Ge* was written as 𠄎 or 𠄏 in the

<sup>15</sup> Feng Yunpeng vol 2. p.8.

<sup>16</sup> Feng Xunyi, 5,5.

<sup>17</sup> A *zhi* from Anyang Guojiazhuang has a *ge* inscription. (KG 1988:10 p.877, fig.6:1). Rong Geng lists 16 examples of bronzes with a *ge* inscription. However, all are found on ritual vessels and not on the *ge* weapon itself (Rong Geng: 1925, 12.25).

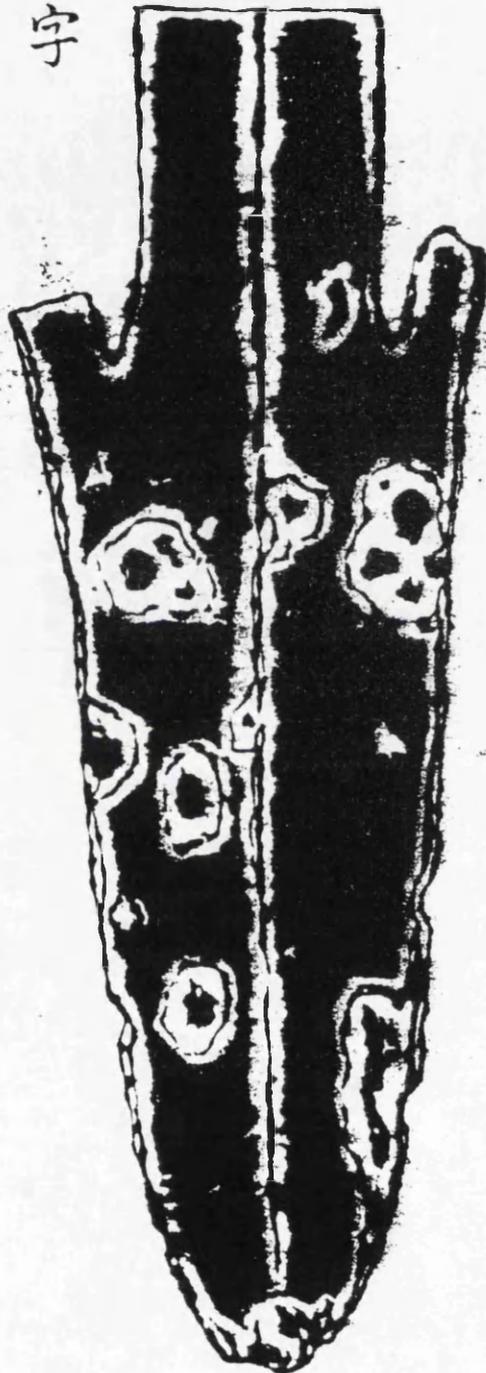
<sup>18</sup> Liu Tizhi, 7, 43.

寶戈戮

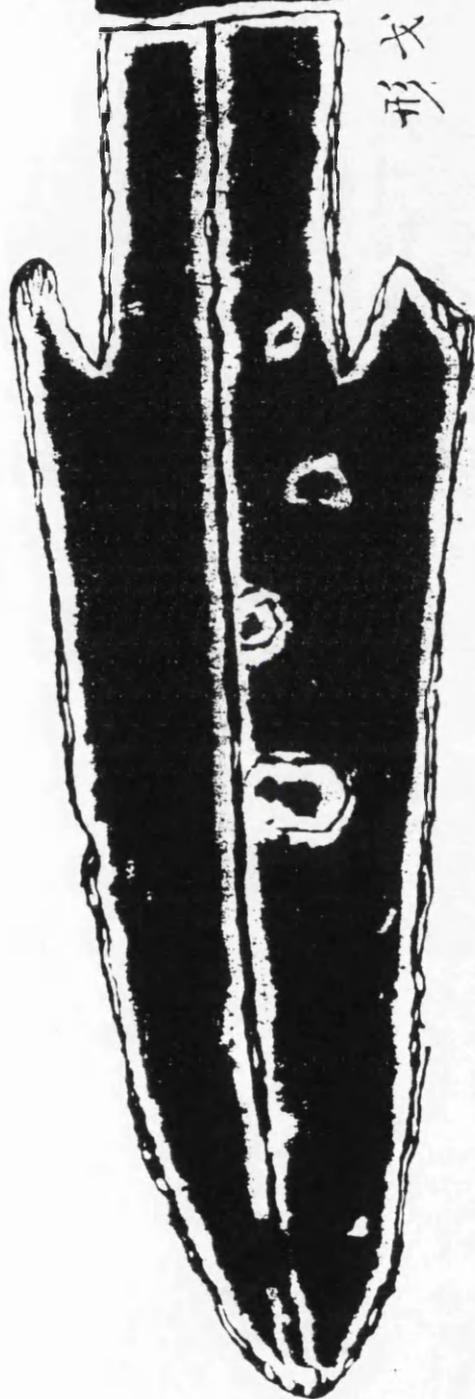
黃小松司馬藏



一曰寶字



一曰象形



子責方系... 下... 責... 下... 以... 為... 戈... 字... 今... 是

fig. 2:8 Ge inscribed "ge" but named as "ju". Feng Yunpeng, vol.2, p.8.

夫

于藏、四、三、于藏、二、八、六、于藏、八、七、一、于前、一、三、七、六、于前、六、三、八、  
 三、戈、後、六、十、一、一、後、六、二、六、一、一、後、下、八、九、一、後、下、四、二、四、一、一、  
 後、下、四、三、九、一、于青、六、一、一、于甲、一、三、二、一、于甲、一、六、三、一、于珠、四、五、八、一、  
 甲編、二、九、〇、七、一、于甲編、二、四、七、一、

夫

1599

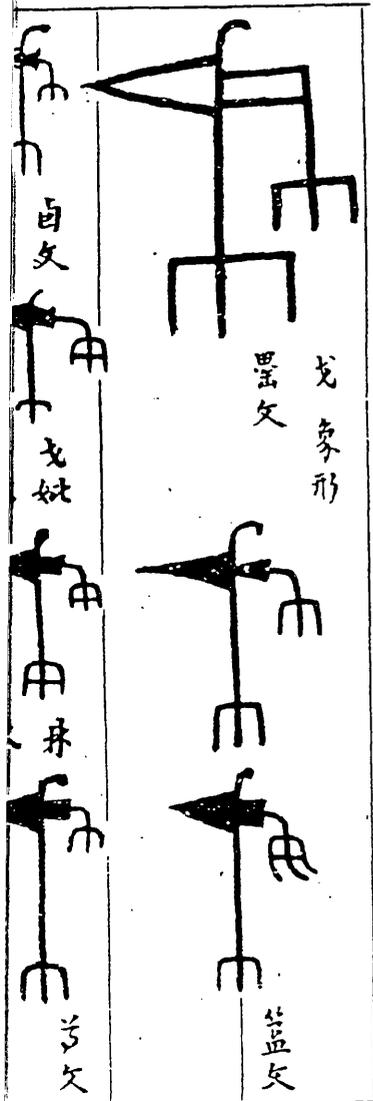


fig. 2:9 "Ge" on the bronze vessels.  
 Rong Geng 1925, p.1955.

fig. 2:10 "Ge" on the oracle bones,  
 Li Xiaoding 1974, p.3753.

oracle bone inscriptions.<sup>19</sup> The characters on the oracle bones seem less realistic than those on the bronzes, this is possibly because the character was carved directly on the oracle bone with narrow cuts of the knife.

Moreover, the character *ge* does not necessarily mean a weapon. It has sometimes been interpreted as the name of a *fangguo* 方國 (statelet). For instance, the term *ge Fang* 戈方<sup>20</sup>. Terms such as *geren* 戈人 (people of *ge* state) and *gehoul* 戈侯 (duke of *ge* state) were also used in the oracle bones.<sup>21</sup>

However, the character *ge* has also been considered since antiquity as a pictorial representation of a shafted *ge*.<sup>22</sup> According to *Shuowen*, *ge* is a *Pingtou ji* 平頭戟 (a *ji* without the spearhead), a description which corresponds exactly to the character as seen on the oracle bones.

The pictorial form of the character was inscribed on two oracle bones excavated from the south of Xiaotun, as follows:

*Wei zi ge yong* 惟茲戈用 (2194)(fig. 2:11) using a *ge*

*Jiachen bu, wei ge zi yong* 甲辰卜，惟戈茲用 (783)(fig.2:12) divining on the *jiachen* day, using a *ge*

In these inscriptions, *ge* is a pictorial character which can be considered to refer to the weapon. The term *zi yong* 茲用 is often associated with ritual. In the present example *ge yong* 戈用 is perhaps best explained as use the *ge* for the ritual

These *ge* characters from South Xiaotun are more realistic depictions than the others. Moreover, an inscribed jade *ge* found in Fu Hao's tomb provides evidence that the jade *ge* with a long *yuan* and flat *nei* was named *ge* during the Shang dynasty. The inscription on this *ge* reads as follows: "the Lu state attributed five *Ge*"<sup>23</sup>. It provided evidenced that the jade *ge* with a long *yuan* and flat *nei* was named *ge* during the Shang Dynasty.

Characters with the radical *ge*, whether they are found among bronze inscriptions or oracle bone inscriptions, are frequently related to war, as exemplified by the characters *wu* 武 and *fa* 伐. The element *ge* in these characters then should be a form of weapon. The term *ge* is frequently used to mean a weapon in Western Zhou literary sources. In "Mushi" of the *Shangshu* the *ge* is one of the primary weapons for King Wu's military troops. "Mushi" also describes King Kang's ascension to the

<sup>19</sup> Li Xiaoding, 1974, vol.12 p.3753.

<sup>20</sup> Hu Houxun 1955, 533.

<sup>21</sup> Guo Moruo, 1933, p.881-2; Rong Geng, pp.488-9.

<sup>22</sup> Luo Zhenyu, 1914, vol.2, p.46.

<sup>23</sup> Beijing 1980f, pl.17.2.



H 50:54  
2194

H 23:144 正  
783

1 Oracle bone, Beijing 1980, 2194.

fig. 2:12 Oracle bone, Beijing 1980g, 783.

throne, and Duke Zhao ordering Zhong Heng to go with *ge* and other objects to welcome the crown prince. Literary sources from the Spring and Autumn period frequently include references to the *ge*. From the *Zuozhuan* it appears that the *ge* was the most important military weapon.

#### d) Function and usage of the *ge*

Since weapons originated from practical use which often influenced their design, the function of a *ge* was often discussed.

The principal classical text regarding the function of the *ge* is found under "Luren" in the "Kaogongji" chapter of the *Zhouli*, though only indirectly through Huang Bosi's commentary. In the "Luren" chapter, weapons are divided into two different categories by their functions, one category being *goubing* 句兵, the other *cibing* 刺兵. *Goubing* means a hooking weapon. *Cibing* means a piercing weapon. Hang Bosi states that the *ge* belong to the category of *goubing*. His commentary has been accepted by all scholars. (See pp.52-56, 2.2.3.1a)

The method of using a *ge* allows for a fuller understanding of its function. It cannot be used by itself. It has to be used with a shaft. Some archaeological remains and traces of *ge* in its burial context provide evidence for the original shaft form and how it was attached to the *ge*.

The shape of the shaft and how the *ge* was hafted to it particularly during Late Shang period can be seen on the *ge* which was excavated from Anyang M234 (fig.2:13-1). On this *ge*, traces of matting covered the *yuan*, *nei*, and *hu* with the exception of the part of the *nei* which connects to the *yuan*. This particular part bore traces of the wooden shaft at right angles to the *yuan*.

From the wooden fibres clinging to the blades of excavated *ge* lying at right angles to the *yuan*, archaeologists have tried to reconstruct the original method of attaching the shaft. Firstly, a rectangular slit the size of the *nei* was pierced through the wooden shaft. Above and below this rectangular slit, shallower grooves were carved to insert the upper and lower *lan* of the *ge*.<sup>24</sup>

It is interesting to compare the archaeological evidence with the ancient records and with later annotations. The earliest record concerning the manufacture of the *ge* is found in the *Zhouli*. According to the "Lu Jing" chapter of the *Zhouli*, for the wooden shaft of *goubing* to be most effective, its shape had to be *bei* 棊. Zheng Xuan annotated the meaning of the word *bei* as "oval."<sup>25</sup> This annotation is consistent with the archaeological evidence. Moreover, the function of the oval wooden shaft was further explained in the same chapter: "*goubing yu wu tan,-- shi gu*

<sup>24</sup> Beijing 1987, pp.248-9.

<sup>25</sup> "Lu Jing" chapter of the *Kaogongji*. 41, p.12b.

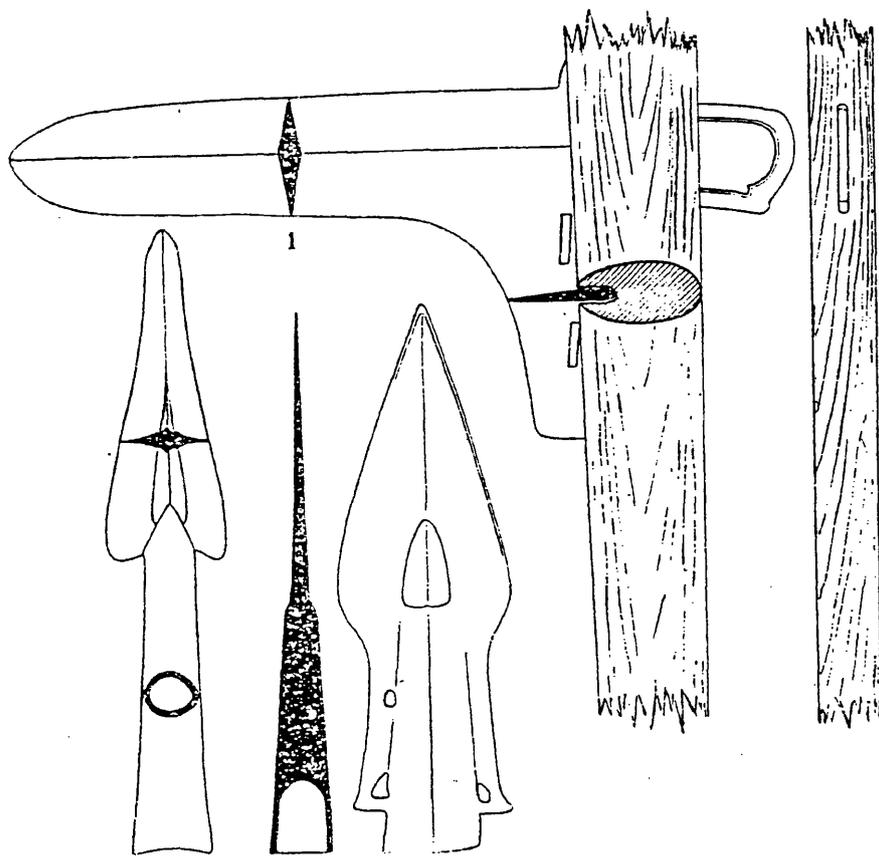


fig. 2:13-1 The reconstruction of shafting of the Type IV *ge*, M234 Xidi of Xiaotun.  
Beijing 1987, p.249, fig.189:1.

*goubing bei*" 句兵欲無彈，...是故句兵榫 This passage was annotated by Zheng Xuan as follows: "A hooked weapon has to be tightly attached to the wooden shaft in order to avoid the shaft from loosening. Therefore, the wooden shaft must be oval in shape." Hence, the shape of the wooden shaft is relevant to the securing of the *ge* to the shaft to prevent the *ge* from turning on the axis of the shaft, which would inevitably happen if the shaft were circular in cross-section and not oval. It is interesting to note that the wooden shaft has been drawn as circular by Zheng Yaotian who seems to neglect the "Lu Jing" passage and Zheng Xuan's commentary.<sup>26</sup>

Archaeological evidence provides even more information about the shaft in regard to its width and length. In some archaeological reports the width of the traces of the wooden shaft to which the *ge* was attached is recorded. They indicate that the wooden shaft was attached to the *nei* and was perpendicular to the *yuan* blade. The remains of the *ge* shafts from M1004 are 3 cm in width. They are all of type V socketed *ge*.<sup>27</sup>(fig. 2:13-2) The shaft traces on the *ge* from M5 at Anyang range from 1.8 to 2.9 cm, the average is around 2 cm.<sup>28</sup> They all are *ge* with *nei*. The longer diameter of the oval wooden shaft during the Late Shang period is probably 2 to 3 cm.<sup>29</sup>

In regard to the length of the shaft, the remains of the wooden shaft seen on the *ge* from M 1004 of Houjiazhuang are about 60 cm in length.<sup>30</sup> Whether this is long enough for use on a chariot is an important question for further research.

### 2.2.3.2. The *ji*-halberd

#### a) Typology

Only two types of *ji*-halberd will be included in this study. The *ji* consists of two parts: *ge* as the main body, and a second part which is the *mao*-spearhead. The two types differ from each other according to whether these two parts were cast ~~were~~ cast separately or together:

Type I. Type II *ge* with a spearhead above it. They were cast separately but were excavated together.(fig.2:14-1)

Type II. Type IV *ge* with a long *hu* and an upper hooked appendage which curves backward, cast as one piece.(fig.2:14-2)

The above two types are grouped together and named as *ji* on the basis of the

<sup>26</sup> Cheng Yaotian, *Yeshi* 11b.

<sup>27</sup> Liang Siyong & Gao Quxun, 1970, p. 35.

<sup>28</sup> Beijing, 1980f. p. 239.

<sup>29</sup> Beijing 1987, pp.239-40.

<sup>30</sup> Liang Siyong & Gao Quxun, 1970, p.35.

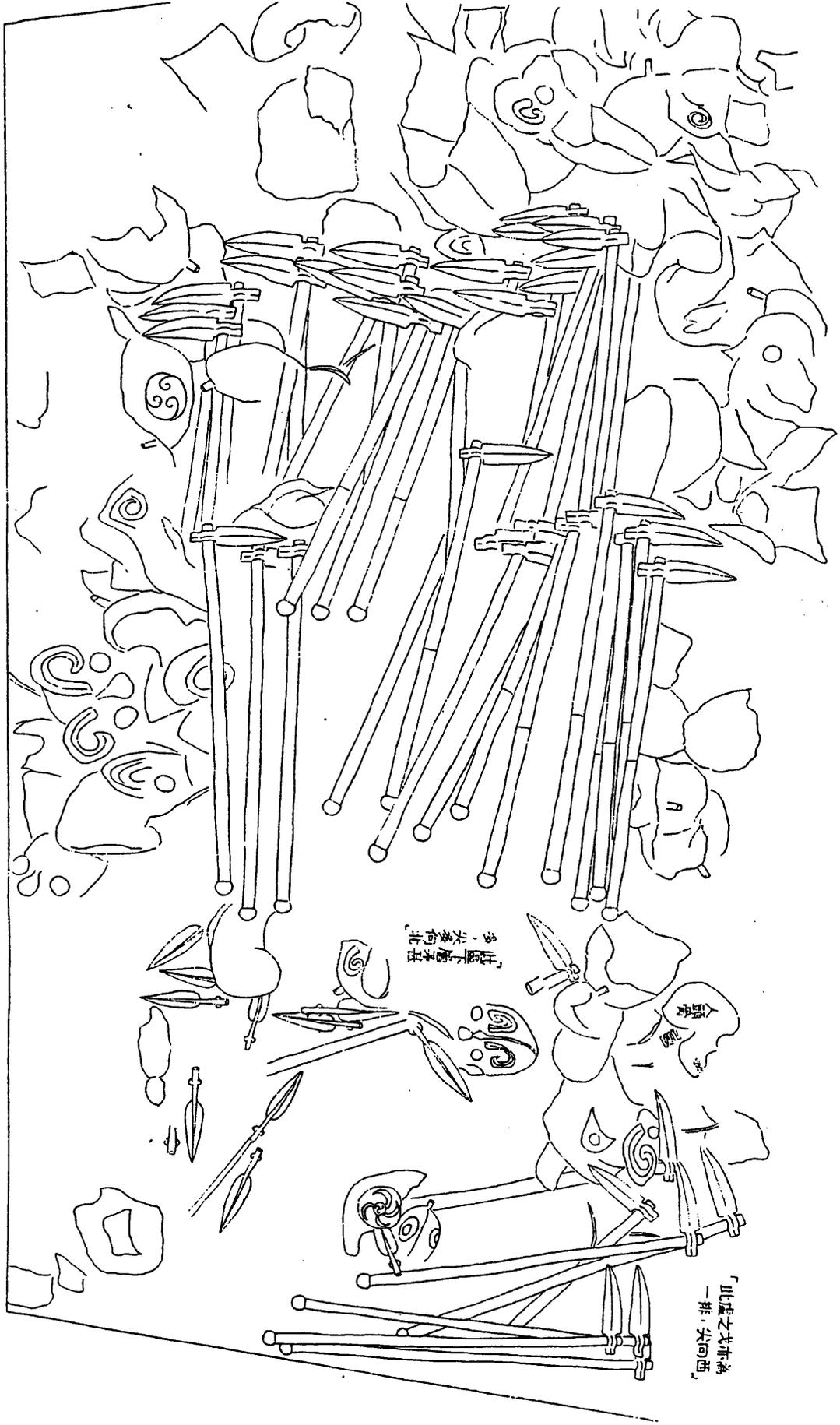
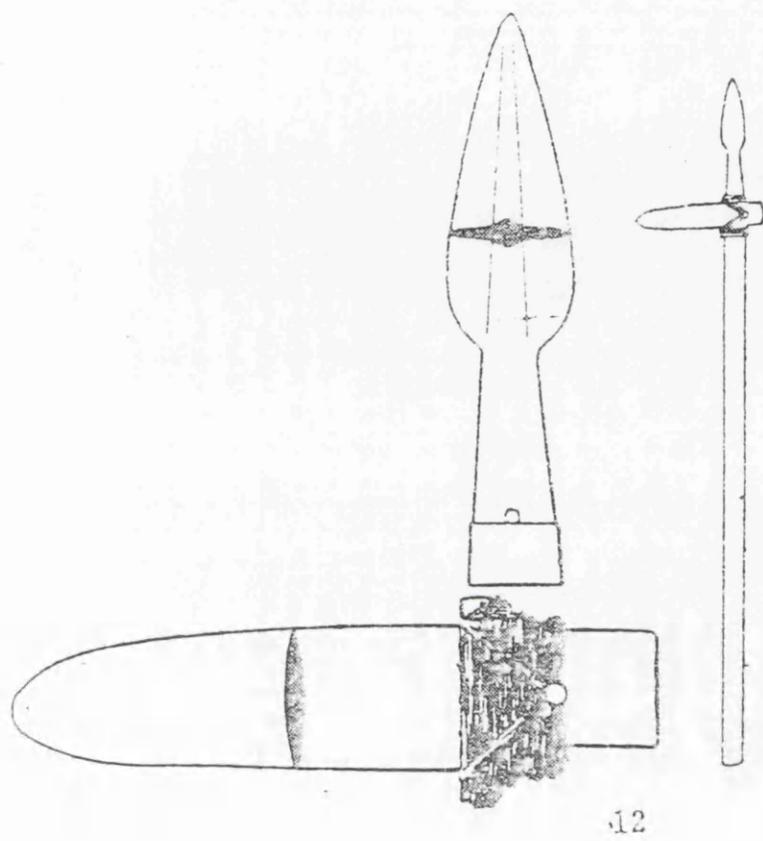


fig. 2:13-2 The reconstruction of shafting the Type V ge, Xibeigang 1004. Liang Siyong and Gao Quxun 1970, pl.25.



.12

fig. 2:14-1 Type I *Ji* from M17 Gaocheng Taixi Hebei. Beijing 1985, p.124, fig.73:12.

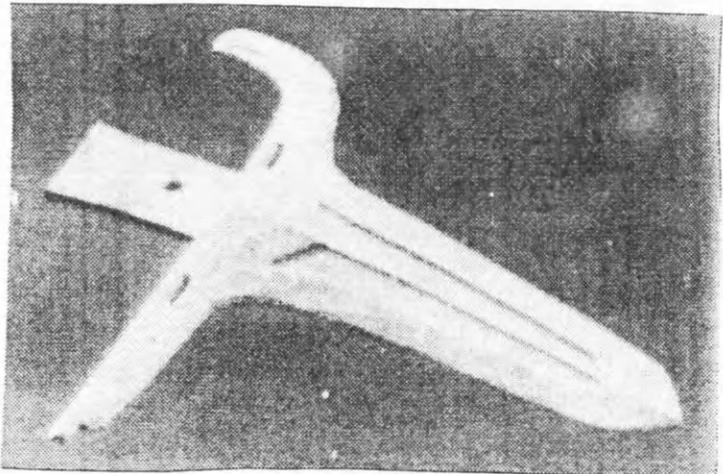


fig. 2:14-2 Type II *Ji* from Xin'gan Jiangxi, Late Shang, length 27.5 cm. WW 1991.10, pl.3:5.

following aspects:

Firstly, the self-named evidence: there are no weapons inscribed as *ji* in the late Shang dynasty. There exist a few post-Shang examples of Type I *ji* that bear self-naming inscriptions in three different ways of writing,<sup>31</sup> such as the "Cai □ *ji*" inscribed with the character "𠄎" excavated from Jiulidun of Shucheng in Anhui (fig.2:15). This *ji* is a Type IV *ge* crested with a spearhead. Both parts were excavated together connected by the wooden shaft which had rotted but traces of which had remained in the tomb. However, the two parts were cast separately.<sup>32</sup> Another example dated to 620 to 571 B.C.<sup>33</sup>, inscribed with the character "*ji*", was excavated from Xichuan, Xiasi, Henan<sup>34</sup>. The other example dated to about the fifth century B.C. and inscribed with the character "*ji*" was excavated from Suixian, Hubei.<sup>35</sup>

We can be sure that the term *ji* was used in the Chu cultural area to name the composite weapon of *ge* and *mao*. There is still no evidence to say whether the same can be said of the late Shang, but the possibility remains. It should be noted that the term *ji* has still not been found in the oracle bone records.

A more complicated relationship between term and shape is brought by the Type II *ji*. Presently there is no self-named evidence for Type II *ji* of the late Shang period. However, the composite *ge* and *mao* (fig.2:16), excavated from tomb 1193 at Liulihe in Beijing and dated to the early Western Zhou period, was inscribed *ge* instead of *ji*.<sup>36</sup> This indicated that there was a complex but close relationship between the *ge* and *ji* when they were developing and later annotations of the classic texts often confuse *ge* and *ji*.<sup>37</sup> At the same time, this is the reason why distinguishing between the two became an important issue in historical studies of weapons. This issue will be discussed below.

A second aspect concerns the typological evidence. Although Type I *ji* is different from Type II, they both have a *ge* and a cresting part above this, either cast as one piece or two. They were developed on the basis of the *ge* and seem to have been developed in order to expand its function. This assumption is supported by some of the ancient texts and by previous studies.

The third aspect of the relationship between *ge* and *ji* concerns these ancient

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31 Zhong Shaoyi (1995, p.57.), noted a fourth way of inscribing a *ge*, which is omitted in the present study.

32 KGXB 1982:2, p.233.

33 Beijing, 1991, p.319.

34 Beijing, 1991, p.20, fig.15.1.

35 Beijing 1980d, fig 156, 160.

36 KG 1990.1, p.28.

37 Wang Yi annotated the *ge* in *Chuci* as *ji*; Zhaoqi annotated the *ge* in *Mengzi* as *ji*; Kong Yingda annotated the *ge* in the "Mushi" chapter of *Shangshu* as *ji*.

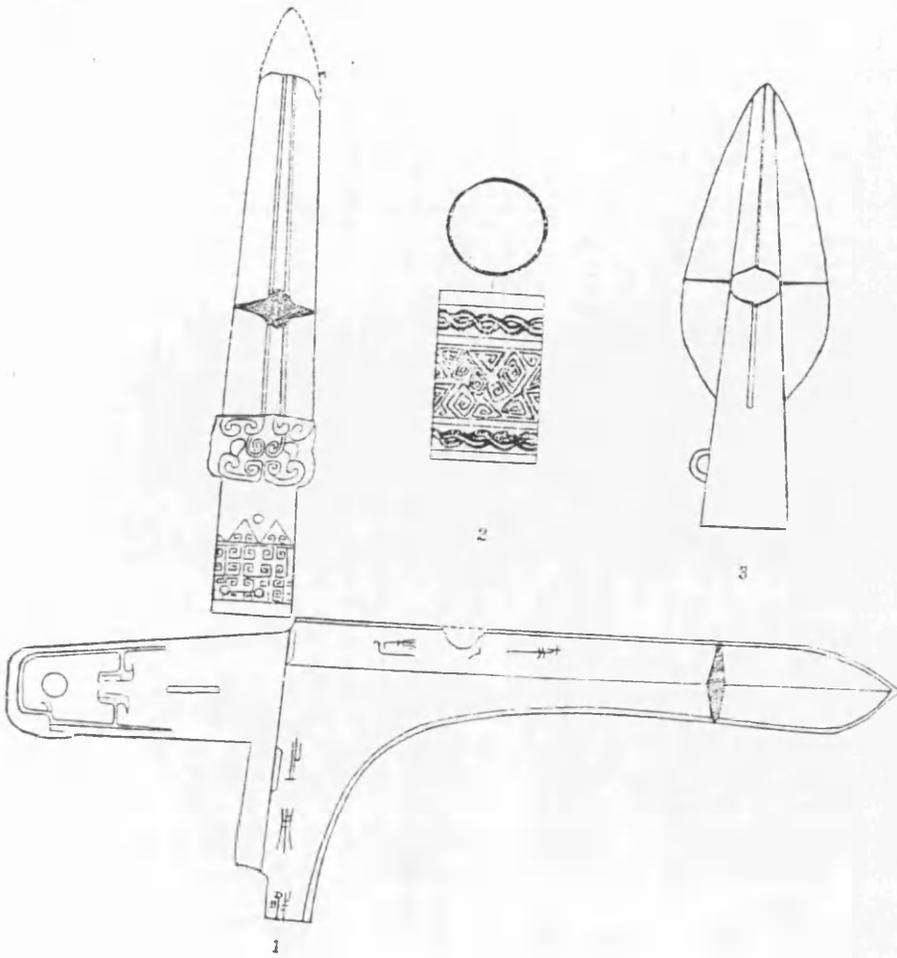


fig. 2:15 *Ji* from Jiulidun Sucheng Anhui, Late Spring and Autumn Period. KGXB 1982.2, p.233, fig.4:1.



fig. 2:16 *Ji* inscribed "ge", M1193 Liulihe Beijing, Early Western Zhou. KG 1990.1, p.28, fig.7:3.

records and previous studies.

There are many oracle bone characters incorporating the element *ge* on one side but the character *ji* has not so far been found in the oracle bone records. This may be because this type of weapon did not exist or was very uncommon during the Late Shang period.

Among classic literary sources, the "Yeshe" passage of the "Kaogongji" gives the earliest record of the *ji*. This text was written at least 600 years after the Late Shang. However, the *ji* was quite popular at the time. Therefore the record in the *Zhouli* is still very relevant to understanding the *ji*. The terms for the parts of the *ji* used in my study originate from this record, which reads as follows:

"*Ji guang cun you ban cun, nei san zhi, hu si zhi, yuan wu zhi, ju gou zhong ju yu ci, zhong san lei*" 戟廣寸有半寸，內三之，胡四之，援五之，倨句中矩與刺，重三鎰 means that: "the *ji* is 1.5 *cun* wide, the (length of) *nei* is three times that, the (length of) *hu* is four times that, and the *yuan* is five times that. The *ji* and *ci* form a right angle. It weighs three *lei*"

Owing to the lack of illustrations in the *Zhouli*, we must turn to the history of the study of the *ji* in order to explain the meaning of the text by identifying this description with the real object.

As he had done with the *ge*, Zheng Xuan, the earliest annotator of the *Zhouli*, explained the meaning of the *ji* passage according to the *san feng ji* 三鋒戟 (fig.2:3) of his time. He noticed that the terms for the parts of the *ji* were the same as those of the *ge* except the *ci* which is peculiar to the *ji*. He explained on the basis of his study of *ge* that the *hu* is in line with the shaft of the *ji*. According to him, the main difference between the *ji* and the *ge* is the *ci* which is like a *zun* (stand) for accepting the shaft.<sup>38</sup>

Cheng Yaotian's explanation of the *Zhouli* differs from Zheng Xuan's. He tried to amend Zheng Xuan's wrong explanation by using more related records of Han dynasty and the real objects of pre-Han dynasty date. Zheng Yaotian first drew an illustration of a *ji* (fig. 2:17) according to his own revised explanation. Zheng Yaotian's illustration is similar to Han Dynasty *ji* as described by Zheng Xuan and named by him as *sanfengji*.

Secondly, Zheng Yaotian tried to explain the meaning of the passage in the *Zhouli* by referring to *Shuowen jiezi*, according to which, "Ge is a weapon with branches." The *Shuowen* also recorded that "Ge is the *ji* without a crest."<sup>39</sup> Zheng Yaotian further explained the characteristics of *ji*, conversely with the record in the *Shuowen*, as a *ge* with a crest. This crest is the *ci* mentioned in the *Zhouli* and a key

<sup>38</sup> Yeshe of "Kaogongji" in the *Zhouli*.

<sup>39</sup> Xu Shen, *Shuowen*

戟

按戟廣寸有半寸內三之胡四之援五之三事并之長十八寸與戈三事并數同其長而殺於戈之廣者四分之一則輕於戈者亦四分之一矣取所殺之長截之為三而并之成廣寸半者長六寸以之為刺加於胡之上適與戈同其重故記云與刺重三釐也

瑤田又據此戟圖據記廣長之度及倨句中矩與刺重三釐之文擬之然十餘年間所見古戈不下二十餘事求一如吾所擬之戟無有也嘗竊疑之既而披前所已錄之戈及所逸而未錄者綜考之覺其內有刃而援之倨句極大畧如磬折者當即方言之區戟襲泥於倨句中矩之言遂棄之以為此不合記文之別一體不知其內之刃即所謂刺而所以與戈異者正在於此內既有刃而平出戟之為刃兵亦正主於此故記以此配胡而曰倨句中矩也戟援倨於戈援則戈援平故說文以戈為平頭戟而戟援向上如周髀望高之偃矩故方言謂之區戟也不然所見古戈何多而古戟絕無豈其然乎既辨正之猶存此圖者見考訂之難苟非所見古之多得彼此錯證而互明之鮮有不泥倨句中矩一語而強為之說以詭誤人也壬子嘉平月朔日記

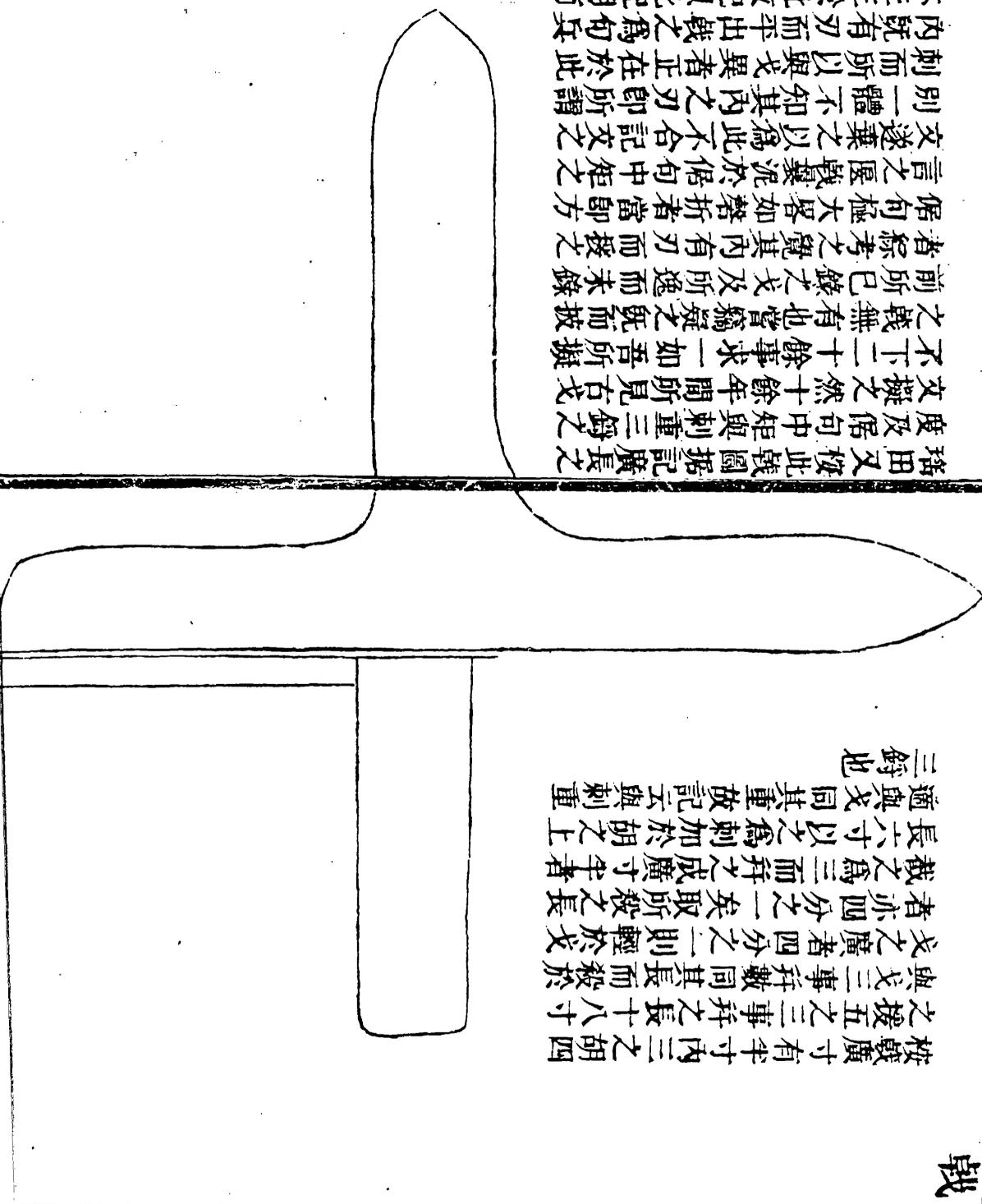


fig. 2:17 Ji. Chen Yaotian, p.5b-6a.

point to distinguish the *ji* from the *ge*. Cheng Yaotian tried to illustrate a *ji* according to his understanding of the passage about *ji* in the *Zhouli* although he hadn't seen any actual examples.<sup>40</sup> His illustration based on the *Zhouli* has been proved by later archaeological evidence to be one form of the *ji*. However, owing to the lack of examples of the *ji* as illustrated by Cheng Yaotian, he later changed his mind about the *ji* and re-illustrated it (fig. 2:18) in the form of a *ge*.<sup>41</sup> His later opinions regarding the *ji* form influenced Ma Heng who illustrated a *ji* in the form a *ge* (fig.2:19).<sup>42</sup> Thus the ambiguity between the *ge* and the *ji* was renewed.

The ambiguity of the *ji* shape was further studied by Guo Moruo.<sup>43</sup> He tried to distinguish the *ji* form from the *ge* form. Ruan Yuan<sup>had</sup> illustrated a *ji* which was close to Cheng Yaotian's first illustration. By referring to some of the excavated materials and reconsidering the *Zhouli* text and its annotations by Zheng Xuan and Cheng Yaotian, Guo concluded that the *ji* was the combination of *ge* and *mao* which were cast separately but were used together. He agreed with Zheng Xuan's interpretation of *ci* and illustrated it as a spearhead separate from the *ge*. (fig.2:20). This *ji* form which is classified as Type I *ji* in this study was thus identified as a form of *ji* for the first time.

The forms of Type I and Type II *ji* were so named by Guo Baojun on the basis of the excavated evidence from both Xincun of Xunxian (fig.2:20)<sup>44</sup> and Liulige of Huixian (fig.2:21).<sup>45</sup> Although there are only two self-named *ge* belonging to the Type II *ji* from the Western Zhou, there are more examples of self-named Type I *ji* from the Spring and Autumn and Warring States periods.

However, the more the excavated materials increased, the more complicated became the issues about the *ji*. Guo Weide<sup>46</sup> tried to widen the *ji* category to include the triple *ge* excavated from the Zeng Hou Yi tomb (fig. 2:22) because they were inscribed as *ji*. These were characterized as a double or triple *ge* with the addition of a *mao*.

The same will apply to discussion of whether the term *ji* was used or not in the Western Zhou and the possible use of the term *hui* 惠 for the *ji* form during the Western Zhou period.<sup>47</sup> In this study, I use the term which was certainly in use

40 Zheng Yaotian, p.5b-6a.

41 *Ibid*, p.38a

42 Ma Heng 1929, pp.745-53.

43 Guo Moruo 1954b, p. 104.

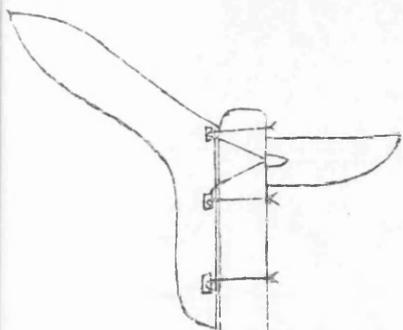
44 Guo Baojun, 1935, p.314, 326; Guo Baojun, 1964, pl.68.1.

45 Guo Baojun 1959, pl .55.1.

46 Guo Weide, 1984, pp.1108-1113.

47 Shen Rong tried to identify the term *hui* (惠) in the Guming (顧命) chapter of *Shangshu* with the Type I *ji* and considered that the term was used during the Western Zhou period. (Shen Rong, 1992b, pp.20-2.) However, there is still no self-named evidence for his identification.

戟鑿秘銜內纏縛之圖



戟秘文有六尺

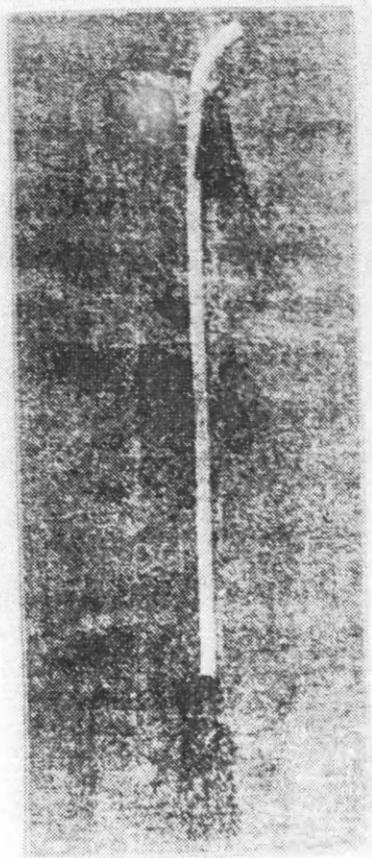


fig. 2:18 "Ji", Cheng Yaotian, p.38a.

fig.2:19 "Ji", Ma heng 1929, p.750.

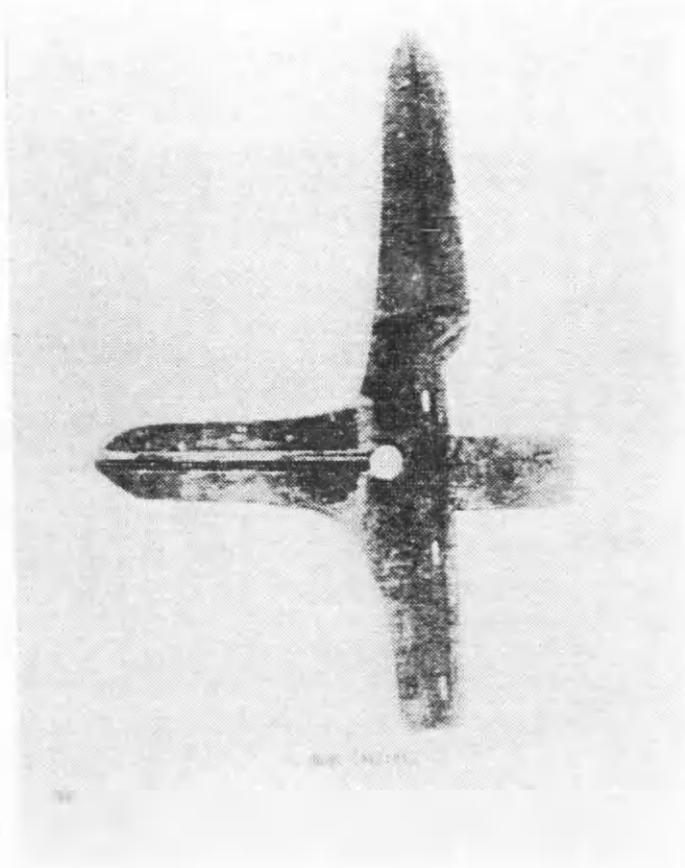


fig. 2:20 *Ji*, M2 Xincun Xunxian Henan. Early Western Zhou, length 27.35 cm. Guo Baojun 1964, pl.21:2.

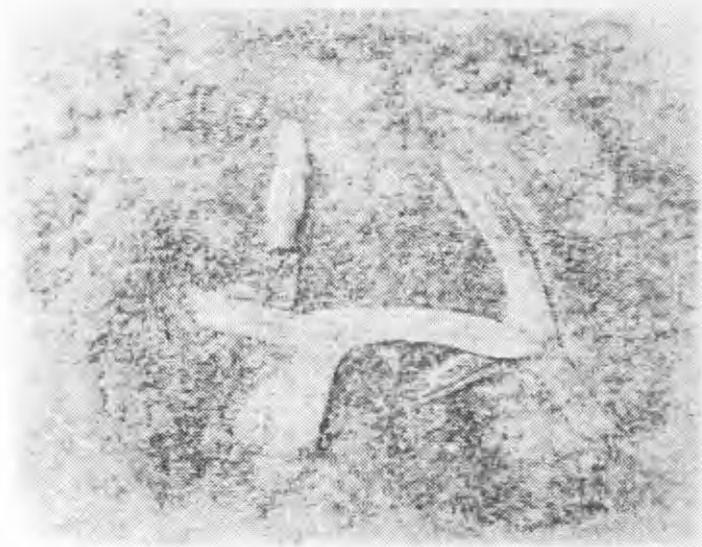


fig. 2:21 *Ji*, M75 Liulige Huixian Henan. Spring and Autumn period. Guo Baojun 1959, pl.55:1.

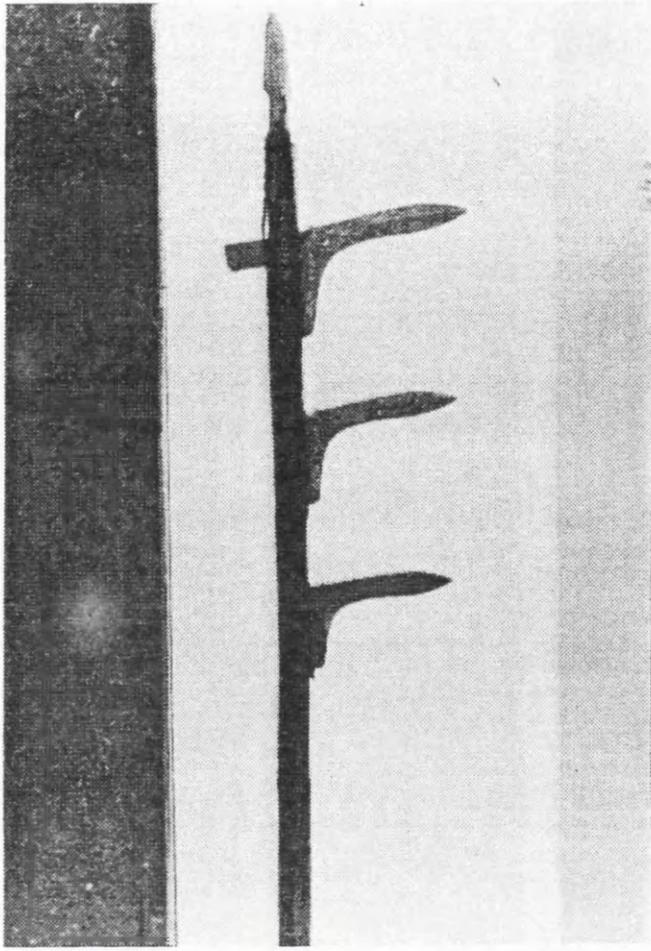


fig. 2:22 *Ji*, Zeng Hou Yi tomb, Suixian Hubei, Late Spring and Autumn Period. Beijing 1989, p.269, fig.159.

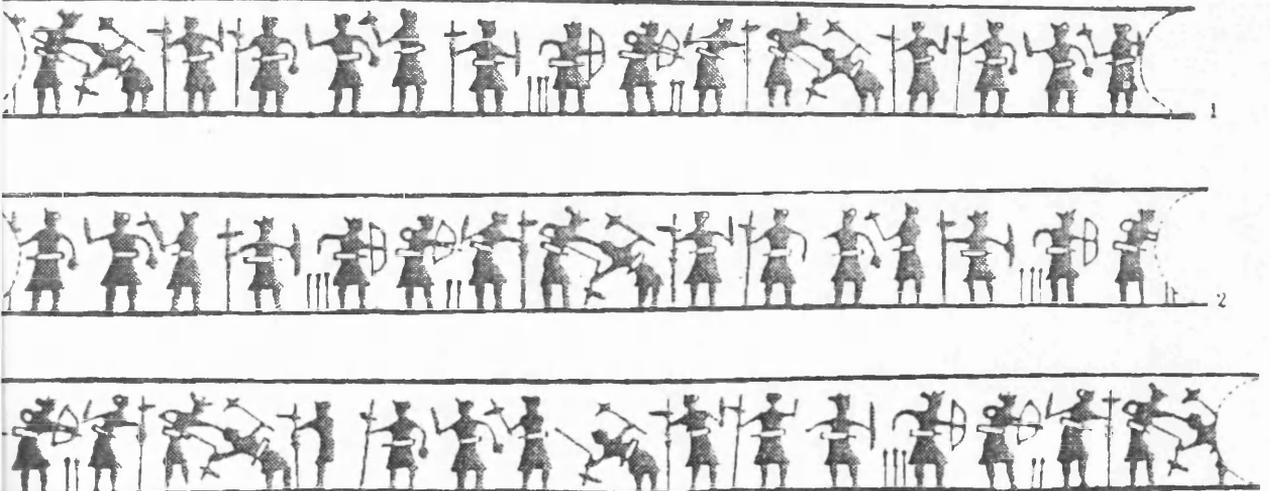


fig. 2:23 Rubbing of soldiers holding *ge* and *jian*, M1 Shanbiaozhen Jixian Henan, Warring States Period. Guo Baojun 1959, p.22, fig. 10:1.

during the Spring and Autumn and the Warring States period.

## b) Function and typology for the parts of the *ji*

The *ji*, as one type of weapon, was pictured on the bronze vessels of the Warring States (fig.2:23).<sup>48</sup> It was also so recorded in the ancient texts.

During the war between the states of Zheng and Song, the people of Zheng used the *ji* to fight.<sup>49</sup> In the same year, Duke Ling of Qin planned to murder Zhao Dun. Ling Zhe, as a guard of Duke Ling, tried to protect the duke with a *ji*. In the *Shijing*, the *ji* was mentioned together with the spear.<sup>50</sup> Such records date to the early Spring and Autumn Period. The function of *ji* was only vaguely referred to, and was not recorded more concretely until *Yanzi chunqiu* where it is said: "*Ji* is used to hook the neck".<sup>51</sup> As previously noted, Zheng Xuan classified both *ji* and *ge* as *goubing* or hooking weapons in his annotation of the passage in the *Zhouli* which is so far the earliest record about the function of the *ji*. If his annotation is right, the function of the *ji* is no different from that of the *ge*.

However, according to both the characteristics of the form of the *ji* and the passage in the *Zhouli*, the *ji* might have had an additional function. The terms for the parts of the *ji* in the *Zhouli* are almost the same as for those of the *ge*, except for *ci*, which forms the upper part of the weapon above the *ge*. This part may have served the function of *ci* (to stab), as was noticed by Guo Moruo.<sup>52</sup>

This function had evolved during the late Shang period as evidenced by Type I *ji*. However the same function can not be applied to the Type II *ji*. The upper part of the Type II *ji* which was connected to the main body of the weapon, is hooked backward without a bladed edge. Therefore, the Type II *ji* of the Late Shang period may have served to hook in more than one direction by using both the lower part, termed the *hu*, and the upper part.<sup>53</sup>

In a word, the functions of the *ji* can be either a combination of hooking and piercing or hooking alone but in more than one direction.

Some scholars suggested that the length of the shaft for the *ji* was probably related to its function, thus the length of the *ji* became another issue for debate among

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48 Guo Baojun 1959, p.22, fig12.1; Another scene is found on a *hu* excavated from Chengdu in Sichuan. WW, 1976, 3, pl.2.

49 「鄭人入于井，倒戟而出之」 Third year of Duke Ding (505BC) *Zuozhuan*

50 "Wuyi" passage of the "Qin Feng" chapter of the *Shijing*

51 *Yanzi chunqiu*, 5, p.125 Jiasong, inner chapter.

52 Guo Moruo, 1954b, p.104.

53 This type of *ji* was excavated from Xincun of Xunxian (fig 2:21) and was named by Guo Baojun as *gouji* 句戟.

scholars.<sup>54</sup> If the *ji* was used for piercing, the shaft should be long. If it was used for hooking, the long shaft would not be necessary.<sup>55</sup>

The Type I *ji* at M17 of Taixi, Gaocheng<sup>56</sup> is with the remains of the wooden shaft in 80 cm. It is obvious that the Type I *ji* during the Late Shang Period could be used by warrior only. It could be used on the charriots afterwards. The remains of the shaft of *ji* of the later half of 5th century have been excavated,<sup>57</sup> and although the *Kaogongji* also recorded information about it.<sup>58</sup>

In conclusion, the terms for the parts of the *ji* are basically the same as those of *ge* such as *nei*, *luan*, and *hu*. The upper part of the *ji*, which is lacking in the *ge*, is named *ci* according to the *Kaogongji*. However, as the upper part of the Type II *ji* served for hooking, not for piercing, it is referred to as *gou ji* 句戟.

### 2.2.3.3. Yue axe

#### a) Terminology

Inscriptions on oracle bones and bronzes indicate that the *yue* and its wooden shaft were fastened to each other. Examples can be seen in (fig.2:24.)<sup>59</sup> (fig.2:25)<sup>60</sup>

By custom the term *yue* is used for all end-bladed implements with curved blade and straight shafting-plate (fig.2:26-2). At present no objects have been unearthed that are self-inscribed as *yue* axes. The only self-inscribed weapon of this shape was uncovered at Sanji gongshe, Pingshan, Hubei (between 1974 and 1978), at the #2 pit for chariots and horses of the Zhongshan state tombs, yet the inscription is not *yue*, but "鉞" (pronunciation unknown)<sup>61</sup>. However, this word does not appear in any ancient literary documents. For centuries, it has been the custom of scholars to use the term *yue*, which appears in literary documents. As the accuracy of this term is not clear, some scholars suspect it may be a synonym with another now lost word. This type of weapon mainly flourished in the late Shang to early Western Zhou. The piece from the state of Zhongshan mentioned above belongs to the Warring States period,

<sup>54</sup> Guo Moruo, 1954b, p.104; Guo Weide 1984, p.1110; Li Jianmin. 1991, p.128.

<sup>55</sup> Guo Moruo, 1954b, p.104.

<sup>56</sup> Beijing 1985c, p.134.

<sup>57</sup> The length of the shaft of *ji* is 283.5 cm. KGXB 1972.1, p.65.

<sup>58</sup> Cheng Xian annotated *Chang* (常) of *Che ji Chang* (車戟常) in *Kao gong ji* as eight *chi* (尺). According to Chen Mengjia's study, one *chi* is equivalent to 23cm. One *chi* (尺) of Chu state is even less than 23 cm. Therefore the shaft of *ji* is about 184cm (according to *Kaogongji*, Chen Mengjia, 1964, p.314.

<sup>59</sup> Li Xiaoding 1974, p.4253.

<sup>60</sup> Rong Geng 1925, p.799.

<sup>61</sup> The details of the inscription were not given in the original report (WW 1979.1, p.4), but are provided in the catalogue of the Zhongshan exhibition held in Japan, Tokyo, 1981 d, pl.27.

片 藏, 十七, 四, 片 藏, 四, 六, 一, 片 藏, 一, 二, 六, 二, 片 藏, 二, 一, 六, 三, 片 一  
 藏, 二, 三, 九, 六, 片 藏, 二, 四, 五, 一, 十, 餘, 三, 二, 片 餘, 八, 二, 片 拾, 一, 十, 片 拾, 二, 十  
 二, 片 拾, 一, 七, 二, 片 拾, 一, 七, 二, 片 拾, 一, 三, 六, 五, 片 拾, 二, 二, 七, 八, 片 拾, 前, 三, 六  
 六, 四, 片 拾, 前, 三, 四, 六, 片 拾, 前, 三, 五, 一, 片 拾, 前, 三, 十, 六, 四, 片 拾, 前, 七, 十, 三, 四, 片 拾, 後, 六  
 六, 四, 片 拾, 後, 六, 六, 六, 片 拾, 後, 六, 十, 二, 六, 片 拾, 後, 三, 二, 一, 片 拾, 後, 一, 一, 七, 片 拾, 後, 一, 十, 六  
 二, 片 拾, 後, 十, 一, 十, 三, 片 拾, 後, 二, 六, 十, 一

fig. 2:24 Inscription "Yue" on the oracle bones. Li Xiaoding 1974, 14. 4253.

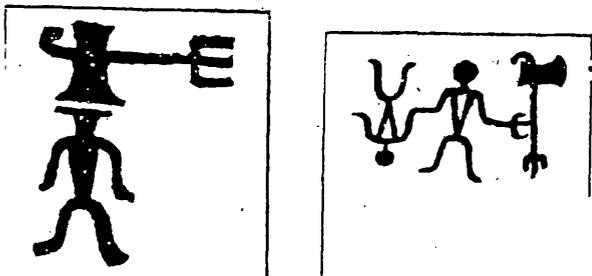


fig. 2:25 Inscription "Yue" on bronze vessels. Rong Geng 1925, p.799.

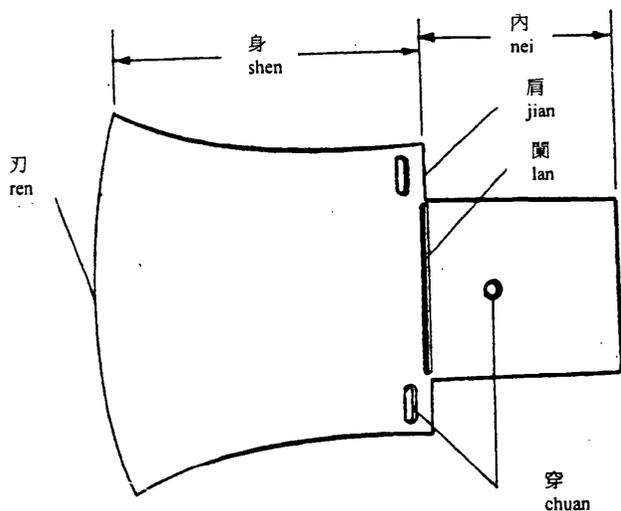


fig. 2:26-1 Terminology for the parts of the "yue". Cheng Dong and Zhong Shaoyi 1990, p.27, fig.2:31.

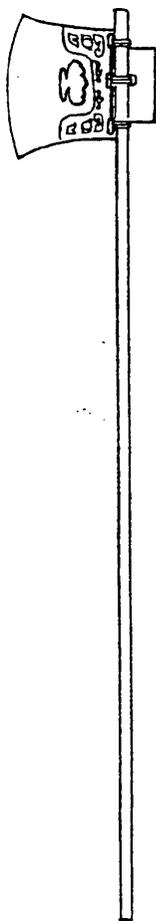


fig. 2:26-2 Reconstruction of the shafting of the yue. Cheng Dong and Zhong Shaoyi 1990, p.27, fig.2-32.

by which time weapons of that shape were quite rarely seen. The type is most often seen in the Anyang area from the late Shang period. Moreover, Zhongshan was not in the Central Plains cultural sphere, but rather in that of the north. Furthermore, it is the single such specimen so far known. In light of all this, one must await further evidence before we can determine whether the character was a late word used in the outlying regions.

However, whether all other items of this form are to be called *yue* is still not commonly accepted. Objective evidence is lacking as no self-inscribed specimens have been found. The ancient literary documents, as well, contain merely verbal descriptions, and are bereft of illustrations. Consequently, the three terms *qi* 戚, *yue* 鉞, and *fu* 斧 are frequently used interchangeably in writings. Various writings dating from the Song to the Qing dynasties, such as *Xuanhe bo gu tu*, (宣和博古圖)<sup>62</sup> and *Xi Qing gu jian* (西清古鑑)<sup>63</sup> employ the word while Chen Mengjia chose to use the word<sup>64</sup>. In the past several decades, an increasing number of bronze axes have been recovered in archaeological digs, and instances of the interchangeable use of these three terms have accordingly become common.

This complicated relationship among the three terms began in ancient times. In the *Zuo zhuan*, in the records concerning the fifteenth year of the reign of Duke Zhao, the words *qi* 戚 and *fu* 斧 are used in tandem, while the annotation by Kong Yingda further adds a statement that the other two were types of *fu* (axes). It appears that the belief that the three are synonyms has its roots there. Although they are all axes, there must be some differences among the three. Throughout the ages, numerous scholars of ancient texts have attempted to determine what these differences might be. The standard for determining this lies in the size of a particular piece. For instance, in the "Ku Ming" chapter of the *Shang shu*, a person in ceremonial dress carries a *yue*; the annotation by Zheng Xuan reads: "*yue* is a large *fu*." Likewise, in Kong Yingda's annotation of the events of the fifteenth year of the reign of Duke Zhao it reads that "a *yue* is large and a *fu* is small. In *Liudao* (六韜), we find the celestial *yue* is also called the Dage *fu*. It weighs eight *jin*, and has a wooden shaft that is five *chi* long. Evidently, a *yue* is a large version of the *fu*.

Thus we see from these literary documents that the *yue*, *qi*, and *fu* are in the same family, and are distinguished merely on the basis of their size. However, the standards for determination are not absolute. There are definite proportions and sizes. Furthermore, the *yue* axes mentioned in the ancient documents also vary in size among themselves. The Zhou Benji of the *Shiji* (史記) contains the passage reading:

<sup>62</sup> *Bogutu* vol.26, pp.49-50.

<sup>63</sup> *Xiqing gujian* vol.37, p.5.

<sup>64</sup> Chen Mengjia 1946, p.77.

Duke Dan of Zhou held a large *yue*, the Duke of Bi held a small *yue*. Obviously, not all *yue* were large. The differences between a *yue*, a *zi*, and a *fu* would seem to be determined not merely on the basis of size.

The contemporary scholar Fan Yong, in his work on *fu* and *yue* axes of the Southwest, has come up with relatively scientific definitions of the *fu* and *yue* based on differences in shape and other characteristics. For instance, he takes note of whether or not there are shoulders (the protruding portion between blade and shafting-plate), and the degree of the angle of the rounded blade. Those of over 100 degrees are *yue*, those less than 90 degrees are *fu*.<sup>65</sup> However, as this method of distinguishing the *yue* from the *fu* has not yet been widely accepted, this catalogue shall use both *yue* axe and *fu yue* axe for this type of weapon with the blade running parallel to the wooden shaft.

Discussions in ancient texts of end-bladed implements whose wooden shafts run parallel to the blade do not use the character 鉞. Instead the popularly accepted *yue* which seems the most appropriate has been used.

The terminology for the parts of *yue* is simply adopted from these uses for the *ge*, such as *chuan* and *lan* (fig.2:26-1).<sup>66</sup>

## b) Function

The evidence gathered from ancient documents, inscriptions on bronzes, and archaeological site conditions makes it evident that those persons who used the *yue* axe carried unique social status. The use of the *yue* axe was likewise extremely special. The inscription on the *Bo pan* of Guo Jizi, of the Western Zhou dynasty, reads: "A *yue* was bestowed for the receiver to levy war upon the barbarians of the south." From this it appears that the *yue* axe was closely related in significance to the matter of making war. It was bestowed upon generals who had the right and power to levy war. Moreover, ancient documents record that the *yue* was used by the kings who had the highest social status.<sup>67</sup> "King Wu had a banner on his chariot, and he carried a *yue* with great sincerity."<sup>68</sup> This clearly states that King Wu of the Zhou dynasty had a *yue*. "When King Wu of Zhou rose up against King Zhou of the Shang dynasty, "King Wu leaned upon the yellow *yue* in his left hand, and held a white banner in his right hand to direct the troops." These were members of the aristocracy or generals as seen in the aforementioned King Zhou, King Bi, and Guo Jizi. Under special circumstances, the warrior could use the *yue*, a recorded instance of which

<sup>65</sup> Fan Yong, 1989, p.161.

<sup>66</sup> Cheng Dong, 1990, p.27.

<sup>67</sup> Yin benji, *Shiji*.

<sup>68</sup> This comes from the "Ch'eng Fa" poem in the "Shang Sung" section of the *Book of Odes*.

can be found in the "Gu Ming" chapter of *Shang shu*: "Someone stood in ceremonial dress, holding a *yue*." <sup>69</sup>

Due to the plundering of the royal Shang tombs, and the fact that the tombs of the Western Zhou kings remain undiscovered, it is difficult to ascertain whether or not the *yue* accompanied burials. Speaking on the basis of archaeological site conditions, statistics show that all tombs in which bronze *yue* axes are found are larger than others, with inner and outer coffins and full sets of bronze ritual implements. A majority also contain the skeletons of people and animals sacrificed in the burial. <sup>70</sup> No doubt the persons accompanied in burial by bronze *yue* axes were of high social status.

### c) Typology

There are three types of *yue*-axe. Type I is *yue*-axe with tang (fig.2:27-1). Type II is *yue*-axe with socket. Type II can be subdivided into four separate kinds, depending on the length of the tubular socket in relation to the width of the blade.

Type IIa: In this type, the length of the socket is shorter than the width of the blade. There is a flat tang (*nei*) below the socket (fig.2:27-2).

Type IIb: In this type, the socket extends a short way above and below the blade. There is a flat tang (*nei*) about the same width as the blade, behind the socket.(fig.2:27-3).

Type IIc: In this type, the socket is longer than the width of the blade, but does not extend above it. There is a column behind the socket.(fig.2:27-4).

Type IId: In this type, the socket extends above and below the blade, and is over twice as long as the blade width. It has no flat tang (*nei*) (fig.2:27-5).

Type III: this type, instead of a flat *nei*, has a cylindrical socket parallel to the blade edge (fig.2:27-6)

### 2.2.3.4. *Mao*- spearhead 矛

#### a) Typology and evidence for the terminology

Four types of spearhead are grouped together under the name *mao*. Their common characteristics are the two main parts: a two-edged blade of leaf-shape known as *ye* 葉, and a tubular socket referred to as *qiao* 𣪠. The direction of the blade is always in line with the shaft. The origin of the terms for the parts of the *mao* (fig.2:28) will be discussed later. The spearheads are divided into four types on the basis of the shape of the *ye* and the relationship between the *ye* and the *qiao*. They are

<sup>69</sup> *Yue*-axe is also considered as an instrument of torture. *Guoyu Luyu* (國語,魯語) recorded: the weapon is for the greatest penalty; the *fu-yue* is for the secondary penalty. It is obvious that the *fu-yue* was also used as instrument of torture. The inscription on the *yue*-axe in the pictorial form of a *yue*-axe on the top of a person (BMFEA, 1948) also suggests that the *yue*-axe could be an instrument of torture. However, the *yue*-axe has only been included in this study as a weapon.

<sup>70</sup> Yang Xizhang 1986b, p.135.

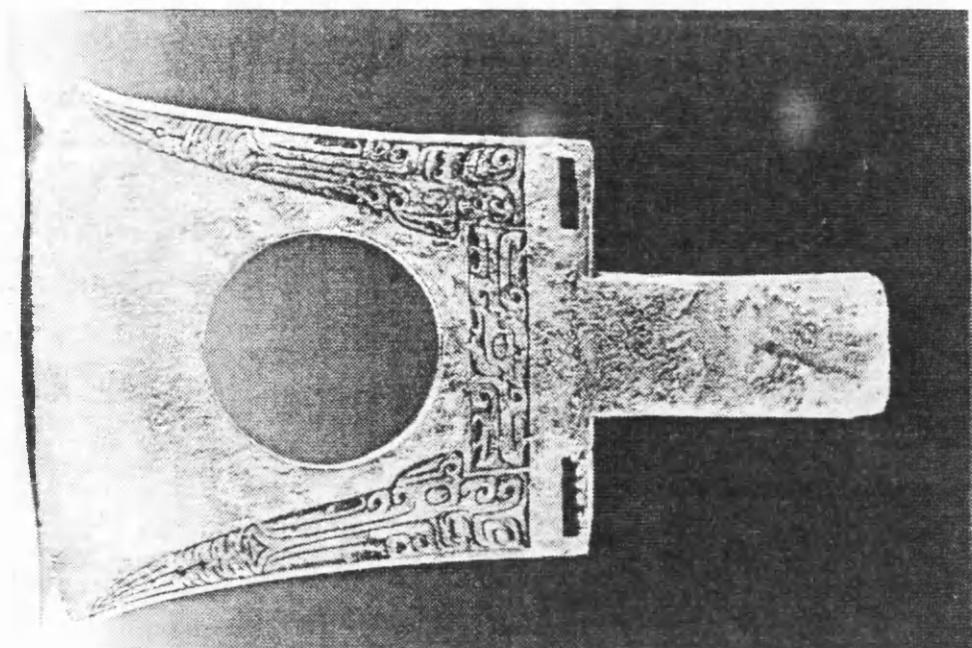


Fig. 2:27-1 Type I *yue*, Panlongcheng Huangpi Hubei, length 40 cm. Beijing 1985d, vol.4, pl.22.

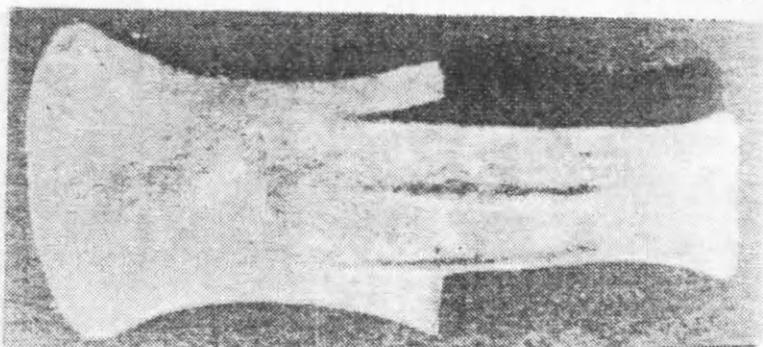


Fig. 2:27-2 Type IIa *yue*, Gaohong Liulin Shanxi, length 15.7 cm. KG 1981.3, pl.4:2.

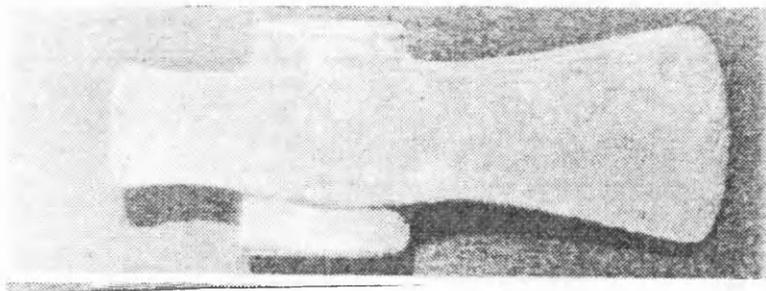


Fig. 2:27-3 Type IIb *yue*, Gaohong Liulin Shanxi, length 13.7 cm. KG 1981.3, pl.4:1.

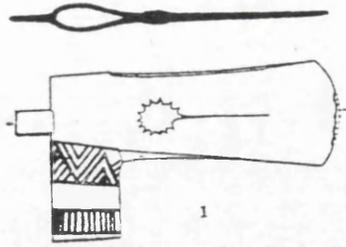


fig. 2:27-4 Type IIc *yue*, Dahongqi Xinming Liaoning. WW 1977.12, p.28, fig.8:1.

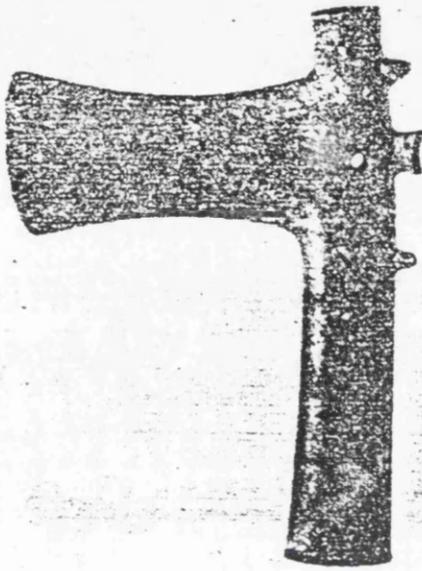


fig. 2:27-5 Type IIId *yue*, Caojiayuan Shilou Shanxi, length 18.7 cm. WW 1981.8, p.50.

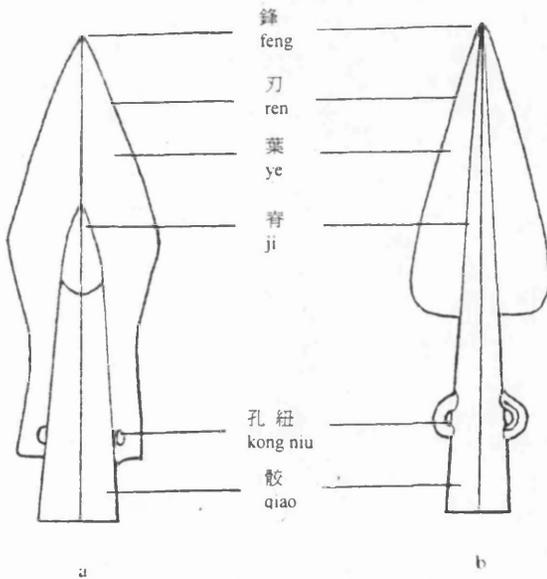


fig. 2:28 The terminology for the parts of the *mao*. Cheng Dong and Zhong Shaoyi 1990, p.25, fig.2:25.

as follows: (fig.2:29)

Type I: From the point of view of the profile as a whole, the *ye* and *qiao* are continuous with no obvious demarcation between them. The hollow cone-shaped socket is continuous from the top to the base of the weapon. (fig.2:29-1)<sup>71</sup>

Type II: In this type there is a clear distinction between the *ye* and the *qiao*. The *ye* is triangular. The hollow of the *qiao* extends through the length of the weapon, wide at the bottom and narrowing towards the top. There are two loops on the *qiao*, one on each side near the mouth.(fig.2:29-2)<sup>72</sup>

Type III: The profile of the *ye* in this type is longer in contrast to a shortened *qiao*. The two parts are clearly distinguished from each other. However, the shape of the *ye* is not triangular as in Type II but is elongated downward as lateral flanges along the socket; these flanges incorporate the two loops. The hollow of the socket is much shorter than in Types I and II and ends below the mid-point of the blade.(fig.2:29-3)<sup>73</sup>

Type IV: Type IV is similar to Type III with a short socket which stops much below the mid-point of the blade. However, the overlap between the *ye* and *qiao* is the shortest among the four types of spearhead. The *ye* is much narrower and shorter, contrasting to the elongated *qiao*.(fig.2:29-4)<sup>74</sup>

Type V: Type V carries a long socket *qiao* and a short *ye*. The cross-section of the *qiao* is an ovoid.<sup>75</sup>(fig.2:29-5)

The above five types are named as *mao* on the basis of the following evidence:

(i) Self-named evidence. No self-named *mao* have yet been excavated from the Late Shang period. However, several later specimens of the spear have been found that are inscribed with the Chinese character *mao* (spear), such as the Wu Wang Fu Chai spearhead unearthed at the M5, Ma Shan brick factory in Jiangling, Hubei and dated to 495-473 B.C. (fig.2:30). The inscription uses the character, the equivalent of *mao*.<sup>76</sup> The form of this spearhead shares common characteristics with the Types I to IV, such as the two-edged leaf-shaped body and the shaft socket, although there are some slight differences. The term *mao* was used in the state of Wu during the Spring

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<sup>71</sup> KG 1983.2, p.129, fig.5:15.

<sup>72</sup> KGXB 1979, p.92, fig.67.8.

<sup>73</sup> KGXB 1979.1, p.92, fig.67.1.

<sup>74</sup> KGXB 1979.1, p.92, fig.67.6.

<sup>75</sup> WW 1991:10, p.10.

<sup>76</sup> Hong Kong 1984, p.13, fig.10.



fig. 2:29-1 Type I *mao*, M4 Sanjiazhuang Anyang. KG 1983.2, p.129, fig.5:15.

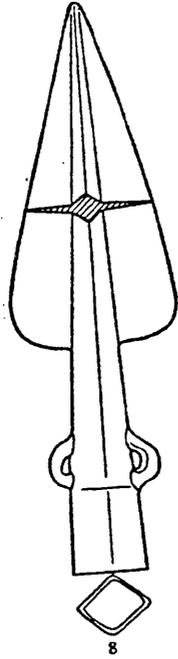


fig. 2:29-2 Type II *mao*, M729 western sector of Yinxu. KGXB 1979.1, p.92, fig.67:8.

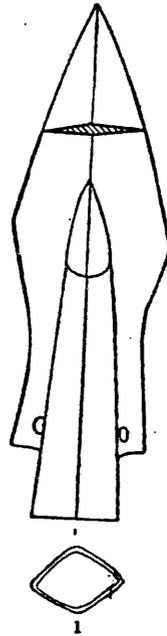


fig. 2:29-3 Type III *mao*, M1118 western sector of Yinxu. KGXB 1979.1, p.92, fig.67:1.

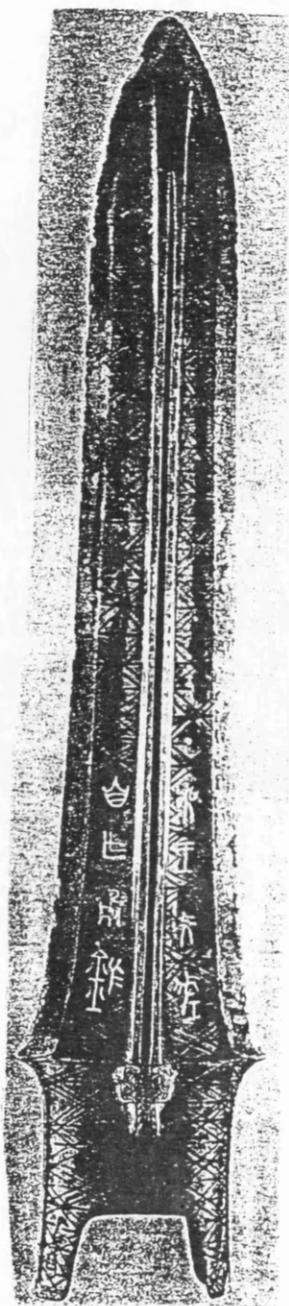


fig. 2:29-4 Type IV *mao*, fig. 2:29-5 Type V *mao*, fig. 2:30 *Mao* of Fu Chai,  
 1374 western sector of Dayanzhou Xin'gan Jiangxi. length 29.5 cm. Hong Kong  
 Yinxu. KGXB 1979.1, WW 1991.10, p.10, fig.11:2. 1984, p.13, fig.10.  
 .92, fig.67:6.

and Autumn period to refer to weapons which shared the common characteristics mentioned above. However, a weapon excavated at Baoding, Hebei, called the "spear of King Xi of Yan" has all the common characteristics of the *mao* but is inscribed with the character "*kou*" 鉤.<sup>77</sup> Perhaps the terms referring to the spear differed from region to region during the Eastern Zhou period. From presently available evidence, one cannot definitely conclude that the term *mao* was used to name the spearhead during the Late Shang period. However, the term *mao* had been used to name the spearhead no later than the Spring and Autumn period.

(ii) Evidence from bronze inscriptions. The term *mao* has not yet been found on the oracle bones, but it had been used in bronze inscriptions. The Dong *gui* 冬簋 excavated from Fufeng in Shaanxi, which is dated to the middle Western Zhou period (c. tenth century B.C.), was inscribed with characters for three types of weapon: *ge*, *mao* and *gong* (the crossbow)(fig.2:31).<sup>78</sup> This evidence shows that the term *mao* has been used to name a type of weapon during the tenth century B.C.

(iii) Evidence from classic literary sources: The term *mao* is a common term for weapons in the ancient texts such as *Shangshu* and *Shijing*, *mao* often appears in connection with *ge* and *ji*. In the *Shijing* the term *mao* appears in the "Qingren" passage of the "Zhengfeng" chapter, in the "Bigong" passage of "Lusong" and in the "Nanshan" passage of "Xiaoya." *Mao* also appears in connection with *ge* in the "Mushi" and "Guishi" passages of *Shangshu*.

On the basis of the above evidence, the term *mao* was already in use to denote a kind of weapon no later than the middle Western Zhou period. The term *mao* was inscribed on a weapon characterized by a double-edged spearhead above with a shaft tube below it no later than the Spring and Autumn period. Owing to the lack of direct evidence from the late Shang period, the term and the definition of its form is adopted from that of the later period in this thesis.

#### b) Function and terminology for the parts of the *mao*

The function of the spear is not recorded in the ancient records. However, in the *Zhouli*, there is a category *cibing* (piercing weapon) which is distinguished from the category of *goubing* (hooking weapon). Zheng Xuan noted that the *mao* belonged to the *cibing*, or piercing weapons. Zheng Xuan's understanding about the function of the *mao* can be examined from the point of view of shape. The point of the blade is in line with the shaft, implying that the *mao* is for piercing. Although the spearhead varies in shape, the edges of the blade always remain parallel with the shaft-tube.

<sup>77</sup> Beijing, 1980a, p. 141.

<sup>78</sup> WW 1976.6. p.57, fig.17.

The terminology which is used in this thesis for the parts of the *mao* mainly originates from *Fang Yan* 方言. According to the *Fang Yan*, the shaft of *mao* is named *jin* 矜; the *qiao* 骹 or socket of the *mao* is narrow.

### 2.2.3.5. Knife

#### a) Typology

A large number of knives have been excavated and dated to the Late Shang period. However, most of them are thin and small. They are considered to be a type of tool rather than a weapon.<sup>79</sup> Only some forms of knife which appear both large and strong are included as weapons in this study.

Three types of knife are grouped together under the term *dao*. They have the following characteristics in common: The knife consists of two main parts: the main body with a blade on one side, and an extension to serve as a handle or a piece for supporting another material which would form the handle. The handle is parallel to the blade.

Knives are divided into three types on the basis of the profile of the knife and the type of handle.(fig.2:32)

Type I is characterized by the concave profile of the main body. The blade curves upward to meet the concave back at a sharp angle at the tip. At the other end of the blade, there is a small tab which is too small to be used as a handle and must have been used to attach a handle of a different material.(fig.2:32-1)

Type II is characterized by the unbroken concave profile of the back of the whole of the knife and handle. For knives of this type, the blade and handle are distinguished from each other along the lower edge, where the blade joins the handle. The depth of the handle is smaller than that of the blade, and there is often a hook between the handle and the blade.(fig.2:32-2)

Type III is characterized by its large size and backward hooked end.(fig.2:32-3) The lower edge of the blade is parallel to the back of the knife. Both edges run horizontally and curve upward and back. The handle, perhaps made of a different material is supposed (fig.2:32-3a) to be attached to the back (fig.2:32-3b) or to be inserted into a ring on the reverse of the back (fig.2:32-3c).

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<sup>79</sup> Chen Zhida, 1989, p.331.



fig. 2:1 "Mao" and "ge" on the inscriptions of Dong gui. WW 1976.6, p.57, fig.17.

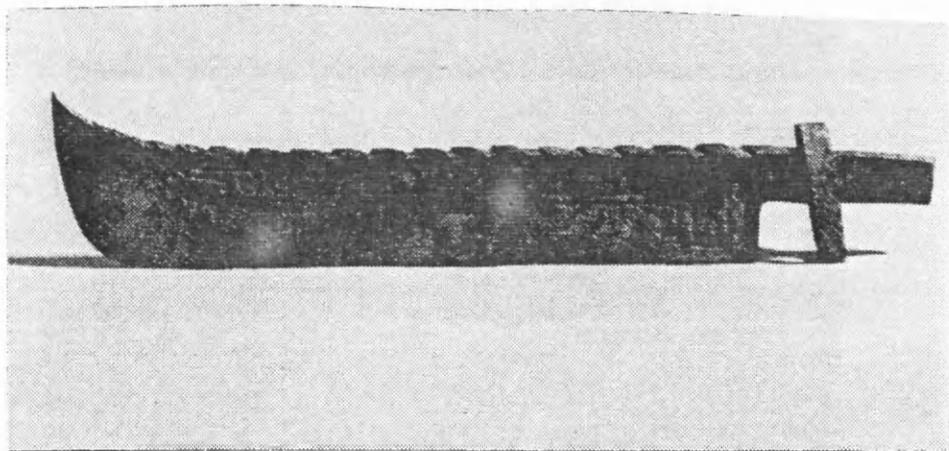


fig. 2:2-1 Type I Knife, Dayangzhou Xin'gan Jiangxi, length 54 cm. Hong Kong 1994, pl.56.

### 2.2.3.6. 短剑/Dagger

#### a) Typology

Two types of ~~dagger~~ are grouped together under the name *jian*. Their common characteristics are the two main parts: a double-edged blade and a short handle.

Type I is double-bladed with a lan between the *yuan* and the handle which is hollow socketed (fig.2:33-1)<sup>80</sup>

Type II differs from Type I in two aspects. (fig.2:33-2) First, it is characterized by the arched profile of the whole body. Second, the handle is often decorated with either an animal head or a ring or rattle pommel. This type of sword is often short, about 20-30 cm, and is normally categorized as dagger. It is often named as curved dagger.

### 2.2.3.7. Bow-shaped implement (fig.2:34)

#### a) Typology

There are two types of the bow-shaped implement. The type I (fig.2:34-1)<sup>81</sup> is characterized by an arched body. Arched projections extend from both ends of the object and these ends are embellished with a rattle or an animal head. While it is possible for this type to rest on the tips of the two projecting arms, the construction of this object cannot maintain balance on the tips.

The type II (fig.2:34-2)<sup>82</sup> can be balanced both on the rattle ends as well as on the two underside loops. Another significant difference is that the body of the second type is a rectangular plate, without any curvature, with the addition of two small loops fixed to the underside.

#### b) Function

The second form of the bow-shaped implement as described above lacks the curve in the body which hosts two loops on the underside, differing from the first type which has a bowed body and no loops on the underside. These differences are possibly related to the function. The characteristics of the bow-shaped implement were the major factors which Shi Zhangru used to propose this object was possibly used in connection with the bow. The first form has a curve in the body, similar to the curve of a bow. On some the back has a perforation which was perhaps used to bind. Other examples have traces of leather thong bindings or cording (fig.2:35).<sup>83</sup> On some of the backs there are traces of wood, and the object has no center of balance,

<sup>80</sup> KG 1989.2, p.133, fig.16.4. The reason for classify this shape into 短剑/dagger will be discussed in Chapter III p.35.

<sup>81</sup> Beijing, 1985d, pl.75.

<sup>82</sup> Taipei 1958 vol.1 simplified heading, p.5.

<sup>83</sup> Shih Zhangru, 1950, pp.18-25.

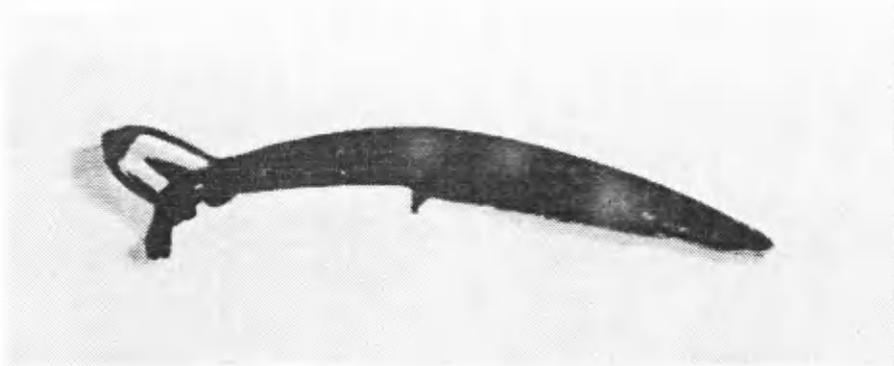


Fig. 2:32-2 Type II Knife, Chaodaogou Qilong Hebei, length 29.6 cm. Beijing 1985d, pl.76.

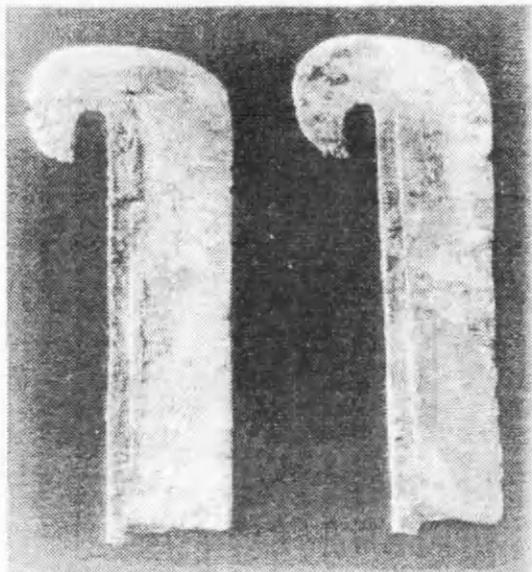


Fig. 2:32-3 Type III Knife, M269 Qijiazhuang Xiaotun, length 25.8 cm. KGXB 1991.3, pl.15:6.

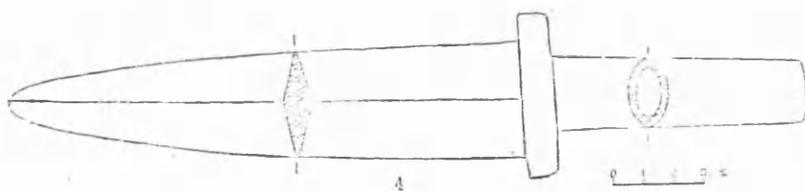


Fig.2:33-1 Type I Sword/dagger, M110 Miaopu Xiaotun. KG1989.2, p.133, fig.16:4.

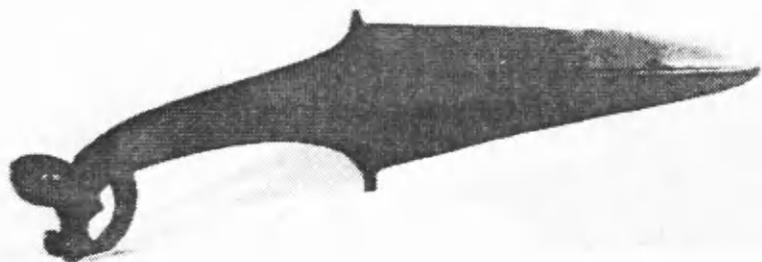


Fig.2:33-2 Type II Sword/dagger, Chaodaogou Qilong Hebei, length 30.2 cm. Beijing 1985d, pl.77.

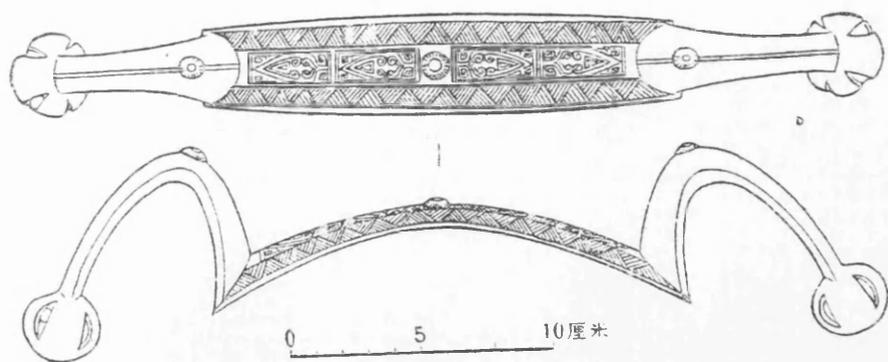
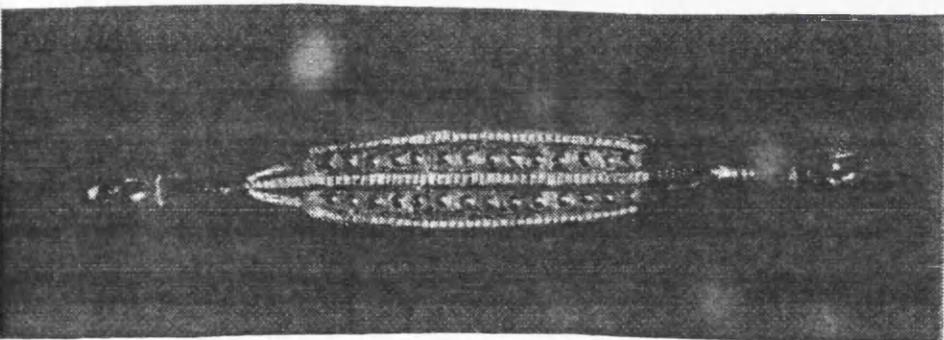
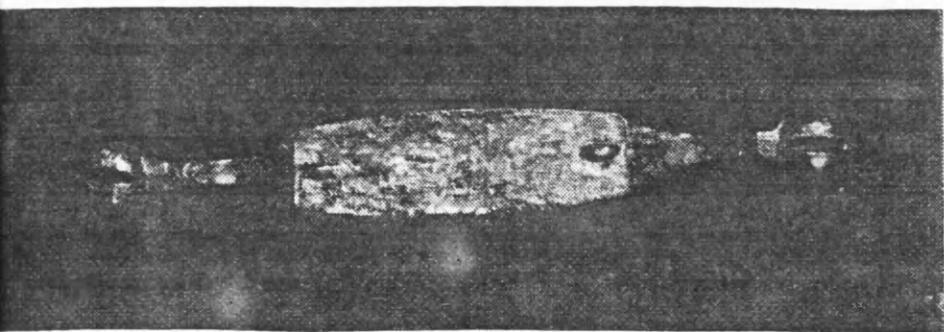


fig. 2:34-1 Type I bow-shaped implement, M33 Dasikongcun, length 33 cm.  
 KG1988.10, p.872, fig.13.



front



back

fig. 2:34-2 Type II bow shaped-impliemnt, length 38.2 cm. National Palace Museum,  
 Taipei.

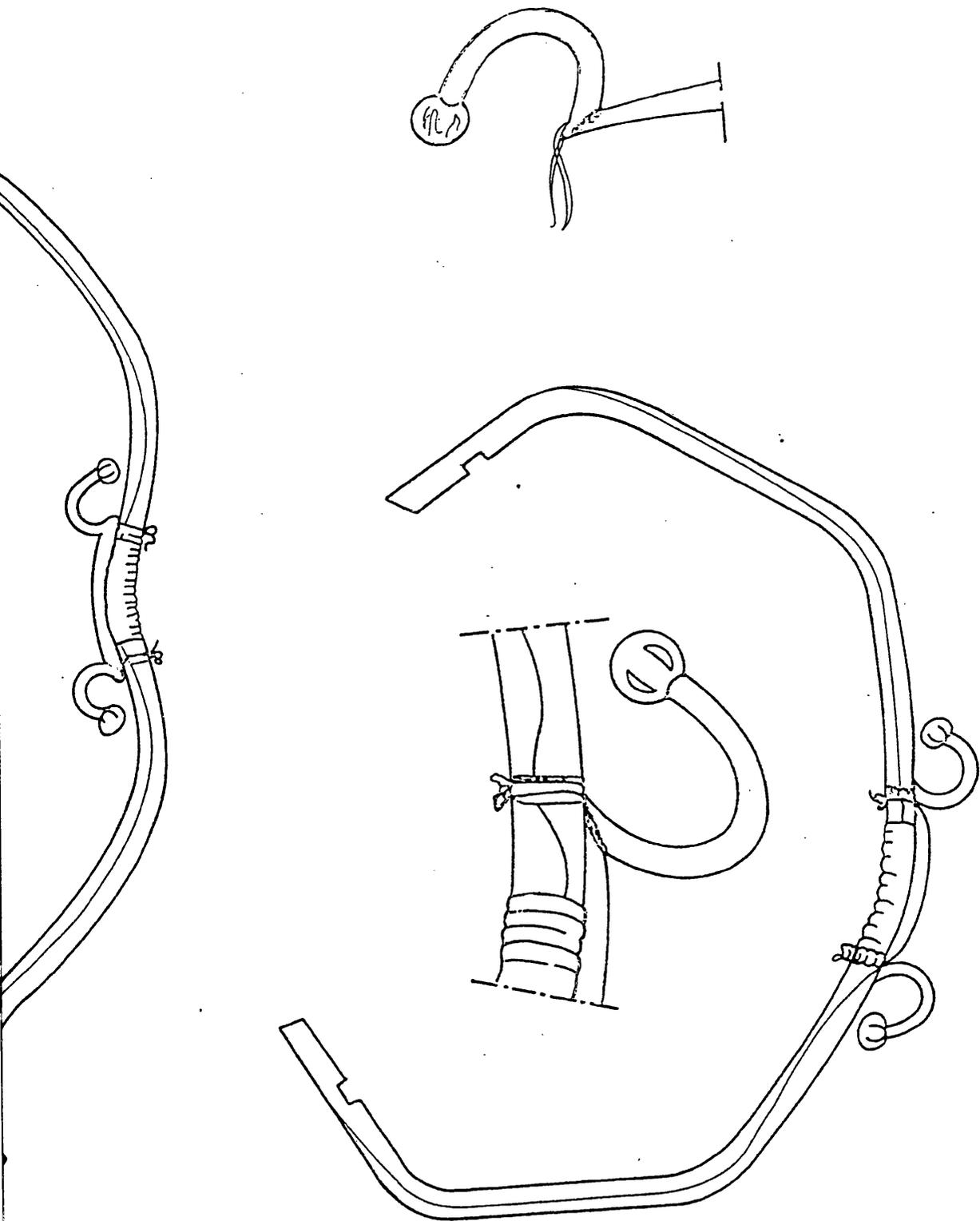


fig. 2:35 The function of the bow-shaped implement suggested by Shi Zhangru. Shi Zhangru 1970, p.115.

indicating that the object was likely attached to another in order to function, the traces of binding and wood give supporting evidence for associating the bow-shaped implement with the bow itself.

Other objects found together with the bow-shaped implement give further evidence to support this association. Among the 30 examples of bow-shaped implements excavated from Yinxu, there are at least 15 cases where they were accompanied by arrowheads, and 3 examples of accompanying horse tack and chariot fittings, hence the bow-shaped implement is commonly buried with arrows, while occasionally buried with horse and chariot fittings.<sup>84</sup> The function of the bow-shaped implement in relation to its distribution will be further discussed in Chapter IV.

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<sup>84</sup> Important to note that between 1934 and 1937 the Academia Sinica excavated at least 15 examples from the Xibeigang cemetery at Houjiazhuang, Anyang, Gao Quxun 1973, pp.1-7.

## Chapter 3: Analysis of materials excavated from the Central Plains area

### 3.1. The increased quantity of excavated materials

For a period of more than 60 years from 1928 until now, archaeological excavations have been undertaken in the Anyang area. A large quantity of Late Shang cultural remains have been excavated, in comparison to the excavations of the Late Shang period in areas outside Anyang. Not only has the longest systematic investigation of archaeological finds been done in the Anyang area, but also a large quantity of objects including bronze weapons was excavated. Hence, a more accurate chronological sequence has been established.

However, the characteristics of the Late Shang bronze objects are different from those of Zhou bronze objects. With regard to the latter, a few examples of the Western Zhou period inscribed with the name of a king provide direct evidence for dating. However, such direct evidence is seldom found on Late Shang bronze weapons.

In order to analyze the development of the Late Shang culture within the period of 273 years following the removal of the capital to Anyang by Pan Geng, scholars tried to establish their chronological systems by different kinds of sources and accordingly the chronological systems of the Anyang finds from which the bronze weapons were excavated have been well established. The criteria for dating are mainly based on stratigraphy, oracle bones, pottery, and bronze objects. Each of these provides a different basis for dating. Various chronological systems have been established for the Late Shang culture remains based on these different materials. Although none of the chronological systems was established on the basis of the development of bronze weapons, they nevertheless provide a means of dating them. With their help, it becomes possible to analyse the development of bronze weapons during the Late Shang period.

The agreement and inconsistencies among the systems reveal the problems of dating. The inconsistency among the chronological systems can be firstly found in the chronology for distinguishing the periods of development. On the basis of the oracle bones, there are at least three systems: the five-period, four-period and nine-period theories.<sup>1</sup> (table 3:1) Although the five-period theory is

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<sup>1</sup> Dong Zuobin, 1933, p.2; Hu Houxuan, 1951, p.1; Chen Mengjia 1956a, p.138.

the one commonly used, it is still at variance with those theories established on the basis of both pottery and bronze.

Table 3:1 Late Shang chronology based on oracle bones

Reigns	Dong Zuobin	Hu Houxuan	Chen Mengjia
Pan Geng	I	I	I
Xiao Xin			
Xiao Yi			
Wu Ding			
Zu Geng	II	II	II
Zu Jia			III
Bing Xin	III	III	IV
Kang Ding			V
Wu Yi			VI
Wen Ding	IV	IV	VII
Di Yi			VIII
Di Xin			IX

On the basis of pottery, the four-period system has been established by the CASS scholars and has been widely applied to both the bronze vessels and Late Shang culture. Zheng Zhenxiang<sup>2</sup> Zou Heng,<sup>3</sup> Zheng Zhenxiang<sup>4</sup> and Hayashi Minao<sup>5</sup> established their four-period systems for Late Shang culture on the basis of a combination of stratigraphy, oracle bones, pottery and bronze materials. In contrast, Zhang Zhangshou<sup>6</sup> and Yang Xizhang<sup>7</sup> established their three-period system on the basis of bronze vessels alone.<sup>8</sup> (table 3:2).

<sup>2</sup> KG 1964.8, pp.380-384.

<sup>3</sup> Zou Heng, 1964, 1980, p.87.

<sup>4</sup> Zheng Zhenxiang, Beijing 1985a, p.70.

<sup>5</sup> Hayashi Minao, 1972, pp.437-469.

<sup>6</sup> Zhang Zhangshou, 1979, p.285.

<sup>7</sup> Yang Xizhang, Beijing 1985a, pp.82-3.

<sup>8</sup> Zhang Zhangshou, 1979, p.285 .

Table 3:2 Late Shang chronology based on bronze vessels.

Reigns	Zou Heng	Zheng Zhenxiang	Yang Xizhang	Zhang Zhangshou
Pan Geng	I	I	I	I
Xiao Xin				
Xiao Yi				
Wu Ding	II	II	II	II
Zu Geng				
Zu Jia				
Bing Xin	III	III	III	II
Kang Ding				
Wu Yi				
Wen Ding				
Di Yi	IV	IV		III
Di Xin				

It is not my main purpose to discuss each chronological system, however it will be necessary to refer to these chronological systems <sup>to</sup> when they are relevant to Late Shang bronze-weapon-related tombs or remains. Due to the fact that most of the important bronze-weapon-related tombs have been dated and listed in one or more of the above chronological systems, a re-examination of the chronological systems previously established on the basis of other cultural remains in the same tomb with bronze weapons, is a first step in this study. Through such a discussion, it is hoped to establish a more reliable chronology. Secondly, the relative dating of the Late Shang bronze weapons from the Anyang area will be tested on the basis of style. With help from the above two criteria for dating, the development of the late Shang bronze weapons from Anyang can therefore be discussed.

### 3.2. Chronology of four groups of representative Late Shang tombs with bronze weapons

As mentioned above, besides style, the criteria which are used by scholars for their chronologies are mainly pottery, oracle bone records, stratigraphy and bronze vessels. Most tombs were not dated by one criterion exclusively but by a combination of several criteria. However, in most cases the dating depended mainly on one significant factor. In order to re-examine the problem from the standpoint of each criterion, the dates of four groups of representative tombs

from which bronze weapons have been excavated will be discussed in the order of these criteria.

### 3.2.1. Pottery as the basis for chronology: tombs of the western sector of Yinxu

In comparison to other materials such as bronze vessels and jade, pottery has been excavated in far greater quantity and is considered to be much more sensitive to changes of style. Nor were bronze vessels, bronze weapons or jades excavated at all the sites. In contrast, pottery was often excavated either by itself or accompanied by bronze vessels, bronze weapons and oracle bones. The massive quantities of pottery provide more chances to match the stratigraphical sequence. Moreover, oracle bones are very seldom excavated with bronze vessels or bronze weapons but are more often excavated with pottery. With the help of other criteria, the chronological system established on the basis of pottery is less controversial. It has been widely applied to the dating of tombs from which bronze weapons have been excavated, particularly by the Anyang archaeological team of CASS.

The chronological system for pottery has been established step by step. It is based on the typology itself aided by the stratigraphical sequence and by the oracle bone chronology system. The pottery chronology was first divided into two stages as the first and second stages of Dasikongcun when the pottery was excavated at Dasikongcun in 1958-9. The potteries of the two different stages differ not only in style but also in the stratigraphical sequence which provides the relative dating for the two stages. Moreover, an oracle bone inscribed "Xin Yi zai zhen 辛衣在貞" was excavated from H 114 and is classified as similar in calligraphical style to the oracle bones of the Bin 賓 group, which are dated to the first period of the oracle bone chronological system, around the reign of Wu Ding. At the same time H 114 lay in the first stage stratum of Dasikongcun. Therefore in 1958-9 with the help of the chronological system, the first stage of Dasikongcun pottery was dated to approximately the reign of Wu Ding.<sup>9</sup>

In 1964, these two stages were further divided into four stages on the basis of pottery styles.<sup>10</sup> In addition, pottery of the third stage was excavated together with oracle bones from H 1 in the southern section of Xiaotun. The calligraphical style of these oracle bones was determined as belonging to the

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<sup>9</sup> KG 1961.2, pp.63-76.

<sup>10</sup> KG 1964.8, pp.380-384.

late third stage or early fourth stage of the oracle bone system.<sup>11</sup> This evidence gave clues for an improved four-period chronological system for pottery. When oracle bones were excavated from southern section of Xiaotun, the four-period chronological system of pottery was further revised as follows:

- I. From the reign of Pan Geng to the earlier part of the reign of Wu Ding;
- II. From the later part of the reign of Wu Ding to the reign of Zu Jia;
- III. From the reign of Bing Xin to the reign of Wen Ding;
- IV. From the reign of Di Yi to the reign of Di Xin.<sup>12</sup>(table 3:2)

This point will be further examined when the chronological system of oracle bones is discussed.

The four-period chronological system of pottery was established on the basis of the stratigraphical sequence and by correlating with the chronological system of the oracle bones. Moreover, this system based on pottery styles was established from a massive quantity of materials. Characteristics examined by archaeologists include the clay material, the technical methods, vessel shapes and subtle changes in style.

With its comparatively precise basis for dating, the four-stage chronological system of pottery has been established as the standard by the Anyang archaeological team. It has been further applied to most of the Anyang archaeological finds including both clusters of tombs and isolated tombs. The bronze weapons are frequently excavated together with pottery, allowing them to be dated by reference to the comparatively well-established chronological system for pottery.

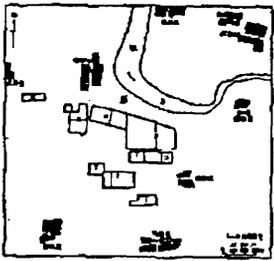
The tombs which contained both weapons and pottery form an important basis for analyzing the stylistic development of bronze weapons.

The most important cluster of graves was excavated from the western section of Yinxu (fig.3:1). Among 939 tombs from this cemetery dating to the Late Shang period, 166 tombs contained bronze weapons, 719 tombs contained pottery, and 104 tombs can be related with the archaeological strata. Moreover, 508 tombs all contain two common types of pottery vessels, the *gu* and *jue*. Therefore the chronological sequences of *gu* and *jue* became the criteria for the other types. Most of the tombs with bronze weapons were dated from the periods II to IV. From the large quantity of bronze weapons and an established systematic chronological sequence, the bronze weapons excavated from the

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<sup>11</sup> KGXB 1958.3, p.70.

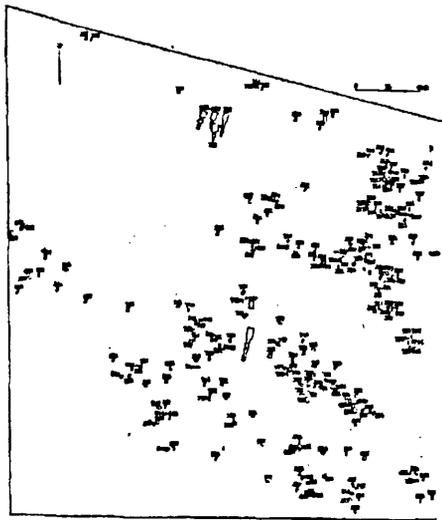
<sup>12</sup> Beijing1985a, p.70.



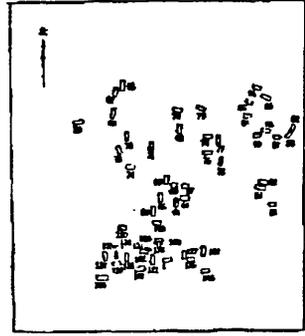
图一 殷西河内遗址平面示意图



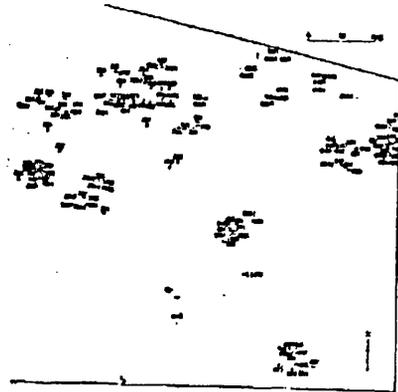
图二 第二区墓葬分布图



图三 第三区(西区)墓葬分布图



图四 第二区墓葬分布图



图五 第三区(东区)墓葬分布图

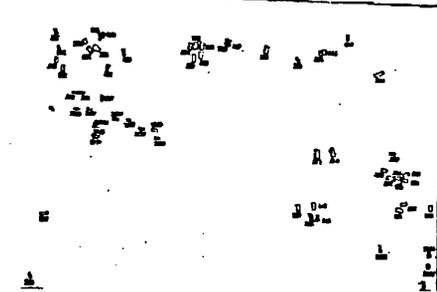
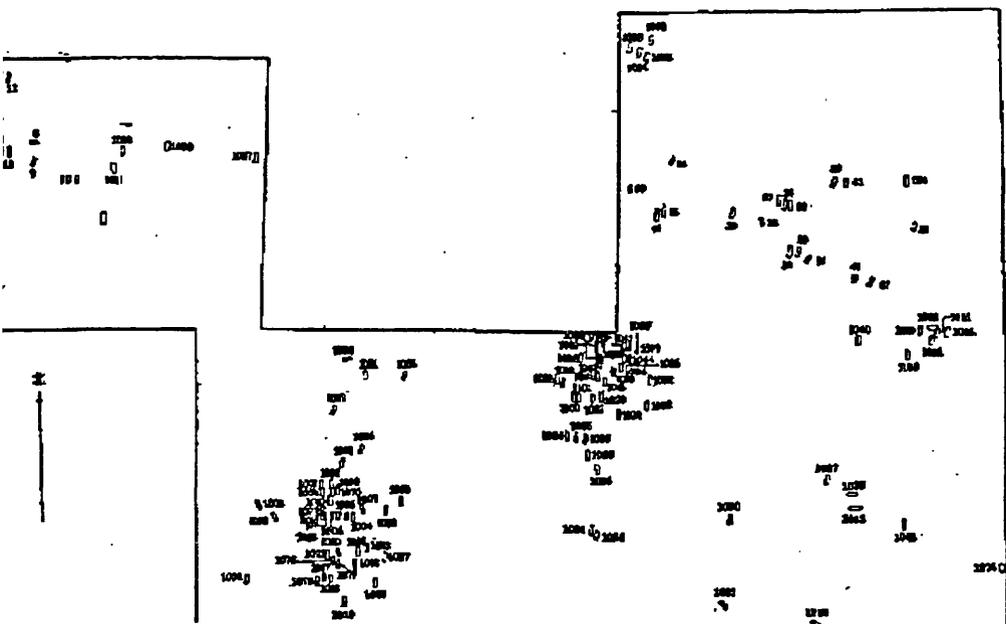
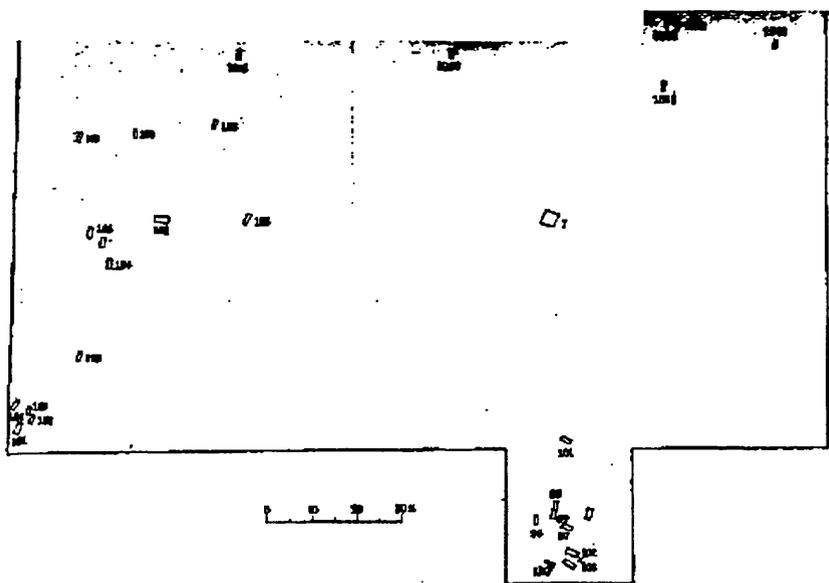


fig. 3:1-1 Tomb group in the western sector of Yinxi. KGXB 1979.1, pp. 28-36, fig. 1-10.



图六 A 第六墓区(北区)墓葬分布图



图六 B 第六墓区(南区)墓葬分布图

fig. 3:1-2 Tomb group in the western sector of Yinxu. KGXB 1979.1, pp. 28-36, fig.1-10.



western section of Yinxu provide important evidence for the stylistic development of bronze weapons.<sup>13</sup>

Tomb 160 of Guojiazhuang at Anyang (fig.3:2) which contained a large quantity of bronze weapons, reveals another important aspect in the development of bronze weapons of the Late Shang period in the Anyang area. It was excavated in 1990 and was previously undisturbed. 288 bronze objects were excavated out of 349 artefacts, only 40 of which were bronze vessels. In other words, bronze weapons constituted the majority of the bronze objects in this tomb. This important tomb has been dated to the third period of the Yinxu culture on the basis of the style of the pottery *gu*, *jue* and *gui*.<sup>14</sup> However only a cursory description of the contents of this tomb has been published, and no photographs of the weapons have been published, so presently this group of bronze weapons cannot be studied in depth.

Tomb 1713 in the Western section of Anyang from which 60 bronze weapons (fig.3:3) were excavated was dated to the fourth period of the chronological system of pottery. The date of the tomb was established mainly on the basis of the pottery style and assemblage. In addition, the writing style and composition of the inscriptions of five bronze vessels resemble those of the period of Di Xin.<sup>15</sup> With its large quantity and various types of bronze weapons, this undisturbed tomb provides important evidence for the later development of bronze weapons of the Late Shang period.

Due to the lack of a solid basis for the first period, the excavation of M 1 at Sanjiazhuang, Anyang in 1980 (fig. 3:4) is very important. Although M 1 of Sanjiazhuang is only a small-scale tomb, it was undisturbed. A *ge*, a *yue*-axe and a spearhead were excavated from the tomb accompanied by a bronze *gu* vessel and jades. The stratigraphy of M 1 was disturbed by that of H 1 containing pottery of period I of the four-period chronological system of pottery. Therefore M 1 of Sanjiazhuang antedates period I.<sup>16</sup>

### 3.2.2. Oracle bones as the basis for chronology: tomb 5 and pit E 16

Bronze materials, including bronze weapons, have seldom been excavated together with oracle bones. The latter are mainly excavated from pits and the former mainly from tombs. However, there are two exceptions to this rule.

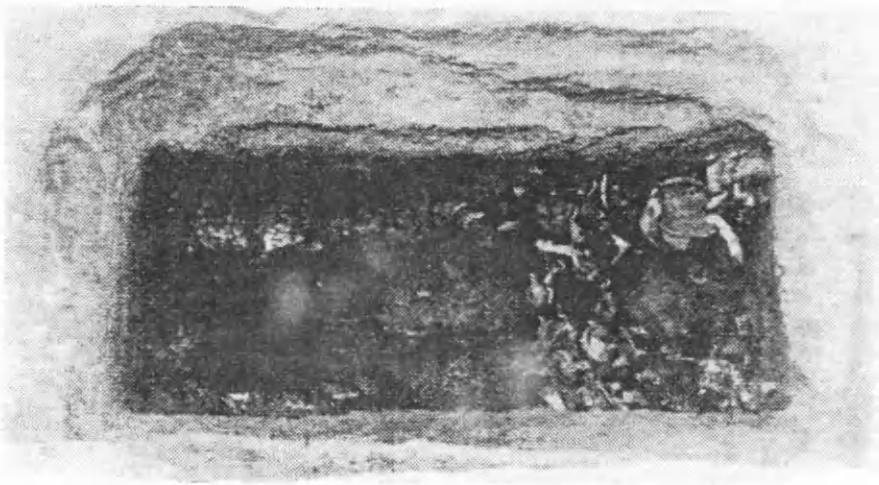
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<sup>13</sup> KGXB 1979.1, pp.27-118.

<sup>14</sup> KG 1991.5, pp.390-1.

<sup>15</sup> KG 1986.8, pp.703-712.

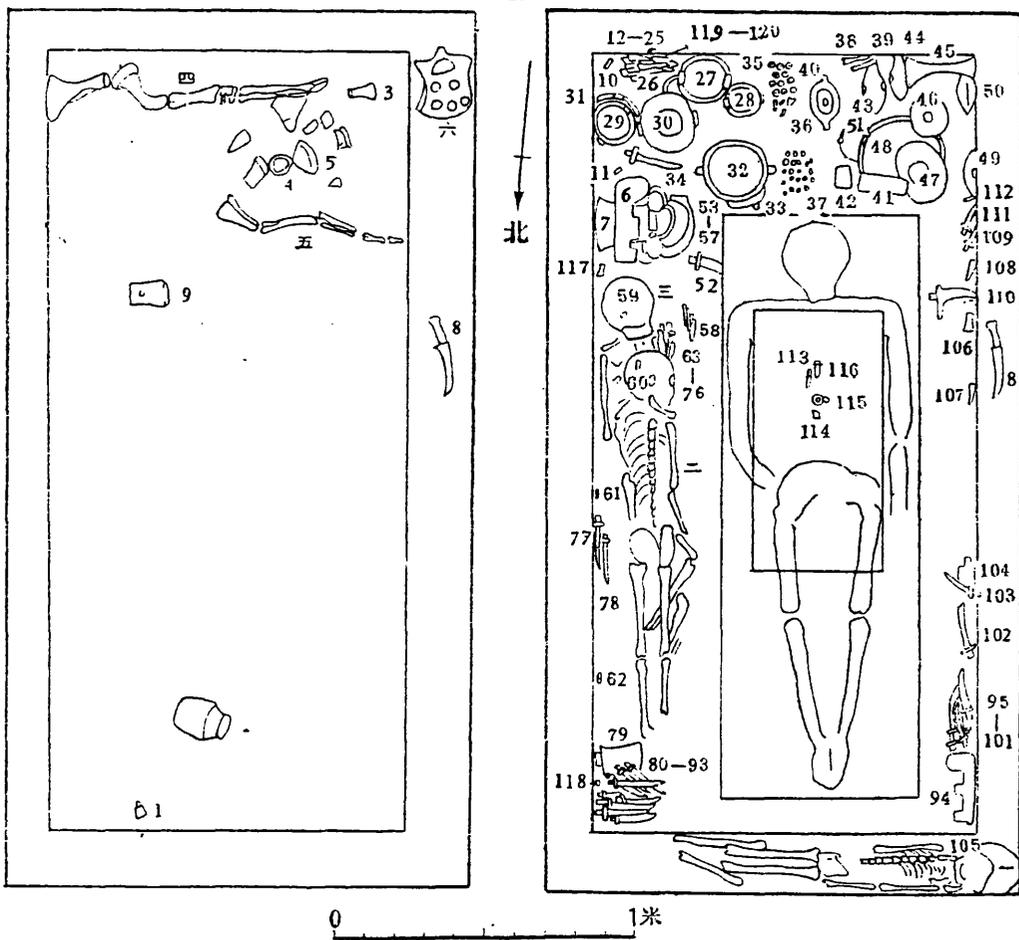
<sup>16</sup> KG 1983.2, pp.126-132.



1. 郭家庄 160 号墓

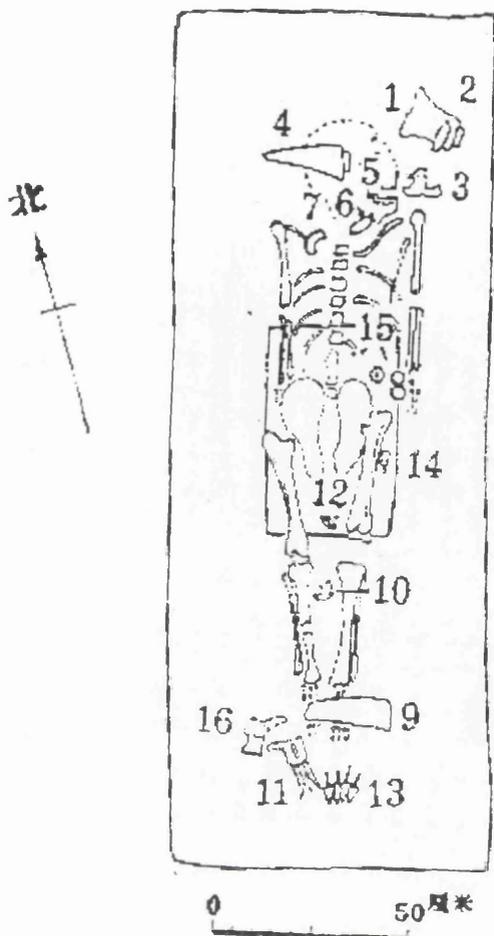
安阳市郭家庄 160 号墓及出土青铜器

fig. 3:2 M160 Guojiazhuang Anyang, length 4.5 m, width 2.9 m. KG 1991.5, Pl.1:1.



图二 墓葬平面图

1. 铜铃 2. 陶罐 3. 陶觚 4. 陶爵 5. 陶盘 6, 94. 铜大刀 7, 79. 铜钺 8. 马头刀 9. 石斧 10, 11. 铜管  
 12-25, 63-76, 119, 123. 铜牙 26. 陶岳 27-29, 31. 铜鼎 30. 铜甗 32, 33. 铜簋 34, 52, 77, 78,  
 80-93, 95-103, 109-111. 铜戈 35. 蚌饰 36. 蚌片饰 37. 小石子 38, 39. 穿孔石条 40. 铜盃 41, 42.  
 石板 43, 44, 50. 铜爵 45, 46. 铜觥 47. 铜尊 48. 铜盂 49. 铜卣 51. 铜斝 53-57. 陶甗 58. 石璋  
 59-61, 118. 长条叉形骨片 62. 凹字形骨片 104. 铜铲 105. 蚌饰 106. 铜铎 107, 108. 铜甬  
 112. 玉棒 113. 石柄形饰 114. 梯形石片 115. 石饰 116. 绿松石片 117. 铜套管  
 一、二、三殉人 四、牛腿骨 五、羊腿骨 六、牛胫骨

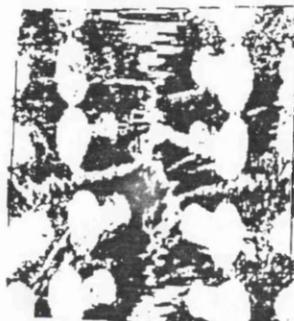


g. 3:4 Plan of M1 Sanjiazhuang Anyang. KG 1983.2, p.127, fig. 2:1.

g. 3:5-1 E16 Oracle bones,  
Yibian 9099:3013, 3019.



3013 13.0.6452



3019 13.0.6478



3045 13.0.6524



3047 13.0.6521

g. 3:5-2 E16 Oracle bones,  
Yibian 9099: 3045, 3047.

They are pit E 16 (fig.3:5-1) and tomb 5 (fig.3:6) usually named as the tomb of lady Hao. Although there are few inscriptions with the name of a king on Late Shang bronze weapons, the oracle bones can often provide a possibility of a more precise dating. However, the periodization of oracle bones within the 273 years of the Late Shang period is quite complex. Some oracle bones have been dated without much contradiction by various scholars, other oracle bones appear to be controversial, particularly with regard to the dates of periods I and IV. E 16 and tomb 5 from which important bronze weapons were excavated reveal this controversial issue in the dating of oracle bones.

The dates of E 16 and tomb 5 reflect the confusion between the dates of periods I and IV of the oracle bones. In 1933, Dong Zuobin did the earliest study of oracle bones establishing his five-period system, according to ten elements including the "*shi-xi*"世系 or generation of the kings, "*chengwei*"稱謂 the name which the king used to refer to his relative when he questioned the gods, the names of the *zhenren* 貞人 or diviners, the calligraphic style 書體, the stratigraphical sequence of the pit from where the oracle bones were excavated, the names of persons mentioned, grammar used, and particular forms of the characters used, 字形. The dates of the five periods are as follows:

- Period I: before and including the reign of Wu Ding
- II: the reigns of Zu Geng and Zu Jia
- III: the reigns of Bing Xin and Kang Ding
- IV: the reigns of Wu Yi and Wen Ding
- V: the reigns of Di Yi and Di Xin<sup>17</sup>

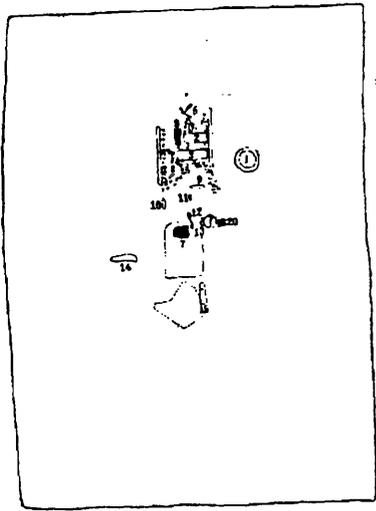
However, at that time a confusion between periods I and IV had taken root. E 16 was particularly mentioned to exemplify the changing of its dating. This pit from which oracle bones and five *ge* were excavated used to be dated to period I or II.<sup>18</sup> Dong Zuobin in particular mentioned the date of E 16 in the preface of *Yinxu wenzi jiabian*. The names of diviners such as "Shi" 自, "Shao" 勺, "bin" 賓 which appeared on the oracle bones of E 16 can be dated to the period I or II. He therefore suggested that the pit E 16 was completed before period II, around the reign of Zu Jia. 祖甲

Dong Zuobin's earlier conclusion about the date of E 16 was questioned by Li Chi who was invited by Dong Zuobin to write a Preface for his book *Yinxu wenzi jiabian*.<sup>19</sup> As one of the archaeologists who excavated pit E 16, Li Chi

<sup>17</sup> Dong Zuobin, 1933, p.002.

<sup>18</sup> Dong Zuobin, 1948a, preface.

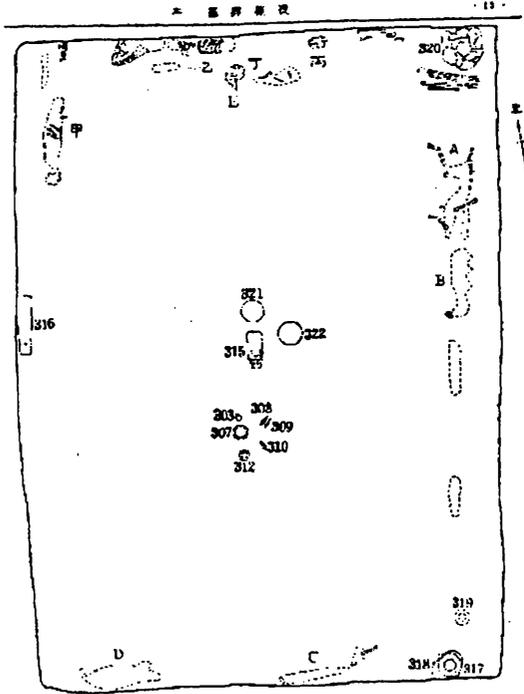
<sup>19</sup> Dong Zuobin, 1948a, p.15.



0 1 2 3 4 5 6 7 8 9 10

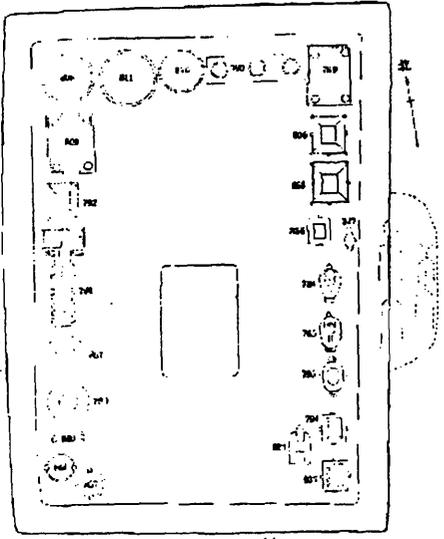
比例尺 1:100

1. 正殿 2. 正殿前廊 3. 正殿后廊 4. 正殿后室 5. 正殿后室前廊 6. 正殿后室后廊 7. 正殿后室后室 8. 正殿后室后室前廊 9. 正殿后室后室后廊 10. 正殿后室后室后室



平面图

13



0 1 2 3 4 5 6 7 8 9 10

比例尺 1:100

g. 3:6 Plan of M5 Xiaotun. Beijing 1980f, p.10, fig.4; p.12, fig.5; p.13, fig.6.

found no evidence from the chronological sequence of the pit to suggest the date of its completion. The closing date of E 16 was deduced mainly on the basis of the name of the diviners seen on the oracle bones by Dong Zuobin. However, the date of the oracle bones is not equivalent to that of the closing date of the pit. For the latter, one must prove that the pottery and bronze are also of the same date. Here, more criteria were brought into consideration for dating the pit instead of solely dating it on the basis of the oracle bones.

There was no need on the basis of the style of bronze or pottery to question the date of pit E 16. Dong Zuobin, however, changed his dating of 17 of the diviners named on the oracle bones of E 16, H 119 and 127. They were later dated by him to period IV. This was considered to solve the enigma of the oracle bones of the Period IV. On the basis of the stratigraphical sequence of the thirteenth season of excavations, some oracle bones which used to be dated to the reign of Wu Ding were shown to be dated to the reigns of Wu Yi 武乙 and Wen Ding 文丁<sup>20</sup>. The similarity among the oracle bones of two periods, with regard to the name which the king used to refer to his ancestor or relative, was further explained as the revival of the earlier period.

Normally, many diviners' names appeared in one pit. The different pits share some of the same names of diviners and some of the pits have a direct or indirect stratigraphical relationship. As a result, the dating was thus established either in a generally consistent or in a contradictory manner. Once again, given the lack of absolute evidence for dating, other evidence for dating was used and interpreted differently by different scholars.

The chronological system of oracle bones established by Dong Zuobin was partially superseded and partially improved by later scholars with the increased quantity of excavated oracle bones and more information about their dating.

In 1953, Kaezuka Shigeki re-examined the characteristics and dating of the oracle bones which had been dated to period IV, the Wu Yi and Wen Ding reigns according to Dong Zuobin's system. He considered them as a different style of the oracle bones from the first period. According to him, the two styles existed at the same time.<sup>21</sup>

In 1956, Chen Mengjia further systematically dated the oracle bones of the Shi 扶 and Zi 子 groups to period I. The oracle bones of the Shi group, which includes the name of the diviners "Shao", Fu and "Shi", were dated to late in the reign of Wu Ding. There are four fragments of oracle bone from E

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<sup>20</sup> Dong Zuobin 1945, first section in volume 1, p.26.

<sup>21</sup> Kaezuka Shigeki 1953, p.46.

16 with "Shi" as the name of diviner, numbered 3013, 3019, 3045 and 3047 (fig.3:5-2). From this evidence Pit E 16 was redated to period I.<sup>22</sup>

Chen Mengjia's dating of the "Shi" group to which the majority of the oracle bones from E 16 belong was later confirmed by scholars following the recovery of the oracle bones from the southern section of Xiaotun.<sup>23</sup> Xiao Nan tried to date the oracle bones of Shi group at the southern section of Xiaotun to the reign of Wu Ding by the help of their stratigraphical sequence and pottery from the same stratum. Seven oracle bones were either inscribed with "Fu" numbered T53(4A):146(fig.3:7-1) or inscribed with the characters in the writing style of the Shi group. They were excavated from the T53(4A) stratum. In terms of stratigraphy, T53(4A) stratum was under H 110 and H102 and was disturbed by H91(fig.3:7-2).

Moreover, the styles of pottery from T53(4A) stratum are similar to those from the other areas of southern section of Xiaotun<sup>24</sup>. The latter has been dated to the early period of southern section of Xiaotun, around the reign of Wu Ding<sup>25</sup>. Although few pottery was excavated from H110, the pottery from H102 were dated to be earlier than the middle period of southern section of Xiaotun and later than the early period of southern section of Xiaotun<sup>26</sup>. The middle period of southern section of Xiaotun has been dated to the period around Kang Ding, Wu Yi and Wen Ding<sup>27</sup>.

However, Jin Xiangheng and Yan Yiping doubted the above dating of the oracle bones of the Shi group on account of a re-examination of the seven pieces of the oracle bones of the Shi group excavated from the T53(4A)stratum of the southern section of Xiaotun.<sup>28</sup> They discovered that one of the seven oracle bones of the Shi group numbered T53(4A):145+H91:7+H91:4(fig.3:7-3) consisted of three fragments, one of which was actually excavated from T53(4A) stratum while the other two were excavated from H91 of a different stratum. H91 disturbed and was over T53(4A) stratum (fig.3:7-2). Therefore, they doubt that the oracle bone of the Shi group belong to the same period.

Besides the oracle bones, bronze weapons were among the important culture remains in E 16. A stylistic analysis of the bronze weapons in E 16 will

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<sup>22</sup> Chen Mengjia, 1956, p.154.

<sup>23</sup> Beijing 1980g, p. 13, fig.6; p.799; 1983b, pp.1154-55.

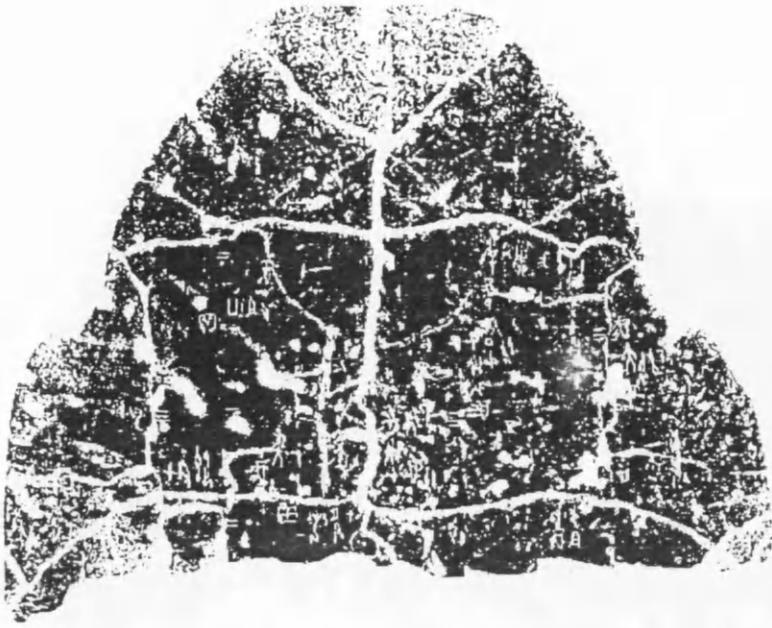
<sup>24</sup> Xiao Nan 1976, p.239.

<sup>25</sup> KG 1975.1 ,p.46.

<sup>26</sup> Xiao Nan 1976, p.239.

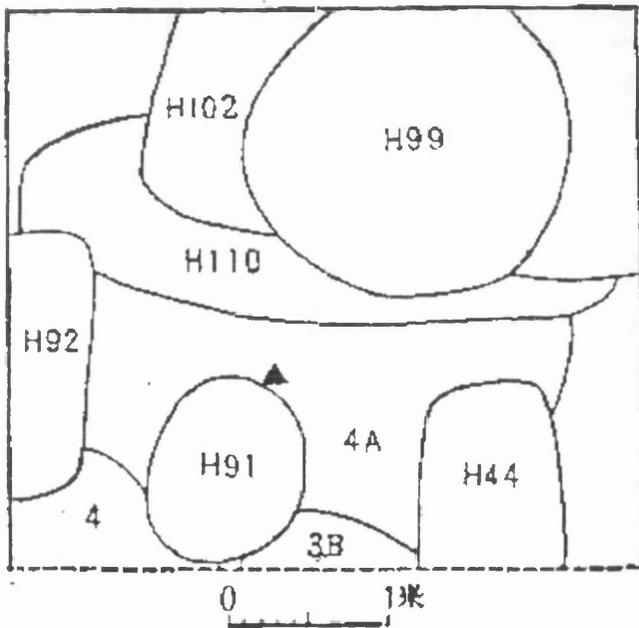
<sup>27</sup> KG 1975.1 ,p.46.

<sup>28</sup> Yan Yiping 1978, pp.1206-8, Jin Xiangheng, p.91.



T53(4A) 146  
4517

fig. 3:7-1 Oracle bone T53(4A) 146 inscribed "Fu" (right: the fourth character in the fourth line; left: the fourth character in the second line). Beijing 1980g, p.800.



T53(4A)层平面图

▲是卜甲出土的位置

fig. 3:7-2 T53(4A) layer at Xiaotun Nandi, location of oracle bones. Beijing 1980f, fig.7.



g. 3:7-3 Oracle bone T53(4A): 145+H91:1+H91:4. Beijing 1983c, pp. 1154-55.

be attempted in the next section. The results of this analysis suggest that pit E16 should be dated to period II rather than to period III or IV (see below, pp.150-151).

The confusion between stages I and IV of the chronological system of the oracle bones was discussed again when the undisturbed Tomb 5 was excavated at Anyang in 1977. The 468 bronze objects excavated from this tomb included 134 bronze weapons. By their large quantity and variations in style, the bronze weapons excavated from tomb 5 play a significant role in the development of bronze weapons of Late Shang period. Among the bronze weapons were two *yue*-axes inscribed with the name Fu Hao, while among the 196 bronze ritual vessels, 109 were inscribed with the name Fu Hao. With this high percentage of bronze vessels inscribed Fu Hao, tomb 5 is considered to be the tomb of Lady Hao. The date for the tomb therefore depends considerably on the date of Fu Hao. Her date has been considered as the key basis in the search for the absolute date of tomb 5.

However, the name of Fu Hao also appeared on oracle bones dated either to period I or to period IV of the chronological system of oracle bones.<sup>29</sup> Consequently, the date of Fu Hao tomb has been controversial.

The first group of scholars, including Zheng Zhenxiang, Wang Yuxing and Li Xueqin, dated the Fu Hao tomb to the late in the reign of Wu Ding.<sup>29</sup> The most important evidence is on the basis of oracle bones. There are at least 170 oracle bones which were dated to the reign of Wu Ding inscribed with the name of Fu Hao and with matters related to her.<sup>30</sup> Some of her activities included campaigns against the Tu Fang 土方<sup>31</sup>, Qiang 羌<sup>32</sup>, Ren Fang 人方<sup>33</sup> and Yi Fang 夷方<sup>34</sup>, as well as officiating over ritual ceremonies.<sup>35</sup> She is considered to have died during the reign of Wu Ding.<sup>36</sup>

In contrast to the first group, the second group of scholars including Zhang

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<sup>29</sup> KG 1977.5, p.341.

<sup>30</sup> Wang Yuxin 1977, pp.1-21.

<sup>31</sup> Ku 庫 1935, 237.

<sup>32</sup> Ku 庫 1935, 310.

<sup>33</sup> Cui 粹, 1229; Guo Moruo 1937, p.659.

<sup>34</sup> Yi 佚 1933, 527

<sup>35</sup> *Yibian* 5086

<sup>36</sup> According to the names of the diviners Bin (Cui 1228), and Zheng (Cui 1226) who divined about matters regarding the worship of Fu Hao and who were still alive during the reign of Wu Ding. For a further discussion regarding Fu Hao see Beijing 1980f, p.226-7; Yan Yiping, *Fu Hao liezhuan*.

henglang, Zou Heng<sup>37</sup> and Li Boqian<sup>38</sup> dated the Fu Hao tomb to either period III or IV of the chronological sequence of oracle bones. About five or six oracle bones of periods III or IV of the oracle bone chronological sequence are also inscribed with the name Fu Hao, which has been interpreted by these scholars as the name of a clan with the surname *zi* 子.

The controversial dating of the Fu Hao tomb reflects a difficult "fact" that the name of Fu Hao appeared on the oracle bones of both the Bin 賓 and Li 歷 groups of diviner names, the former previously dated to period I, and the latter to period III or IV. Li Xueqin of the first group of scholars tried to redate the Li group of the oracle bones to period I, , so as to resolve the contradiction. Some scholars<sup>40</sup> still disagree with such a redating.<sup>41</sup>

Because of the large quantity and variety of the bronze weapons excavated from tomb 5, one may hope that analysis of the development of bronze weapons can provide evidence to resolve the contradictions in the dating of tomb 5. A stylistic analysis of the bronze weapons in tomb 5 will be attempted in the next section. The results of this analysis suggest that tomb 5 should be dated to period II rather than to period IV. (see below, p.156).

Besides, there are some bronze weapons excavated from other tombs which have been dated by the help of the evidence of oracle bones. These tombs played an important part in defining the chronological systems of the Anyang culture. These are two Xiaotun tombs of section C, M 331 (fig.3:8-1) and M 388 (fig.3:9-1), and the Xibeigang tomb 1001. Their dating is partially made possible with the help of the oracle bones of the "Shi" group. Oracle bones with a similar writing style to that of the Shi group were excavated in Xiaotun M 331 (fig.3:8-2).<sup>42</sup> The inscription "𠄎" on a pottery *dou* in M 388 is also found in an oracle bone of the Shi group from H 006 (fig.3:9-2).<sup>43</sup> These two tombs which had originally been dated late in the Anyang culture were there by redated to period I. They thus became important representative tombs of period I. The process and basis for redating will be discussed below (section 3.2. 4.)

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<sup>37</sup> KG 1977.5, pp.341-50.

<sup>38</sup> Li Boqian, 1979, pp.165-70.

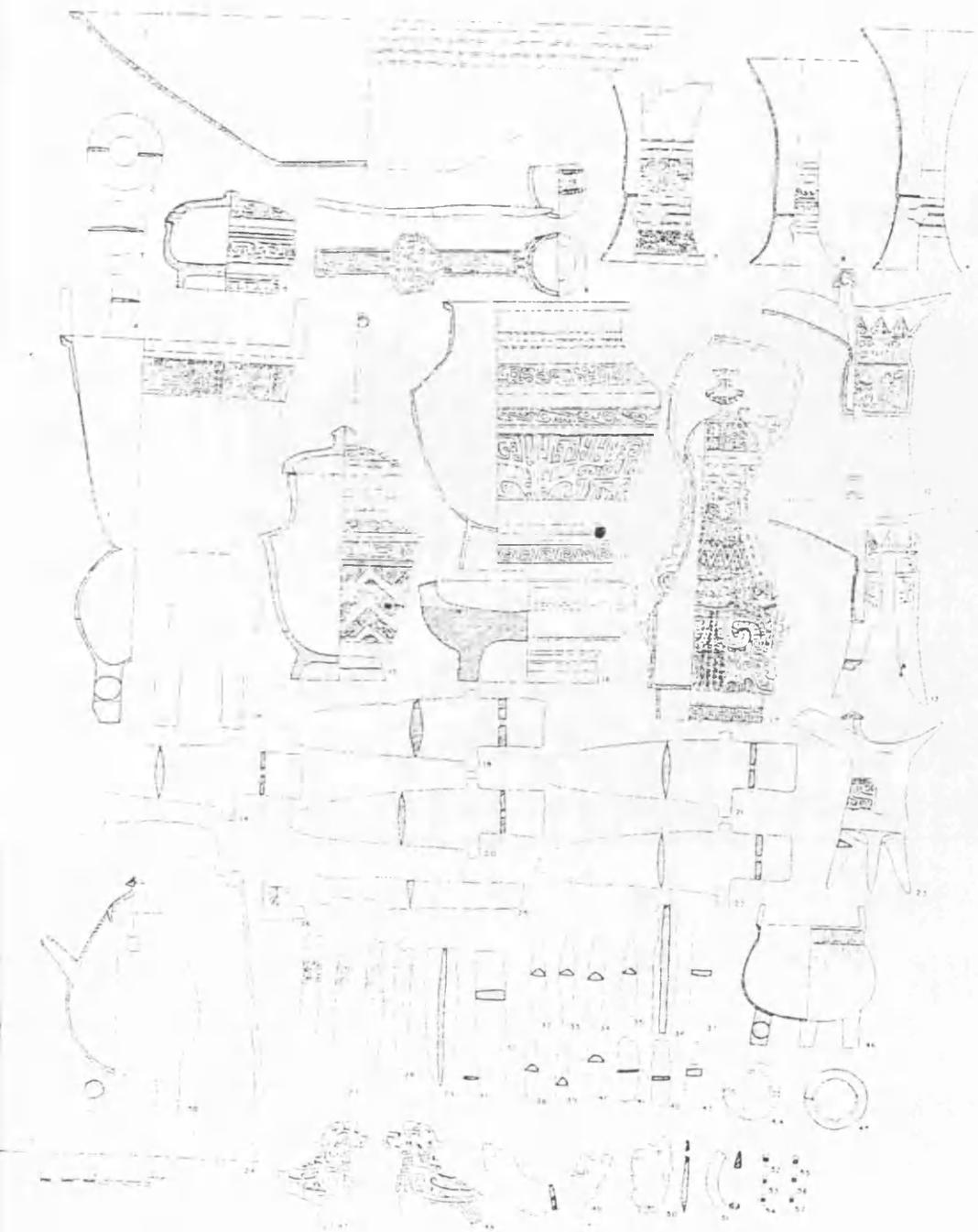
<sup>39</sup> Li Xueqin, KG 1977.5, pp.344-5; Li Xueqin, 1977, pp.35-7; Qiu Xigui 1981, pp.263-321; Lin Yun 1984, pp.111-154;

<sup>40</sup> Xiao Nan, 1980, pp.43-79; 1984, pp.155-188; Zhang Yongshan & Luo Kun, 1980, pp.80-103.

<sup>41</sup> Refer to Wang Yuxin, 1979, pp.85-101 for an overview of scholarly research regarding oracle bones.

<sup>42</sup> *Yibian* 9099

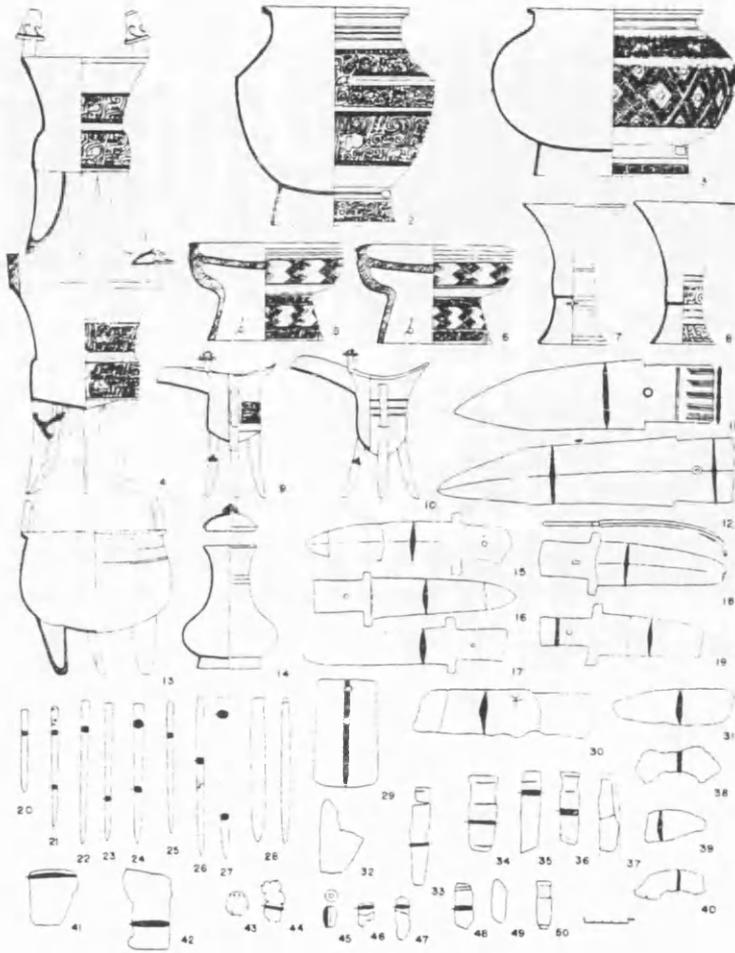
<sup>43</sup> *Jibian* 385



g. 3:8-1 M331 Xiaotun. Shi Zhangru, 1970, p.150, fig.196.

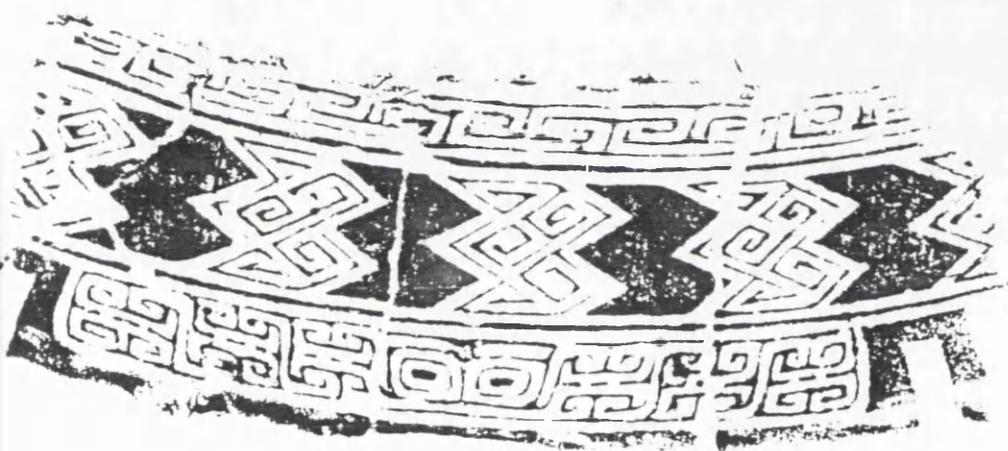


g. 3:8-2 Oracle bone inscribed "shi" from M331 Xiaotun. *Yibian* 9099.



- |           |          |                  |          |          |            |
|-----------|----------|------------------|----------|----------|------------|
| 1. 銅斝二    | 2. 銅斝一   | 3. 銅斝二           | 4. 銅斝一   | 5. 白陶豆一  | 6. 白陶豆二    |
| 7. 銅斝一    | 8. 銅斝二   | 9. 銅斝一           | 10. 銅斝二  | 11. 玉戈一  | 12. 玉戈二    |
| 13. 銅斝    | 14. 銅斝   | 15. 銅戈三          | 16. 銅戈二  | 17. 銅戈一  | 18. 銅戈四    |
| 19. 銅戈五   | 20. 玉斧七  | 21. 玉斧八          | 22. 玉斧六  | 23. 玉斧四  | 24. 玉斧五    |
| 25. 玉斧三   | 26. 玉斧二  | 27. 玉斧一          | 28. 小石器二 | 29. 石戚一  | 30. 石(斧)戈三 |
| 31. 石戈四   | 32. 石戚二  | 33. 小石器四         | 34. 小石器一 | 35. 小石器五 | 36. 小石器十   |
| 37. 小石器十一 | 38. 環形器  | 39. 石戈五          | 40. 魚尾飾  | 41. 石戚三  | 42. 石戚四    |
| 43. 玉缸    | 44. 透壁玉琮 | 45. 磨石球          | 46. 小石器三 | 47. 小石器九 | 48. 小石器八   |
| 49. 小石器七  | 50. 小石器六 | 51. 石戚五(因未發現未繪入) |          |          |            |

柳窪八十五: M388 出土器物集成圖



2

3

g. 3:9-2 Pottery *dou* inscribed *b* from M388 Xiaotun. *Jiabin*, pl.385, p.245, fig. 83.

Besides, the term *Yaque* 亞雀 inscribed on a deer antler from Xibeigang tomb 1001(fig.3:10-1) is also found on oracle bones of "Wu" and "Zi" group, which have been dated to period I of the oracle bones.<sup>44</sup> The date of tomb 1001 of Xibeigang will be discussed further in the next section.

### 3.2.3. Stratigraphy as the basis for chronology: the Xibeigang tomb group

In comparison with other dating criteria, stratigraphy provides a more objective basis for dating. Therefore, this provides powerful evidence for dating. However, only a relative dating can be derived from this evidence. Moreover, within the context of the tremendous amount of excavations at Anyang, only a few examples show stratigraphical evidence. Therefore, not all the bronze weapons excavated at Anyang are furnished with clear information about their stratigraphical sequence. Some examples can be found in the areas of both Xiaotun and Houjiazhuang. The Xibeigang area is considered to be the area with royal tombs.<sup>45</sup> In the Xibeigang area, six tombs out of eight, which can be divided into two groups, show a stratigraphical relationship: The first group consists of M 1217 and 1500. The northern part of the northern passage of M 1217 disturbed the southern part of the southern passage of M 1500.<sup>46</sup> Therefore the date of M 1217 is later than that of M 1500. Among this group of tombs the majority of the artifacts which remained were mainly arrowheads which are excluded from this study.

More significant evidence for dating is revealed by group 2. The northern passage of M 1002 disturbed the southern passage of M1004.<sup>47</sup> The southern and eastern passages of M 1004 disturbed the eastern and northern passages of M 1001(fig.3:10-2).<sup>48</sup> Therefore the date of the Xibeigang M 1001 is earlier than that of M 1004, which is in turn earlier than that of M 1002. These three tombs then can be arranged in the order of dating as M 1001, M 1004 and M 1002. Because no bronze weapons were left in tomb 1002, after being plundered, its dating is not as important as that of M 1001 and M 1004. However, stratigraphy can only provide a relative dating for the tombs. Therefore the comparative dating of the weapon-related tombs at Xibeigang has to be further calculated by putting them in the complicated and inconsistently chronological sequence of the royal tombs group at the

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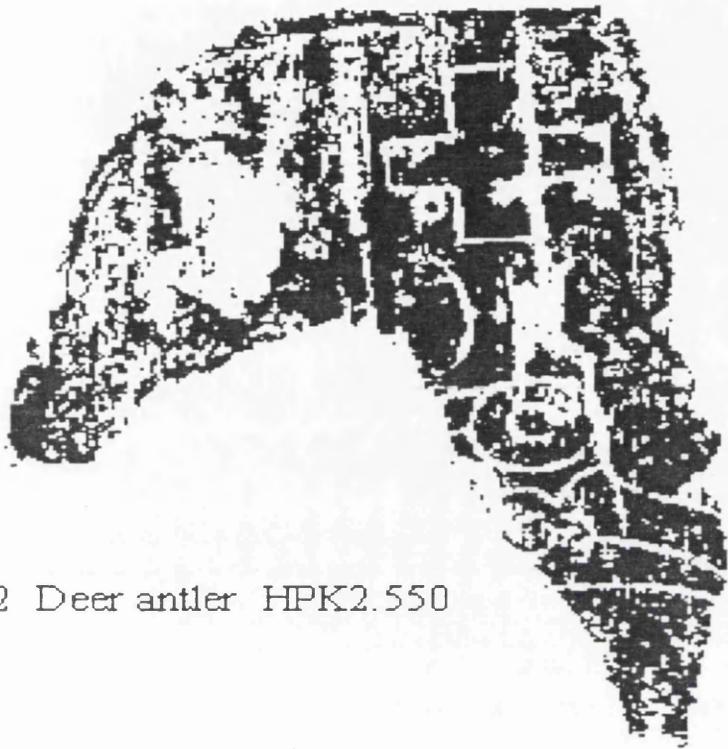
<sup>44</sup> Zou Heng, 1980, p.84.

<sup>45</sup> Gao Quxun 1959, pp.1-14.

<sup>46</sup> Gao Quxun 1974, p.1.

<sup>47</sup> Gao Quxun 1970, p.1.

<sup>48</sup> Gao Quxun 1970, p.1.



3942 Deer antler HPK2.550

Fig. 3:10-1 *Yaque* 亞雀 inscribed on deer antler from M1001 Xibeigang. *Jiabian*, pl. 942.

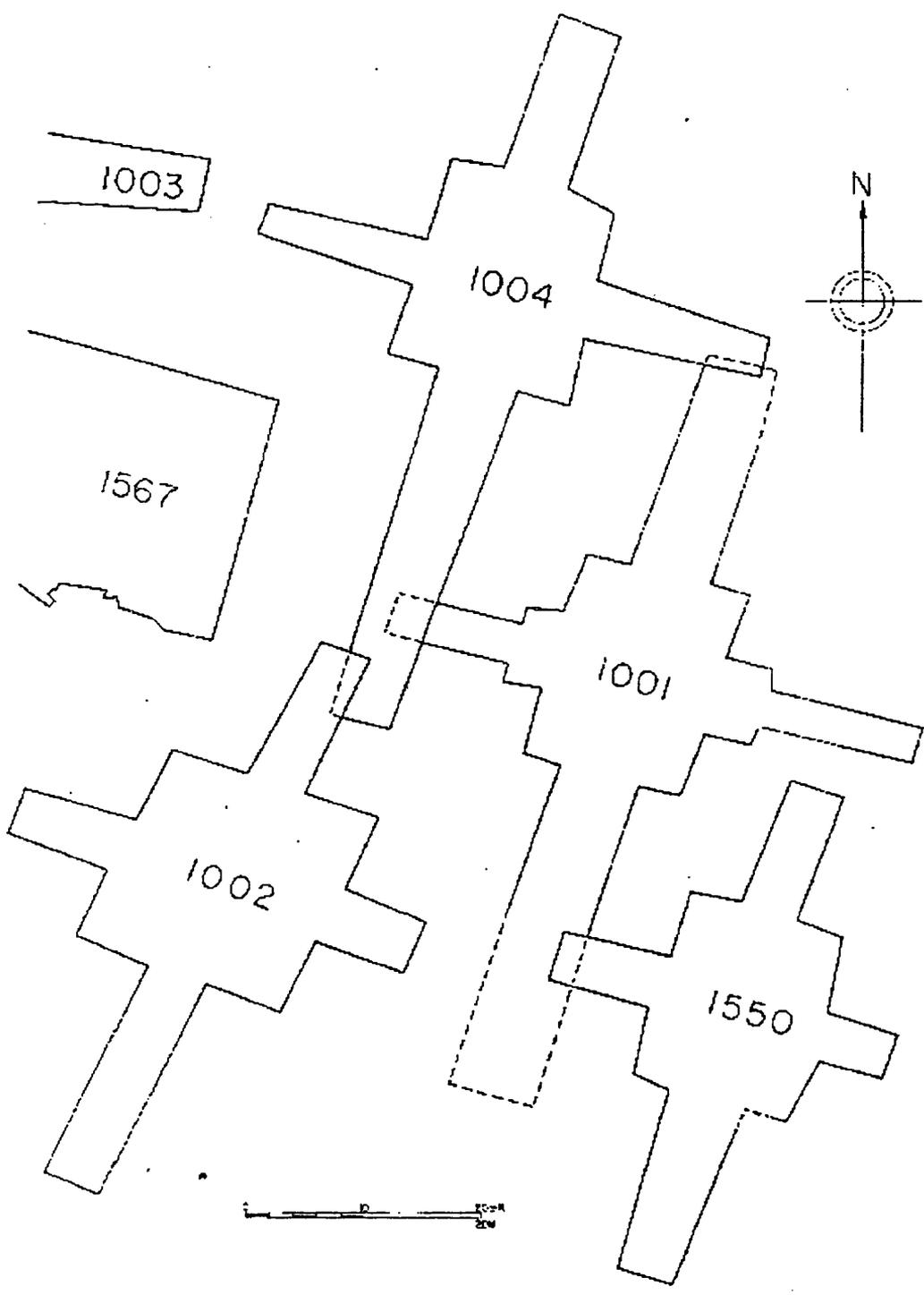


Fig. 3:10-2 Stratigraphical relationships of M1001 Xibeigang with surrounding tombs.  
 Mao Quxun, 1962, Vol.1, p.2, fig.1.

Xibeigang.

In comparison with the tombs in other parts of the Anyang area, the Xibeigang tombs are quite interesting with regards to their chronology. The tombs from Xibeigang with large ramped passages, although having been pilfered, are accepted by most scholars as royal tombs. Therefore, the tombs must have a certain chronological order and cannot be contemporary with each other.

Scholars have tried to identify the eight tombs at Xibeigang with the dates of the twelve kings of eight generations as recorded in *The Bamboo Annals*. However, there are at least five chronological systems (table 3:3) for the Xibeigang tombs due to the fact that there is no absolute basis for dating, although some of them have a stratigraphical relationship as mentioned above.<sup>49</sup> In order to draw conclusions about their dating, other criteria should be considered.

On the basis of stratigraphy, the important weapon-related tomb 1001 has been consistently accepted as the earliest tomb in the Xibeigang area by most scholars. However, its absolute date is controversial. K.C. Chang dated it to the reign of Pan Geng according to the royal worship systems of Zhaomu.<sup>50</sup> In contrast, some scholars have dated it to the reign of Wu Ding,<sup>51</sup> the second of the four periods of Anyang culture, on the basis of the styles of pottery and bronze objects.<sup>52</sup>

It is interesting to discuss the controversial date of tomb 1001 from the point of view of the style of the bronze weapons.

A stylistic analysis of the bronze weapons in Xibeigang tomb 1001 will be attempted in the next section. The results of this analysis suggested that Xibeigang tomb 1001 should be dated to period II rather than later periods (see below p.150).

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<sup>49</sup> Li Chi 1958, 1959; Zou Heng 1980; Kane 1975, p.109-110; KG1977.5, p.345; Yang Xizhang 1981, pp.47-52; *Huaxia Kaogu*, 1988.1, pp.86-91; Cao Tingyuan 1986, pp44-50; 1987, pp.80-87.

<sup>50</sup> Chang, 1989, pp.13-19.

<sup>51</sup> Cao Tingyuan 1986, pp.44-50,

<sup>52</sup> Yang Xizhang 1981, pp.47-52.

Table 3:3-1 Chronological sequence of the Xibeigang tombs according to various scholars

	Li Chi	Zou Heng	Yang Xizhang	Hu Houxuan	Kane 1975	Chen
1001	Early	II	II	1	6(III?)	Gp 2
1002	Middle		III	5	10(VI?)	
1003	Late-Mid	IV	IV	4	11	Gp 4
1004	Early-Mid	III	III	3	9(V?)	Gp 3
1129					2(I?)	
1217	Late	I(III?)	III	7	4(II-III?)	
1400		IV	II		8(IV?)	
1443					1(I?)	
1500	Late-Mid	I	III	6	3(II?)	
1550	Early-Mid	III	II	2	7(IV?)	
Wuguan					5(III)	

### 3.2.4. The style of bronze vessels as the basis for chronology: the Xiaotun tomb group in section C

The bronze vessels and pottery are the two main categories of materials which were often excavated together with the bronze weapons in tombs. Moreover, bronze vessels were frequently excavated together with bronze weapons in the large-scale tombs. On the other hand, pottery was particularly commonly excavated with bronze weapons in the smaller-scale tombs. Due to the fact that bronze weapons are often excavated with bronze vessels and since the chronological systems of bronze vessels are better established, the chronological system established by the bronze vessels is significant. This significance is particularly exemplified in the dating of the Xiaotun tombs from section C which include M333, (fig. 3:11) M331 (fig.3:12), and M338 (fig. 3:13)<sup>53</sup> and M232 (fig.3:14) from section B.<sup>54</sup>

The general lack of bronze weapons from tombs dating to YinXu period I gives particular importance to Xiaotun tombs M232, M331, M333, and M338. These four tombs were undisturbed and the majority of burial furnishings were bronze vessels and weapons with no pottery. Hence the style of the bronze

<sup>53</sup> Shi Zhangru, 1970, p.56.

<sup>54</sup> Shi Zhangru, 1976, p.17, fig.24.

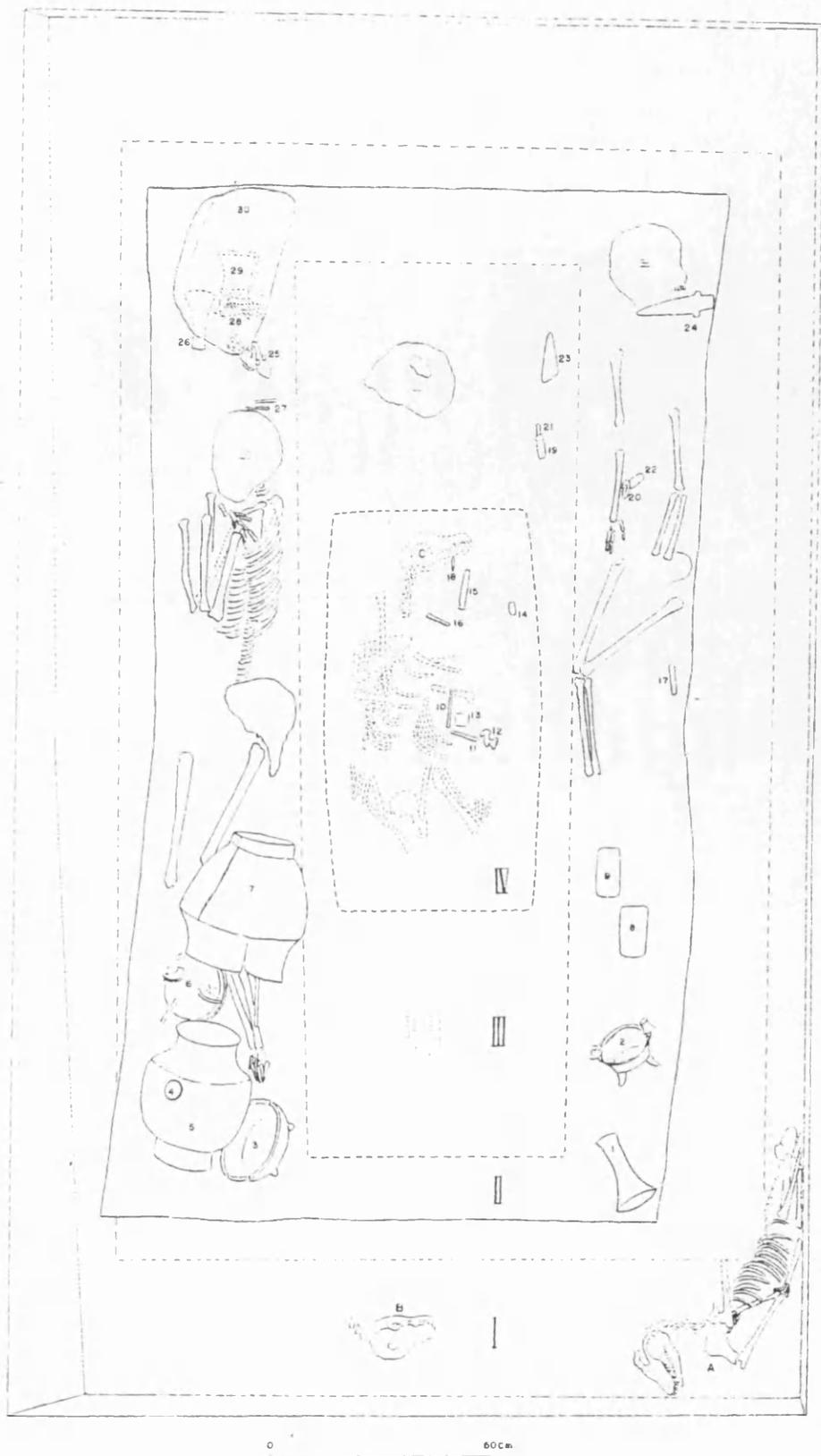


Fig. 3:11 M333 Xiaotun. Shi Zhangru 1980, p.174, fig.55.

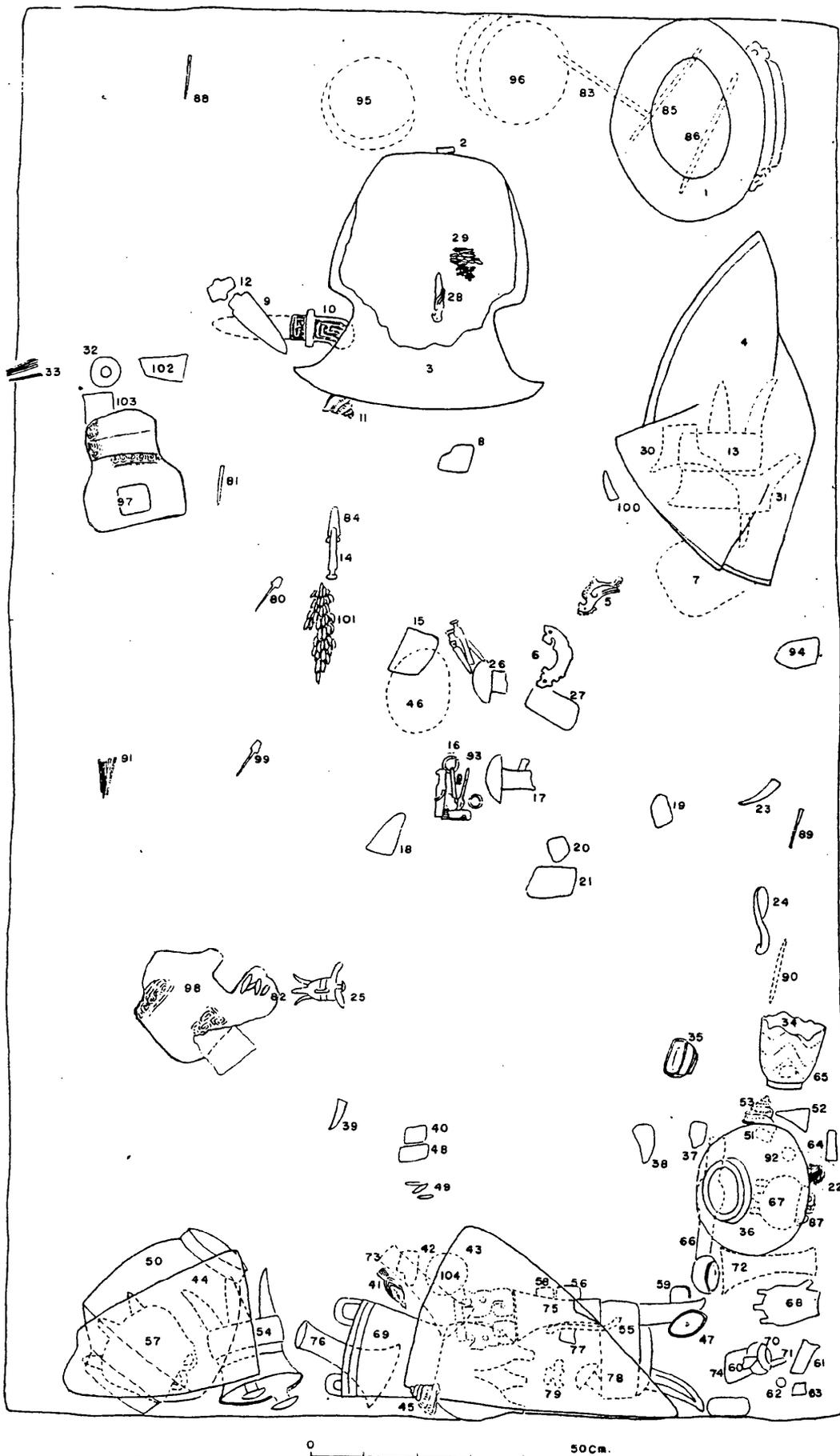
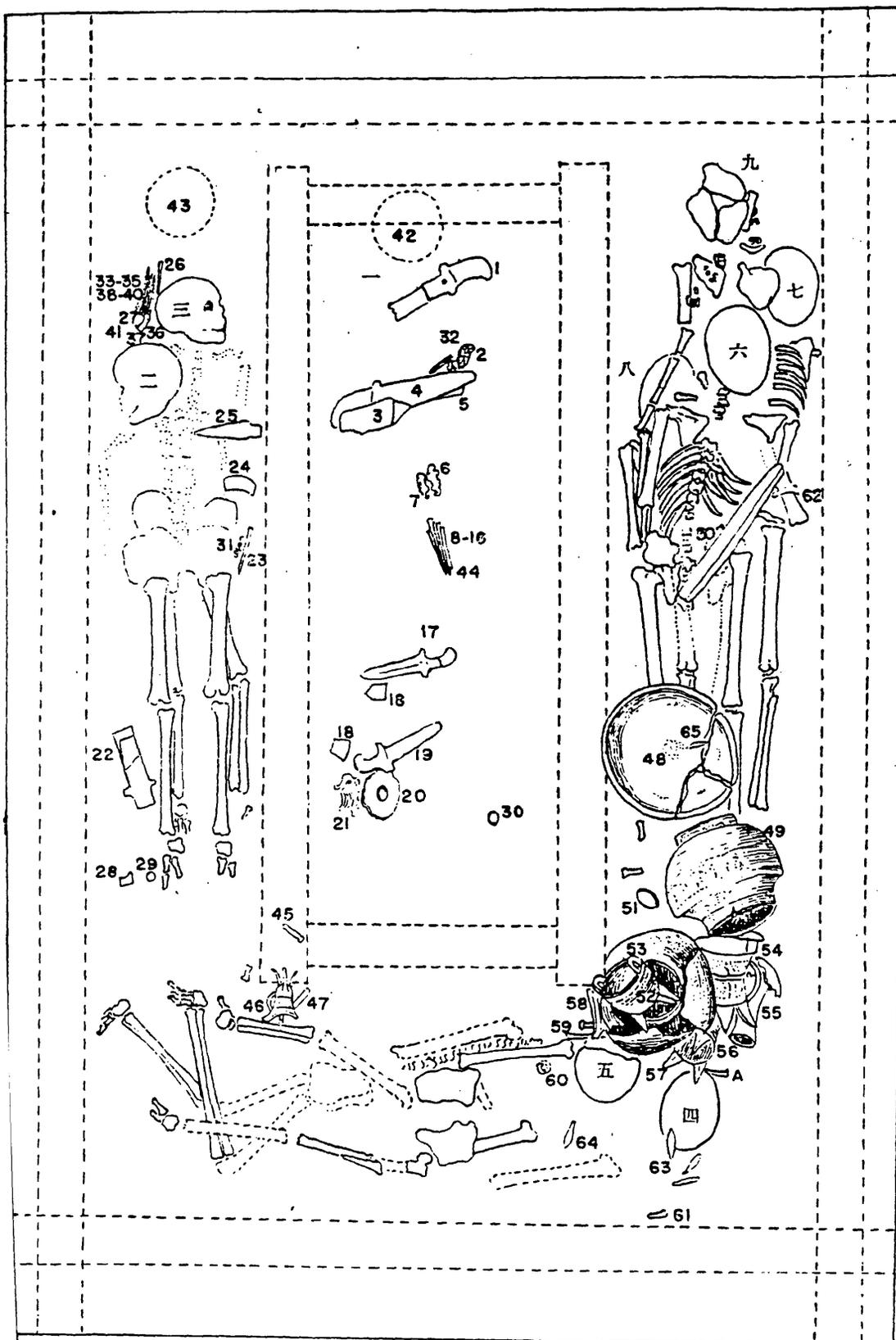


Fig. 3:12 M331 Xiaotun. Shi Zhangru 1970, p.56.





0 50cm  
一至九，人骨

1. 銅戈，2. 松綠石飾，3. 石戈，4. 大銅戈，5. 石戈，6, 7. 玉獸，8-16. 玉葬，17. 銅戈，18. 殘石戈，19. 銅戈，20. 石環，21. 石鳥，22. 銅戈，23. 玉葬，24. 殘銅戈，25. 銅戈，26. 玉葬，27. 牙葬首，28. 殘石器，29. 蚌泡，30. 陶輪，31. 松綠石，32. 玉魚，33-35. 玉葬，36, 37. 玉瑣，38-40. 玉葬，41. 松綠石，42, 43. 紅色殘木器，44. 玉葬，45. 劍形小石器，46. 銅尊，47. 劍形小石器，48. 銅盤，49. 銅甗，50. 石杵，51. 陶輪，52. 銅鼎，53. 銅甗，54. 銅甗，55. 銅甗，56. 銅甗，57. 銅甗，58. 銅甗，59. 銅甗形器，60. 蚌泡，61. 骨柩一，62. 骨柩二，63-65. 骨族，A 殘骨柩。

fig. 3:14 M232 Xiaotun. Shi Zhangru 1976, p.17, p.67, fig.24.

vessels became the most important criterion for dating these tombs.

The dates of the four tombs were examined by Li Chi, who was the first to attempt a periodization of the Anyang culture.<sup>55</sup> He studied ten tombs from Xiaotun including these four on the basis of their bronze vessels.<sup>56</sup> He discussed the dates of the Xiaotun and Xibeigang tombs in relation to Xiaotun tombs M331, M333, and M388 all from section C. At the time of his study there were relatively few recognized pre-Anyang bronzes for comparison. Comparing these bronzes with the pottery styles of neolithic and pre-Anyang periods, he established that the style of the bronze ritual vessels from section C represents an early period of the Anyang culture. However, at this time the stratigraphical sequence of the tombs of section C as a group had been dated to the later period of the Anyang culture.<sup>57</sup> The contradiction in dating between the style of cultural remains and the stratigraphy of the tombs was noted by Li Chi.<sup>58</sup> He resolved this conflict by explaining that section C represented the period of decline in the Late Shang period. He applied these conclusions to his other studies of the area.<sup>59</sup>

More recently, the tombs of section C of Xiaotun have since been re-dated to the earlier period of Anyang culture by most scholars. In 1964, Zou Heng dated M333 to period I and M331 to period II in his four-period chronological system.<sup>60</sup> In 1972 Hayashi Minao dated M232, M331, M333, and M388 to period I of his own four-period chronological system.<sup>61</sup> Ursula Linert in 1979 dated M232 and M333 to period I and M388 to period II, M331 to period II of her four-period chronological system.<sup>62</sup> In 1979, Zhang Changshou dated M232, M333, M331, M388, to period I of his three-period chronological system.<sup>63</sup> In 1980, when discussing the dating of the Fu Hao tomb, Zheng Zhenxiang dated the section C tombs M333, M388 and the section B tomb M232 to period I in her four-period chronological system.<sup>64</sup> In 1983, Yang

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<sup>55</sup> Li Chi was inspired by Dong Zuobin who established the periodization of the oracle bones. Li Chi himself tried to establish his chronological system on the basis of the cultural remains. (Li Chi 1948, pp.1-99)

<sup>56</sup> Li Chi, 1948, pp.1-99; Li Chi and Wan Jiabao, 1964, 1966, 1968, 1970, 1972.

<sup>57</sup> Shi Zhangru, 1980, p.331.

<sup>58</sup> Li Chi 1963, p.725.

<sup>59</sup> Li Chi, 1963, p.350.

<sup>60</sup> Zou Heng, 1964, p.70.

<sup>61</sup> Hayashi Minao, 1972, pp.18-9.

<sup>62</sup> Ursula Linert, 1979, pp.30-40.

<sup>63</sup> Zhang Changshou, 1979, p.279.

<sup>64</sup> Beijing 1980f, pp.221-2.

Xizhang dated M333, M388, M331, and M232 to period I of his four-period chronological system on the basis of pottery,<sup>65</sup> and to period I of his three-period chronological system based on the bronze vessels.<sup>66</sup> While the chronological systems of each scholar are not exactly the same (table 3:3-2), these four tombs have generally been dated to the earlier period of Anyang. In 1991, the style of the bronze vessels from these four tombs was examined in detail. The style and assemblage of the bronzes represent a transitional phase from the style of the Erligang period to the period represented by the vessels from the Fu Hao tomb. The Erligang style co-exists with the pre-Fu Hao style in these bronze vessels. The co-existence of these styles on the bronzes from these tombs reveals the turning point from the style of the Erligang period to the archetypical Anyang style as represented by the bronzes from the Fu Hao tomb.<sup>67</sup>

Table 3:3-2 Chronological sequence of the Xiaotun tombs according to various scholars

Tomb Section	Li Chi	Li Chi	Zou Heng	Hayashi	Linent	Zhang	Zheng	Yang	Yang
basic of Chronology	bronze	stratig.						pottery	bronze
188					II-III	I		I	I
232 B			I	I	I	I	I		
331 C	early	late	II		II	I		I	I
333 C	early	late	I	I	I	I	I	I	I
388 C	early	late		I	II	I	I	I	I

The early dating of M232, M333, M331, and M388 established on the basis of the style of the bronze vessels, will be applied to the weapons from these tombs as representative examples earlier than those from the Fu Hao tomb.

In conclusion, the representative tombs from which bronze weapons have been excavated can be listed as follows, using the four-period chronological system established by the Anyang archaeological team:

<sup>65</sup> Yang Xizhang, 1983, pp.48-55.

<sup>66</sup> Beijing, 1985a, p.85.

<sup>67</sup> Chen Fangmei, 1991, pp.181-232.

**Period I:** Sanjiazhuang M1, Xiaotun M232, M331, and M388

**Period II:** M5, M18, Xibeigang M1001, E16, some finds from the Western Sector of YinXu

**Period III:** Other tombs from the Western Sector of YinXu

**Period IV:** M1713 and further tombs from the Western Sector of YinXu

In cases where the dating of a tomb or tombs is still controversial, such tombs will be dated in section 3.3 through discussion of the styles of bronze weapons which they contained.

### 3.3. Stylistic development of bronze weapons in the late Shang period

#### 3.3.1. *ge*

During the 273 years of the late Shang period, five types of *ge* are found in the Anyang area. Only type VI *ge* is not found in this area.

Types II (fig.3:15-1) (fig.3:17) and III (fig.3:15-2) had been used in the Central Plains area since the Erlitou<sup>68</sup> and Erligang periods<sup>69</sup> and seem to become the main tradition of the Anyang area during the Late Shang period. By the Western Zhou, on the other hand, the *ge* are mainly Type IV (fig.3:16) with a small number of types V, I and III.<sup>70</sup> Thus, the traditional types are types II and III, while types I, IV, and V are probably new forms. Why did new types of *ge* develop during the Late Shang period? Did they have different functions in the ancient burial system? What is the organic relationship among the various types? Once again, the problem of the chronological sequence of the various types has to be discussed. The occurrence, popularity and decline of each type have to be defined in the chronological system.

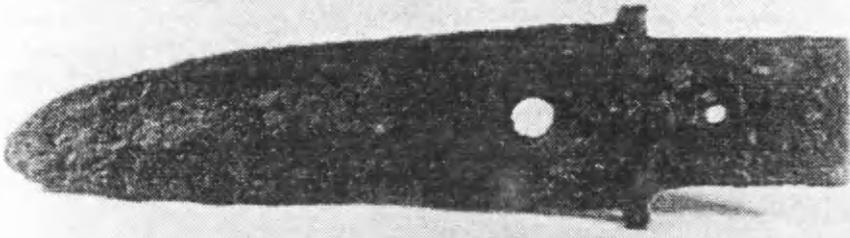
The chronological sequence of the *ge* during the Late Shang period will be discussed with the help of criteria other than the style of bronze weapons. The organic relationship between different types of *ge* will be discussed by taking note of the co-existence of different types in the tomb and the changing proportion of the various types at different periods. This discussion will entail a re-examination of both the accepted and the controversial aspects of the chronological systems according to oracle bones, stratigraphy, pottery and bronze vessels — from the point

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<sup>68</sup> KG 1976.4, p.260.

<sup>69</sup> KGXB 1957.1, p.59.; WW 1983.3, p.74.

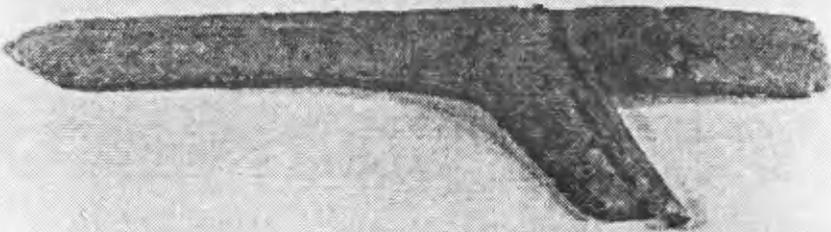
<sup>70</sup> Guo Baojun, 1964, Xian 1994, pp.105-7; Beijing 1995, p.33, pp.204-209; Beijing 1962, p.118.



g. 3:15-1 Type II *ge*, Erligang period, M7 Baijiazhuang Zhengzhou, (8M7:6)  
length 29.3 cm. Beijing 1981a, pl. 19.



g. 3:15-2. Type III *ge*, Erlitou period, Erlitou Yanshi (75 YLVK3:2),  
length 23.5 cm. Beijing 1981a, pl.23.



g. 3:16 *Ge*, Baoji Yugou, Shanxi, length 24.5 cm. Beijing 1984b, pl.23.

of view of the stylistic development of the *ge*. Several representative tombs have been mentioned above. They will be divided into two categories according to size and variations of *ge* shapes. The first category consists of larger tombs in which often more than one type of *ge* co-existed. They include tomb 5 known as the Fu Hao tomb, tombs of Xiaotun section C, and the royal tombs of Xibeigang. That various types co-existed in one tomb often reveals the organic relationship among them during the course of their stylistic development. It helps to explain the complicated stylistic web of invention and tradition, zenith and decline. On the other hand, some tombs were excavated with a certain number of *ge* of the same type. They reveal a significant tendency in the development.

However, only a limited number of representative tombs belong to the first category. Therefore, the stylistic development of the *ge* found in these tombs has to be evaluated in the light of evidence from the tombs of the second category.

The second category of tombs are mainly excavated from the western sector of YinXu. Most of the tombs from this cemetery are smaller in scale and are considered to belong to the lower classes of the nobility. They are dated by stratigraphy and pottery types to a wide chronological range from period II to IV. While some tombs are larger in scale and contained many *ge* of various forms. Most of them only contained one *ge* each. However, a large number (166) of tombs contained bronze weapons, including various types of *ge*.

In the light of traditional and new *ge* shapes, the tombs of the first category can be divided into four groups.

The first group consists of those tombs with the strongest traditional shapes of *ge* and the least intention to alter the tradition. M 331, 388, 333 and 232 can be placed in this group.

The tradition of the Erligang period was comparatively strong in these four tombs. The traditional Type II and III *ge* are in the majority. Thirteen are of Type II (fig.3:18,19) and six *ge* are of Type III (fig.3:21). The design decorates the curved *nei* without changing its outline, and so can be considered traditional.

However, there are some new characteristics in this group: a traditional Type III *ge* (fig. 3:20-1) from M 331 displays a different appearance produced by the new technique. It consists of a jade *yuan* and a bronze curved *nei*. The jade-*yuan* bronze *nei ge* had been developed as early as the Erligang period (fig.3:20-2)<sup>71</sup>. On the Wangjinglou *ge* there is a small circular perforation where the bronze and jade join (fig.3:20-2), possibly facilitating securing the two materials together. The *ge* from M331 (fig.3:20-1) on the other hand has a groove in the bronze *nei* for inserting

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<sup>71</sup> KG 1981.6, p.556.

the jade blade, achieving a much more secure join of the bronze and jade. A hole in the jade near the point of intersection may have strengthened the bond. This is very helpful evidence for understanding the techniques for combining cast different materials at that time.

Another type related to Type I (fig.3:22) was found in M 232. This shape simply consists of the *yuan* and a rectangular *nei* without *lan*. This form is much simpler than the traditional shapes found at Erligang.

The combination of a strong tradition with some invention may give some clues to the date of the tombs of group I. In comparison with the other groups, this group has the highest proportion of weapons styled in the Erligang tradition, suggesting that the tradition of the Erligang period was still very prevalent.

As regards the two *ge* with new features among the sixteen *ge* of group 1, these new features can also be found in another representative tombs. Type I *ge* with an equilateral triangular *yuan*, and a rectangular *nei* placed symmetrically with respect to the blade, was excavated in M 232 (fig.3:22) and has also been found in M 1 of Sanjiazhuang.(fig.3:23)<sup>72</sup> Moreover the new technique, of connecting of the bronze *nei* and jade *yuan* seen in the Type III *ge* of M 331 (fig.3:20-1) can also be found in *ge* of types II and III (fig.3:24-1,24-2) from M 5.<sup>73</sup>

The tombs of group 2, represented by M 5 of Xiaotun and M 1001 of Xibeigang, still show a strong adherence to tradition but less so than those of group 1, and they show a greater tendency to alter the tradition than those of group 1.

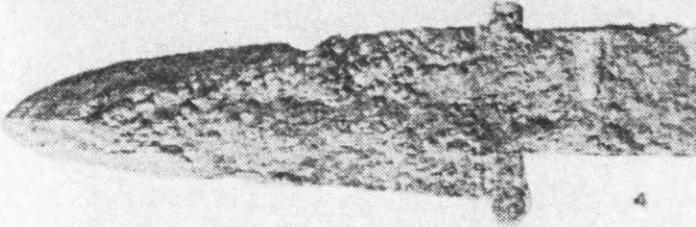
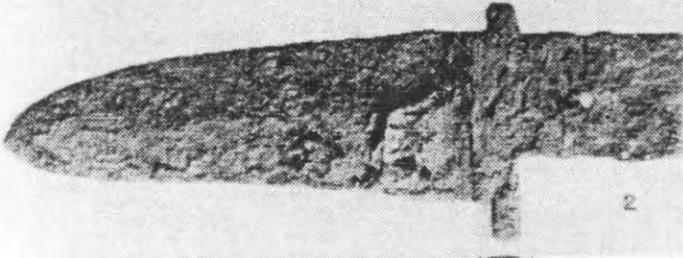
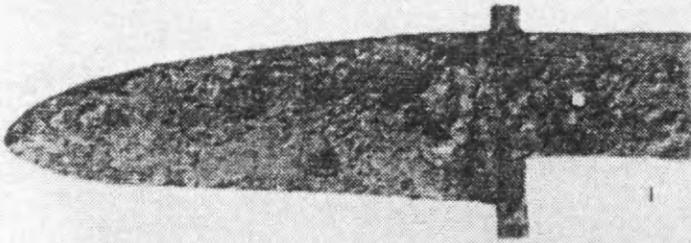
In M 5 named as the tomb of Fu Hao, although 91 *ge* were excavated, only 52 of these (including 50 bronze *ge* and 2 *ge* with jade *yuan* and bronze *nei*) can be classified by type. Among the 52 *ge*, there are nine of Type II (fig.3:25-1), 41 of Type III (fig.3:25-2) and two of Type V. In other words, during the period of M 5, types II, III and V co-existed. The traditional Erligang types (II and III) thus are overwhelmingly dominant in this tomb, numbering 50 out of the total of 52.

However, the tradition of the Erligang period is modified, particularly as exemplified by Type III. The change is seen in the decorative treatment of the curved *nei*. Among the 41 examples of Type III *ge*, only 4 exactly followed the traditional decorative treatment of the curved *nei* (fig.3:25-2), in which the *nei* is decorated without changing the outline of the arch. The remaining 37 *ge* changed the outline of the *nei* with a hooked treatment to depict the crest and beak of a bird-like creature (fig.3:26). In other words, the decoration was not restricted to the arch but was given a more sculptural treatment. In addition, as mentioned above, a new technical and

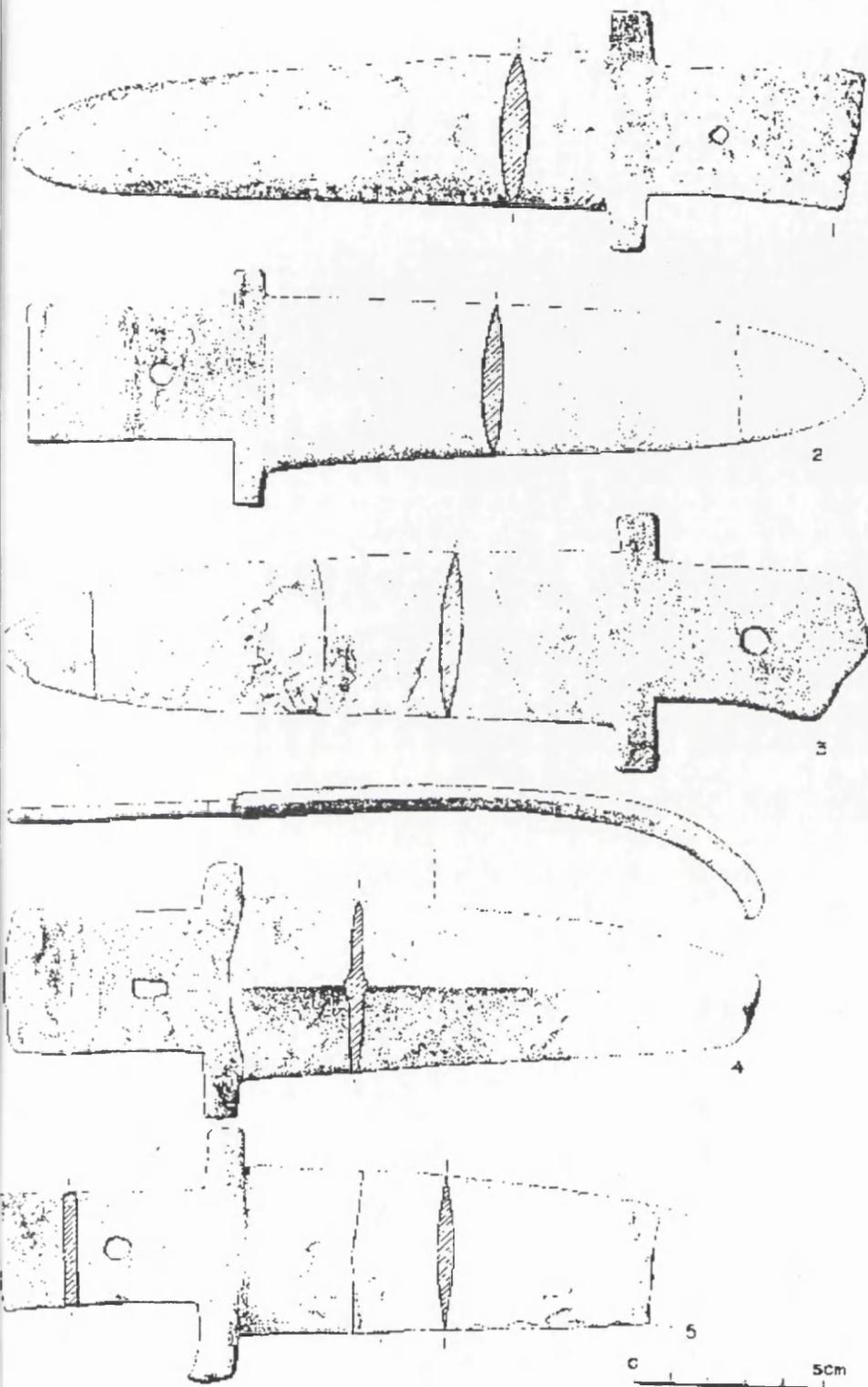
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<sup>72</sup> KG 1983.2, pp.127-8.

<sup>73</sup> Beijing 1980f, pl.17:1 and pl.71:3.

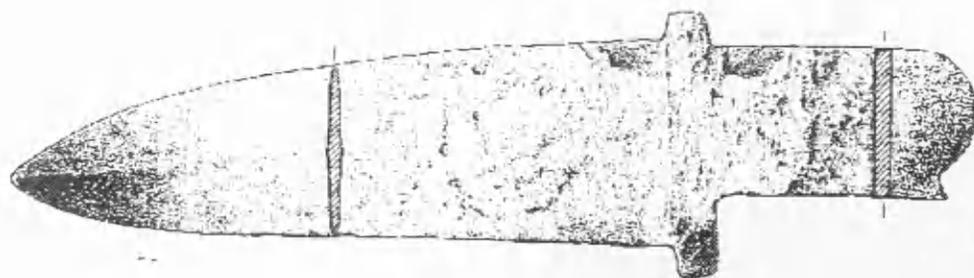


3:17 Type II *ge* from M331 Xiaotun, length 23.1, 22.9, 23.2, 23.2 cm. Shi Zhangru 1980,pl.64.

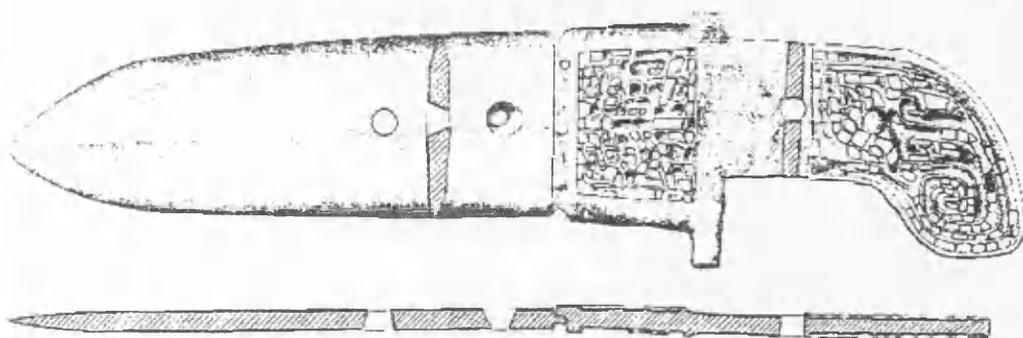


劍形器一、二、三、四、五

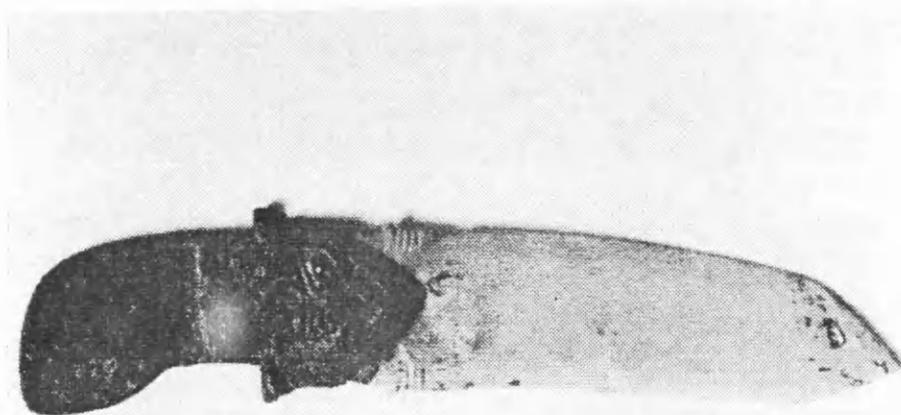
3:18 Type II ge from M388 Xiaotun. Shi Zhangru 1980, pl.172.



g. 3:19 Type II *ge* from M333 Xiaotun, length 25.5. Shi Zhangru 1980, pl.140.



g. 3:20-1 Type III *ge* with jade blade and bronze curved-*nei* from M331 Xiaotun, length 32.9 cm. Shi Zhangru 1980, pl.67.



g. 3:20-2 Type III *ge* with jade blade and bronze curved-*nei* from Wangjinglou Xinzheng Henan, length 31.6 cm. Beijing 1993b, pl.22.

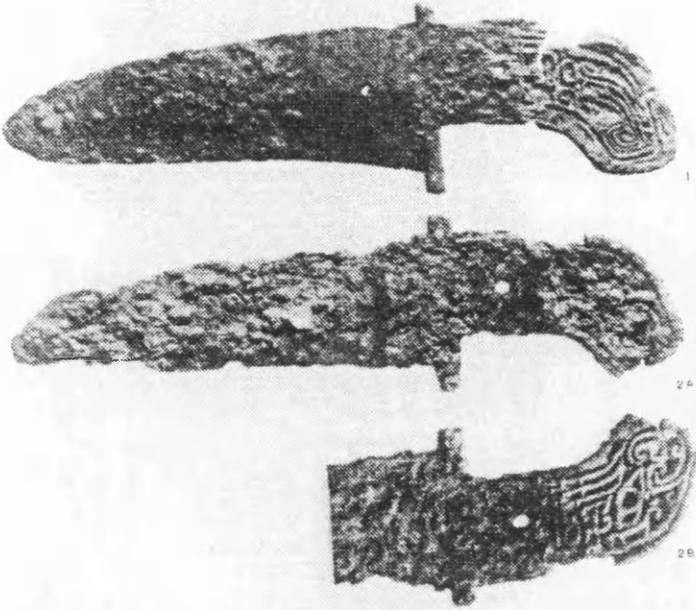


Fig. 3:21-1 Type III *ge* from M232 Xiaotun, length 25.7 cm (1) ,25.8 cm (2A) .  
Shi Zhangru 1973, pl.28.

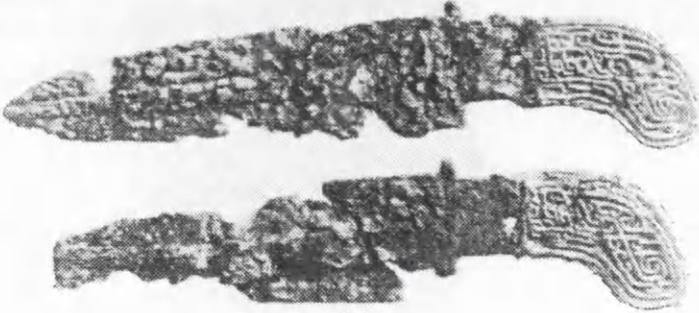


Fig. 3:21-2 Type III *ge* from M232 Xiaotun, length 35.8 cm (2) , 35.2 cm (3) . Shi  
Zhangru 1973, pl.26.

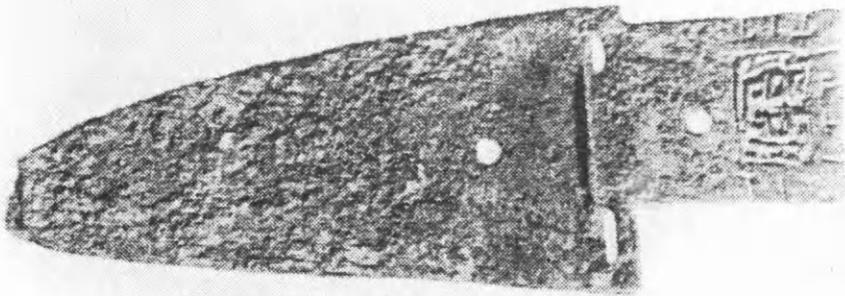
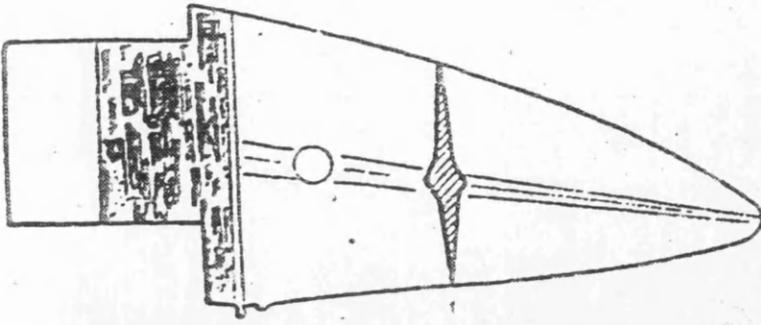
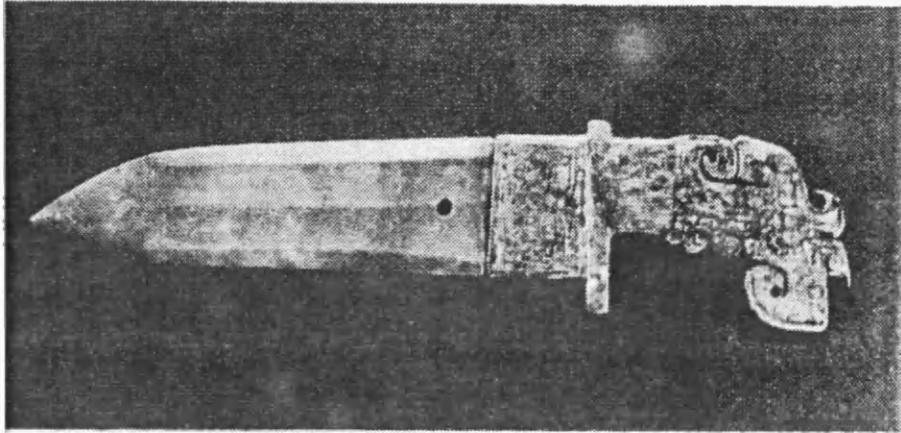


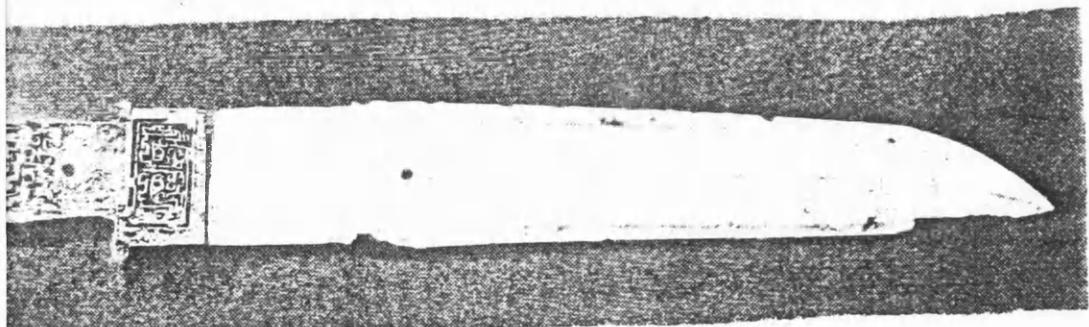
Fig. 3:22 Type I *ge* from M232 Xiaotun, length 24 cm. Shi Zhangru 1973, pl.30.



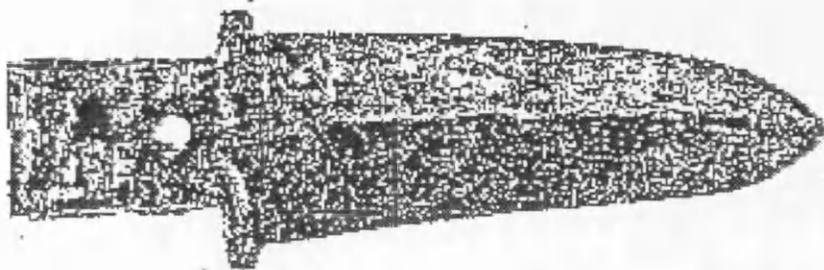
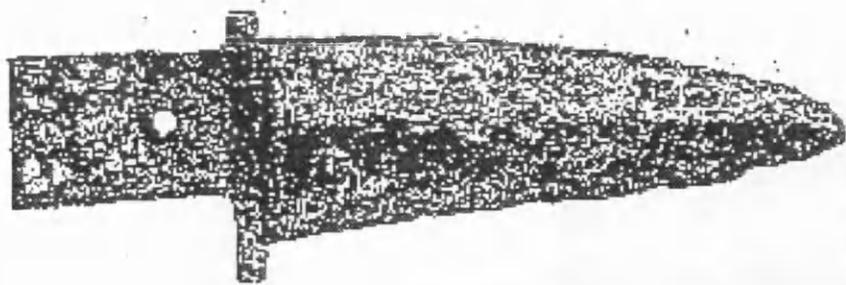
g. 3:23 Type I ge from M1 Sanjiazhuang Anyang, length 23 cm. KG 1983.2, p.128, fig.3:2.



g. 3:24 -1 Type IV ge with jade blade and bronze curved-wei from M5 Xiaotun, length 27.8 cm. Beijing 1980f, color plate 17:3.



g. 3:24 -2 Type II ge with jade blade and bronze curved-wei from M5 Xiaotun, length 56.9 cm. Beijing 1980f, pl.71:1.



g. 3:25-1 Type II *ge* from M5 Xiaotun, length 21.9 cm. Beijing 1980f, pl.70:1.



g. 3:25-2 Type III *ge* from M5 Xiaotun, length 38.8 cm. Beijing 1980f, pl.71:2.

aesthetic treatment was applied to both the traditional forms of *ge*, Types II and III. Two "jade blade and bronze *nei*" *ge* (fig.3:24) are examples. In other words, although the traditional types still played an important role in tomb 5, the majority show features which depart from tradition. Moreover, the socketed *ge*, Type V, is a new form developed beyond the tradition of Erligang. There are just two Type V *ge* (fig.3:27) among 52 in M 5. In other words, this new type of *ge* seems not to have been as popular as the traditional forms such as types II and III.

To sum up the above discussion, the Erligang tradition was still very strong, on the other hand, some new features of the Anyang period had already begun to appear during the period of M 5.

In comparison with M 5, the *ge* forms from M 1001 of Xibeigang reveal a similar tendency. This tomb has been robbed so that the proportion of different *ge* types in it is not known exactly. However, of the fourteen remaining *ge* in this tomb, ten are of Type II (fig.3:28-1), three of Type III (fig.3:28-2) and one of Type V (fig.3:28-3).<sup>74</sup> These three types are the same as seen in tomb 5. They reveal the same tendencies in the development of the *ge* shape. A strong Erligang tradition still existed as seen in the ten *ge* of Type II and three of Type III. However, there was also one Type III *ge* with a curved *nei* decorated with a sculptural bird-like design. This treatment is never seen in tombs of group 1 but is seen in M 5. Moreover, the new Type V socketed *ge* of M 1001 of Xibeigang, which was unknown during the Erligang period and which was rare in tombs of group I, also appeared in M 5. But this new Type V is uncommon in M 5 and M1001 of Xibeigang, in contrast with the majority of traditional types.

Although the tombs of group 2 show more new elements than those of group 1, traditional elements are still very strong at this time.

In contrast, the tombs of group 3 reveal a different tendency in the development of *ge* shapes. There is an extraordinarily high proportion of the Type V *ge* in contrast to a low proportion of the traditional types. The representative tombs of group 3 are M 160 of Guojiazhuang<sup>75</sup> and M 1004 of Xibeigang.<sup>76</sup>

In an undisturbed tomb, M 160 of Guojiazhuang, among 118 *ge* only about ten were of traditional shape (Type III) in contrast to about 100 *ge* of new form (Type V). Although only a brief archaeological report was provided by the archaeologist, the contrast is still visible. Not only do the traditional shapes occur in smaller numbers, the one remaining traditional type, Type III, became smaller in size, thinner and

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<sup>74</sup> Gao Quxun 1962, pp.1216-1219.

<sup>75</sup> KG 1991.5, pp.390-391.

<sup>76</sup> Gao Quxun 1970, p.154.

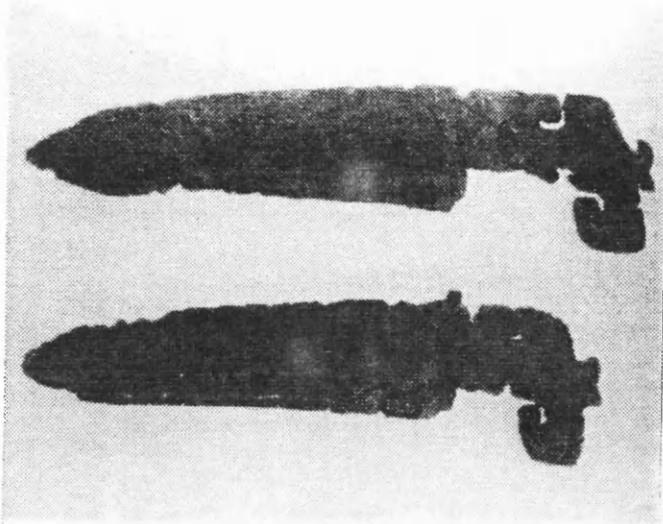


Fig. 3:26 Type III *ge* from M5 Xiaotun, length 26.1 cm, 26.8 cm. Beijing 1980f, pl.73:5.

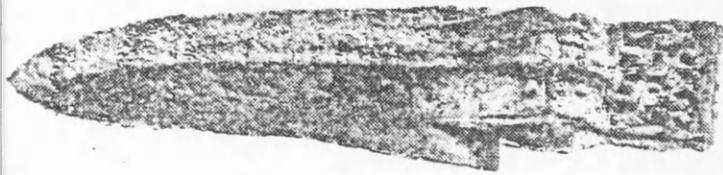


Fig. 3:27 Type V *ge* from M5 Xiaotun, length 17 cm. Beijing 1980f, pl.70:6.

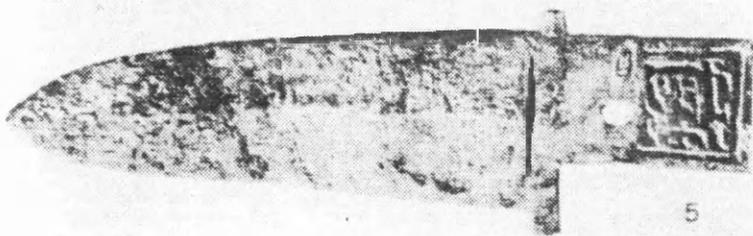
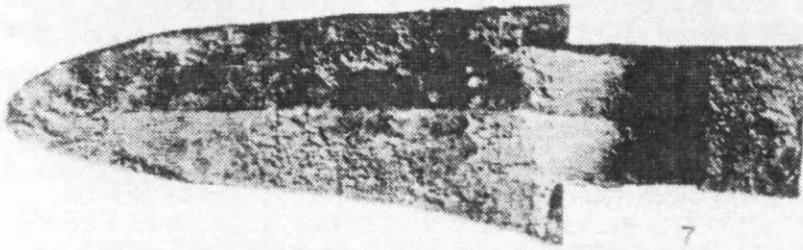


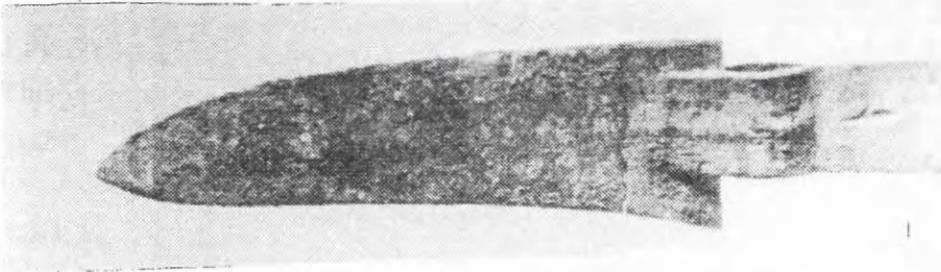
Fig. 3:28-1 Type II *ge* from M1001 Xibeigang, length 22 cm. Gao Quxun 1962, pl.248.



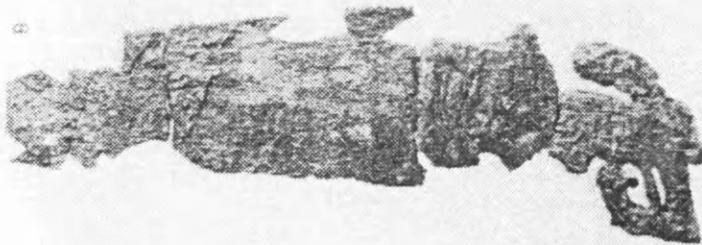
g. 3:28-2 Type III *ge* from M1001 Xibeigang. Gao Quxun 1962, pl.248.



g. 3:28-3 Type V *ge* from M1001 Xibeigang, length 33.6 cm. Gao Quxun 1962, pl.248.



g. 3:29-1 Type V *ge* from M1004 Xibeigang, length 26.9 cm. Gao Quxun 1970, pl.136:1.



g. 3:29-2 Type III *ge* from M1004 Xibeigang, length 25 cm. Gao Quxun 1970, pl.136:8.

lighter in weight, and roughly decorated. In other words, the *ge* of Type III seem to have been manufactured mainly for burial purposes. At the same time, another traditional shape, Type II *ge* seems to have lost its importance and was hardly seen.

The phenomenon observed in M 160 of Guojiazhuang can also be seen in M 1004 of Xibeigang which had 70 Type V *ge* (fig.3:29-1) and three Type III *ge* (fig 3:29-2). At the same time, the traditional Type II *ge* was absent. Although this tomb had already been robbed, a large quantity of bronze weapons still remained.<sup>77</sup> It is interesting to notice that the proportions of the various shapes of *ge* seen in this tomb is very close to that of M 160 of Guojiazhuang. Since bronze weapons were not as attractive as bronze vessels to the robbers it is possible that the bronze weapons were comparatively intact in M 1004. However, the proportion of the various *ge* types changed again in the tombs of group 4.

In group 4 tombs such as M 1713 of the western sector of Yinxu<sup>78</sup> and M 1003 of Xibeigang,<sup>79</sup> the traditional shapes of *ge*, such as types II and III, are of almost no significance, and the new Type V *ge* is not as important as in group 3. In contrast, another new shape, Type IV became important. This type shares the tendency of the development of *ge* shape during the Western Zhou period. M 1713 of the Western sector of Yinxu was undisturbed. The 30 *ge* in this tomb are all of Type IV (fig.3:30-1,30-2). Neither the traditional forms, types II and III, nor Type V occur in this tomb. This is not an isolated example: The same tendency appears in M 1003 of Xibeigang. In this tomb among the six remaining *ge*, five are of Type IV and only one of Type V.

### 3.3.1.1. Chronology of the four groups of tombs with *ge*

From the point of view of the style of *ge*, the Erligang tradition remained strongest in the tombs of group 1. The Erligang tradition was maintained in group 2 where it was weaker than in group 1 but stronger than in groups 3 and 4. The tombs of both groups 3 and 4 have the least relationship with the Erligang tradition, and those of group 4 have the strongest links with the tendency of development of the *ge* in the Western Zhou period.

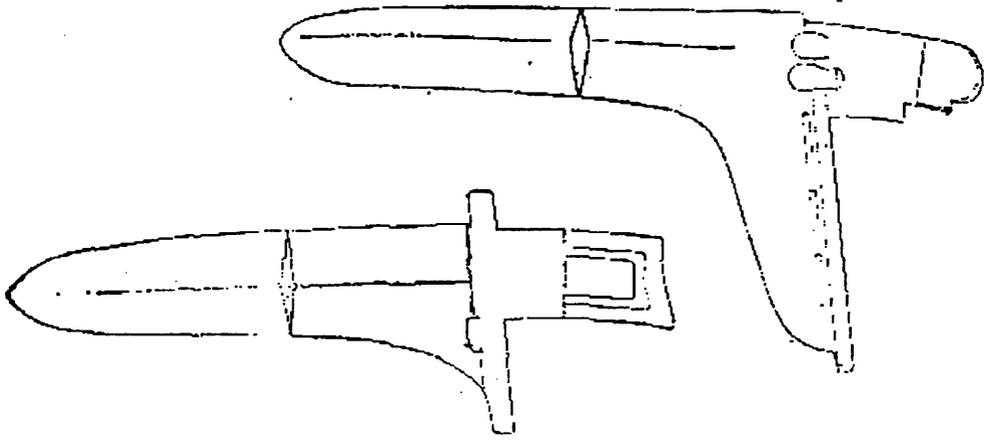
As mentioned above, the style of *ge* found in tomb of group 1, in which tradition was strong and invention weak, suggest that this could be the earliest group, which could be dated to be earlier than the period of M 5 of Xiaotun, perhaps as early as the period of the Shi group of oracle bones and M 1 of Sanjiazhuang. This tomb was dated earlier than the reign of Wu Ding, in the first period of the chronological

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<sup>77</sup> Liang Siyong & Gao Quxun, 1970, pp.145-57.

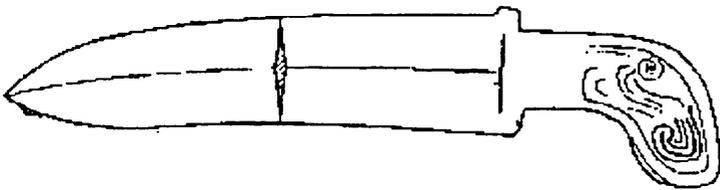
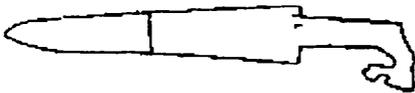
<sup>78</sup> KG 1986:8, p.172.

<sup>79</sup> Gao Quxun, 1967, pp.123-125.



g. 3:30-1 Type IV *ge* from M1713 western sector of Yinxu, length 27.2 cm. KG 1986.8, p.709, fig.7:6.

g.3:30-2 Type IV *ge* from M1713 western sector of Yinxu, length 26 cm. KG 1986.8, p.709, fig.7:4.



g. 3:31-1 *ge*, western sector of Yinxu, length 17 cm. KGXB 1979.1, p.90, fig.65:2.

g. 3:31-2 *ge*, western sector of Yinxu, length 28 cm. KGXB 1979.1, p.90, fig.65:1.

system based on pottery.<sup>80</sup>

In group 2 represented by M 5 of Xiaotun and M 1001 of Xibeigang traditional forms are still strong but less prominent than in group 1. Group 2 however manifests fewer innovations than groups 3 and 4.

The relative sequence of the four tomb groups can be further confirmed by other criteria of dating. On the basis of stratigraphy, M 1001 of Xibeigang was disturbed by M 1004 which is one of the representative tombs of group 3. Moreover, M 1001 was dated to either the reign of Pan Geng or the reign of Wu Ding on the basis of other criteria of dating as mentioned in Chapter III above. From the point of view of the styles of bronze weapons, due to the fact that the level of invention of group 2 is stronger than that of group 1, the date of M 1001 could be no earlier than the reign of Wu Ding rather than the reign of Pan Geng. At the same time, the date of M 5 with the stronger tradition than group 3 and 4 could not be as late as the reign of Wen Ding, and could be as early as the reign of Wu Ding. The stylistic tendency of bronze weapons as seen in both M 5 and M 1001 may represent the period around the reign of Wu Ding. To sum up, the tombs of group 2 may be dated to period II according to the development of the *ge* found in them.

The tombs of group 3 consist of M 1004 of Xibeigang and M 160 of Guojiashuang. The *ge* found in them are inventive but not yet as intimately related to the main tendency of Western Zhou as those seen in the tombs of group 4. The tradition of Erligang is much less evident in group 3 than in group 2. From the point of view of the styles of bronze weapons, the date of the tombs of group 3 is later than those of group 2 and earlier than those in group 4. Other criteria of dating provide further confirmation: on the basis of stratigraphy, as already noted, M 1004 disturbed M 1001, a representative tomb of group 2. Moreover, M 160 has been dated to period III of the chronological system of pottery.<sup>81</sup> In summary, the tombs of group 3 may be dated to period III according to the development of the *ge* found in them.

Group 4, represented by M 1003 of Xibeigang and M 1713 of Western Sector of Yinxu displays the strongest level of invention which strongly foreshadows the

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<sup>80</sup> On the basis of the style of bronze vessels, the Xiaotun tombs have also been dated to the first period of the chronological system of bronze vessels. The Shi group of oracle bones was dated by most scholars to be earlier than the first period of the chronological system of oracle bones although some scholars have thought it to be later. From the point of view of the development of bronze weapons, the dating of the Shi group to the first period of the chronological system of oracle bones is more acceptable. Thus, the *ge* from tombs in group 1 can be dated as early as the first period of the chronological system based on the oracle bones.

<sup>81</sup> KG 1991.5, pp.390-381.

main tendency of the development of the Western Zhou period. From the point of view of the style of their bronze weapons, the tombs of group 4 could be dated to the period which is most close to the Western Zhou period. This hypothesis can also be confirmed from the other criteria for dating. M 1713 has been dated to period IV in the chronological system of pottery.<sup>82</sup> To sum up, the tombs of group 4 are chosen to represent period IV of the stylistic development of bronze weapons.

On the basis of the above discussion, the chronological sequence of four groups of tombs can be roughly divided into four periods, according to the stylistic development of the *ge*. The tentative chronological sequence can be roughly outlined as follows:

**Group 1**, which consists of M 232, 331, 333, 388 of Xiaotun and M 1 of Sanjiazhuang, represents the stylistic development of the *ge* in period I.

**Group 2**, which consists of M 5 of Xiaotun and M 1001 of Xibeigang, represents the stylistic development of the *ge* in period II.

**Group 3**, which consists of M 160 of Guojiazhuang and M 1004 of Xibeigang, represents the stylistic development of the *ge* in period III.

**Group 4**, which consists of M 1713 of the Western sector of YinXu and M 1003 of Xibeigang, represents the stylistic development of the *ge* in period IV.

According to the above tentative chronological sequence of the four tomb groups in the first category, the main trends of stylistic development of various *ge* types can be roughly drawn.

During period I two main shapes of *ge* co-existed, the *ge* with *lan* (Type II) and the *ge* with curved-*nei* (Type III). This period was strongly dominated by the tradition inherited from the Erligang period, but there was some invention, such as the simple *ge* without *lan* or with curved *nei* as in Type I, which although not as common as the others, should be noticed as appearing as early as period I. Moreover, the form of *ge* consisting of a bronze *nei* and a jade *yuan* also appeared during period I.

During period II of the stylistic development of the *ge* the Erligang period tradition was still very strong: types II and III are still the main types. Moreover, Type II maintained its shape unchanged in period II and showed little further development. In contrast, Type III altered the treatment of decoration of the curved *nei* during period II and opened the way forwards a further development in the next period. The stylistic development of the curved *nei* may provide another argument in

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<sup>82</sup> KG 1986.8, p.712.

the controversial dating of pit E 16, from which five *ge* were excavated: three of them were decorated without changing the curved form. This is the earlier treatment which was about to change during period II. As it contained oracle bones of the Shi group, the date of pit E 16 could be as early as the reign of Wu Ding rather than as late as the reign of Wen Ding.

However, the changes of period II are not confined to the traditional forms. The new inventions seen in period I continued but remained in a minority during period II. Type I and the new use of both jade and bronze do not replace the major shapes of Erligang tradition during period II. However, the socketed *ge*, Type V, was introduced in this period and became a common shape during period III, unlike other innovations of period I.

During period III, the *ge* with curved *nei*, Type III of the tradition of Erligang period, was further changed with the simplified sculptural bird design. It appeared to be thinner and was possibly manufactured solely for the purpose of burial. During period III, Type II of the Erligang tradition became rare, while the socketed *ge*, Type V, became popular. It seems clear that Type II, the *ge* with *lan*, which formed the majority of *ge* during periods I and II, was replaced by *ge* of Type V, the socketed *ge*, during period III. However, the dominance of Type V during period III seemed not to last too long. During period IV, the majority of *ge* were of Type IV, the *ge* with the suspended *hu*, which became representative of the development of the *ge* during the Western Zhou period.

The above development of Late Shang period *ge* forms is merely an outline on the basis of the *ge* shapes found in the representative tombs. Because the number of representative tombs is limited, the above framework of the development of *ge* shapes during the Late Shang period in the Anyang area has to be supplemented by other kinds of tombs. The tomb group of the Western sector of Yinxu will be chosen as one of the main sources for this supplementary information. The tombs of this group are mainly those of the lower class of warrior.<sup>83</sup> On the basis of stratigraphy and pottery, they were dated widely ranging from periods II to IV. In addition other tombs from which bronze weapons were excavated will be included to expand the basis for discussion.

The changes of the *ge* in shapes and proportion in the different periods can be roughly revealed through the tombs of the western section of Yinxu. The various types of *ge* and numbers found in tombs from the western section of Yinxu can be

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<sup>83</sup> The skeletons of the tombs containing bronze weapons in the western section of Yinxu were identified as males who could be warriors. This type of tomb is smaller in scale. KGXB, 1979.1, p.118.

listed<sup>84</sup> in chronological sequence as follows:

Types/ amount	I	II	III	IV	V
period II		4	45		3
period III	1	4	56	1	12
period IV	4		32	7	8

It is interesting to compare the relationship of various types of *ge* from the Western sector of Yinxu with those from the representative tombs of the first category, which have been discussed in the above paragraphs. The consistency between them is obvious particularly in regard to the new shapes such as the socketed *ge* (Type V). This type evolved during period II and developed to its zenith during period III. During period III, another new shape, the suspended *hu ge*, (Type IV) evolved and became more common during period IV. In other words, the tombs of the western sector of Yinxu, belonging to warriors of lower class, confirm on a smaller scale the trends in the development of the *ge* which have been observed in the bigger tombs of category 1.

It has to be noticed that Type I, the other shape with the simplest *yuan* and *nei*, was found in tombs such as M 372 and M 374 in the Western sector of Yinxu during periods III and IV. Although Type I had evolved during period I as seen in the M 232 and Sanjiazhuang tombs of category 1, it seems not to have been further developed there. In contrast, this type was further developed in the smaller-scale tombs of category 2. The development of Type I as it relates to the cultural relationship between central and south western China will be further discussed below(pp.285-288).

In regard to the traditional shapes of the Erligang period, the influence of tradition is stronger in the tombs of the Western sector of Yinxu. Particularly, the Type III *ge* formed the highest proportion during periods II to IV. Because the archaeological reports did not distinguish whether the bird decoration on the *ge* with curved *nei* had been changed into the arched form or not when classifying the shapes of Type III *ge*, it is difficult to know when the curved form was changed by the addition of decoration. However, it is obvious that in the tombs of the western section of Yinxu, the Type III *ge* was mainly used as a surrogate weapon for burial use in contrast to Types II, IV and V which were utilitarian weapons. The former were often made very thinly and decorated quite roughly. The latter were cast thicker.

<sup>84</sup> No tombs from period I exist in this area. KGXB 1979. 1,pp.121-146.

Although not all the Type III *ge* in this tomb were surrogate *ge*, the high proportion of Type IV *ge* has to be noticed (133 surrogate Type III *ge* out of a tomb of 156). It seems to have been the commonest shape of *ge* in the tombs of the lower aristocracy and was often manufactured in even numbers.<sup>85</sup>

On the basis of the above chronological discussion, the stylistic development of the *ge* will be discussed according to the following three main themes:

### 3.3.1.2. Anyang as the centre for the development of various forms of *ge*

Most of the various *ge* forms, except for Type VI, were used in the Anyang area during the Late Shang period. The evolution seems to have been a struggle for an ideal shape in order to attach the *ge* firmly to the shaft. In regard to the methods of attaching the *ge* to the shaft, there are two groups during the Late Shang period.

Group 1: Most of the variations of the *ge* shape can be classified in the first group. In this group the *ge* has a blade, *yuan*, with a rectangular flat *nei* to be inserted into a grooved wooden shaft. A *lan*, which extends beyond the width of the *yuan* and the *nei* can be used to secure a cord in order to fix the wooden shaft and *ge* together more tightly. This group includes types I, II, III, and V: the differences among them are in the connecting area between the *nei* and the end of *yuan* where the wooden shaft was to be placed. This seems to suggest that their differences were mainly caused by the considerations of fixing the shaft. Therefore, several shapes of *ge* evolved during the Late Shang period.

In Type IV the lower edge of the blade extended downward in order to allow extra holes for binding the wooden shaft to the *ge* by a cord. Type I can be distinguished from these shapes as it has the basic shape only, without any alteration or addition between the *yuan* and the *nei*.

The various shapes of *ge* in the Anyang area in the Late Shang period seem to have evolved through a search for the ideal way of attaching the *ge* to the shaft. However, the development of Type III, characterized by the curved *nei*, seems to be related to artistic considerations.

Group 2: The second way of attaching the shaft is by means of a socket as in Type V.

As various types of *ge*<sup>86</sup> were found in large numbers in the Anyang area of the Central Plains, this area could be the centre for the development of the *ge* during the Late Shang period.

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<sup>85</sup> KGXB, 1979.1, pp.89,121-146.

<sup>86</sup> According to the calculation by Chen Zhida in 1986, over 700 *ge* of Late Shang have been excavated at Anyang area. Chen Zhida, 1986, p.326

### 3.3.1.3. Tradition and invention in the development of the *ge*

The traditional way of attaching the shaft to the *ge* is by a flat *nei*. The way of attaching the shaft by means of a socket as in the Type V socketed *ge* is new and indicates a sudden change from the traditional *ge* shapes. The meaning of the occurrence of Type VI socketed *ge* can not be understood solely in the context of the Central Plains and will be discussed in Chapter 5.

Such a sudden change could have occurred in the Central Plains as early as ~~early as~~ period I of the chronological system of pottery, according to the socketed *ge* of Wuguan Tomb 1 which was excavated with pottery of this period.<sup>87</sup> It seems not to have become common until the period III of the chronological system of pottery as seen in M 160 and Xibeigang M 1004. However, this invention was carried on in the main trend of development of *ge* forms after the Late Shang period. The traditional way of attaching the shaft to the *ge* was improved on and carried on as the main trend. This suggests that there must have been something inconvenient for the function of the socket.<sup>88</sup>

Accordingly, most types of *ge* evolved by developing the traditional way of attaching the shaft to the *ge*. Type I *ge*, another new shape, occurred during period I of the chronological system of pottery. This type is simpler than the traditional types II and III *ge* inherited from the Erligang period. It consists of only the *yuan* blade and the rectangular *nei*. Therefore, the penetration by the *nei* was the only means for fastening the shaft to the *ge*. The appearance of Type I *ge* in the Anyang area is a phenomenon outside the main trend of improving the way of attaching the *ge* to the shaft. The meaning of the occurrence of Type I *ge* in the Anyang area, once again, cannot be understood in the context of the Anyang region alone. It will be discussed in chapter 5.

The Type IV *ge* with the suspended *hu* is the other new shape in the Anyang area during the Late Shang period. Although the manner for attaching the shaft to the *ge* is traditional, the shape is new as the *hu* was suspended from the bottom edge of the blade. Not only was the area between the tang and *yuan* extended in order to provide more space for fastening the *ge* to the shaft, but additional perforations ranging in number from one to four were placed here to help in securing the blade to the shaft. This new type must have been successful in fixing the *ge* firmly to the shaft, as it became the basic form developed during the Western Zhou period. This

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<sup>87</sup> Beijing, 1987, p. 247.

<sup>88</sup> Guo Baojun 1961, p.111 suggested that the wooden shaft might be more easily dislodged on the socketed *ge*.

type used to be considered an invention of the Western Zhou period.<sup>89</sup> However, with more excavations at Anyang (table 5:3), it is certain that this type evolved in the Anyang area during the Late Shang period.<sup>90</sup> On the basis of the experience with the various types of *ge*, the Type IV *ge*, as the final new type, occurred as late as period III of chronological system of pottery.

In contrast to the above new types, types II and III which were inherited from the Erligang period continued to be used in the Anyang area, although, the Type II *ge* with the rectangular *nei* lost its prominence after period III of the chronological system of pottery. On the other hand, Type III with the curved *nei* existed from periods I to IV and maintained its position as a main shape particularly for the tombs of a small scale. The decoration of the *ge* with curved *nei* continued to evolve. During the periods I and II, the decoration executed in low-relief lines did not change the original curved form. Later, the curved form was gradually sculptured into the form of the bird motif.

#### 3.3.1.4. Distinction between surrogate and utilitarian *ge*

The occurrence and disappearance of types of *ge* form a complicated web of development. This will be further explained within the context of the surrogate *ge* (*mingqi ge* 明器戈, for burial only) and utilitarian *ge* (*shiyong ge* 實用戈 for actual use as a weapon) and in regard to the issue of decoration.

The distinction between the surrogate *ge* and utilitarian *ge* is clearly distinguished in the Type III *ge* with curved *nei*. It is particularly revealed in the 166 tombs with bronze and lead weapons of the western sector of Yinxu. Among 156 Type IV *ge* with curved *nei*, 133 are of surrogate *ge* in contrast to 23 utilitarian *ge*. The surrogate *ge* are often very thin. Their surface is normally rough without being polished (fig.3:31-1).<sup>91</sup> In contrast, the utilitarian *ge* (fig.3:31-2) are thicker with carefully treated decoration.<sup>92</sup> Owing to the differences between them being so obvious, the archaeological reports classified the Type III *ge* with curved *nei* on the basis of this factor.

The distinction between the surrogate *ge* and utilitarian *ge* may relate to the different burial conditions. Utilitarian *ge* are normally excavated in tombs with more burial objects, particularly bronze ritual vessels. For instance, in M 5 of Xiaotun, 40 out of 91 *ge* are of type III. In this royal tomb, there is no distinction between surrogate and utilitarian *ge*. Most of them are thick and carefully decorated and

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<sup>89</sup> Li Chi, 1950, pp.1-18.

<sup>90</sup> Hayashi Minao, 1972a, p.30; Yang Xizhang, 1986, pp.65-8; Chen Chih-ta, 1989, p.327; Li Xueqin, 1991, pp.3-5.

<sup>91</sup> KGXB, 1979.1, p.88, fig. 65:4, 65:2.

<sup>92</sup> KGXB, 1979.1, p.88 fig. 64:5,65:2.

inlaid with turquoise.<sup>93</sup> They were decorated with a bird design to alter the curved geometrical form into a bird form. The artistic intention is so strong that it is clear that the *ge* was manufactured not only for practical but also for ceremonial purposes. Such an artistic intention brings the weapon into the realm of art. The *ge* with a jade *yuan* and a bronze *nei* was a variation of Type III with curved *nei*. The bird's beak and crest were treated with many curved lines in order to form the bird image in the curved part of the *ge*. It must have been easier to depict and cast in bronze. At the same time, the form of the jade blade *yuan* is more geometrical. It was manufactured in jade which could not serve a practical use for hooking but is full of aesthetic sense. Such a strong artistic treatment could be for ceremony. The delicate Type III *ge* can also be found in tombs 25 and 29 south of Dasikongcun (fig.3:32),<sup>94</sup> and in tomb 18 of Xiaotun.<sup>95</sup> The above tombs were dated to the period II in the chronological system of pottery. The introduction of a ceremonial function for the Type III *ge* may have occurred around period II. It still had this function until the period III. Tomb 701 of western section of Yinxu, although robbed, is a large-scale tomb with passages and 12 human burial victims. A delicate Type III *ge* was excavated from this tomb which was dated to period IV.<sup>96</sup>

In contrast, the surrogate Type III *ge* is normally found with pottery vessels. For instance, in tomb 815 of the Western section of Yinxu, a surrogate Type III *ge* was excavated together with a pottery *gu* and *jue*.<sup>97</sup> In tomb 355 of the Western section of Yinxu, both surrogate and utilitarian Type III *ge* were excavated together with four bronze vessels and two pottery vessels.<sup>98</sup> Altogether, a high proportion of surrogate Type III *ge* and a low proportion of utilitarian *ge* were recovered from the tombs of the Western section of Yinxu. Moreover, it has been suggested that most of the tombs in this group belonged to the warrior class. This may suggest the importance of the surrogate form of Type III *ge* for ceremonial burial usage: most small-scale tombs were furnished with this type of *ge*. On the other hand, the popular need for Type III *ge* for ceremonial burial usage explains the long and popular existence of Type III *ge* from periods I to III of the Late Shang period. Owing to the distinction between the utilitarian *ge* and surrogate *ge*, and the need of Type III *ge* by the majority, the design and quality of Type III *ge* became generally poor after period 2. A wide gap in the quality of decoration is also obvious in Type III *ge*.

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<sup>93</sup> Beijing, 1980f, pp.105-8.

<sup>94</sup> KG, 1989.7, p.597.

<sup>95</sup> KGXB, 1981.4, p.493.

<sup>96</sup> KGXB, 1979.1, p.132.

<sup>97</sup> KGXB, 1979.1, p.135.

<sup>98</sup> KGXB, 1979.1, p.128.

In contrast to the distinction between the utilitarian and burial usages of Type III *ge*, the other *ge* form such as types II, VI and V are mostly utilitarian. They were mostly manufactured thicker and heavier. The practical usage explained the occurrence of the new types of *ge* in the development of Late Shang period. The need to fix the shaft tightly to the *ge* is so important that new types appeared by experiment. Type II *ge* with the *lan* inherited from the Erligang period was common in periods 1 and 2, but lost its importance afterwards. The socketed Type V *ge* occurred during period 1 and became more common during period III but lost its importance afterwards. On the other hand, another new shape, Type IV with a suspended *hu* at the base of the blade appeared during period III and carried on throughout the whole history of *ge*. That the various types of *ge* occurred as a result of experience with practical usage is another focus to interpret the development of *ge* shapes in the Anyang area in Late Shang period. Although they were for practical use, some of them in large-scale or royal tombs were well-decorated and inlaid with turquoise. Some of them are works of art. In a word, the Anyang area was the centre for the development of *ge*.

In comparison with the *ge*, the shapes and development of other bronze weapons in the Anyang area of late Shang period are not so complicated. Moreover, the complicated issues of chronology have been discussed in the section on *ge*. The foundation of this chronological sequence will be followed here.

### 3.3.2. *Yue*-axe

In the Anyang area during the Late Shang period, most *yue*-axes are of Type I (fig.3:33-1) except for one which is of Type II (fig.3:33-2). At the same time, about 50% of all Type I *yue*-axes (fig.3:34) of the Late Shang period were excavated from the Anyang area.<sup>99</sup> In other words, Anyang is the centre for the development of the Type I *yue*-axe during the Late Shang period.<sup>100</sup>

The Type I *yue*-axe consists of a square or rectangular body and a flat *nei*, for inserting into a grooved shaft. The body has one curved and sharpened edge and often has a concave profile on the two sides. Such a profile of the body of the *yue*-axe is common in the Anyang area; and became characteristic of the *yue*-axe in this area. Unlike the *ge* and spearhead, only about thirty *yue*-axes have been found in the

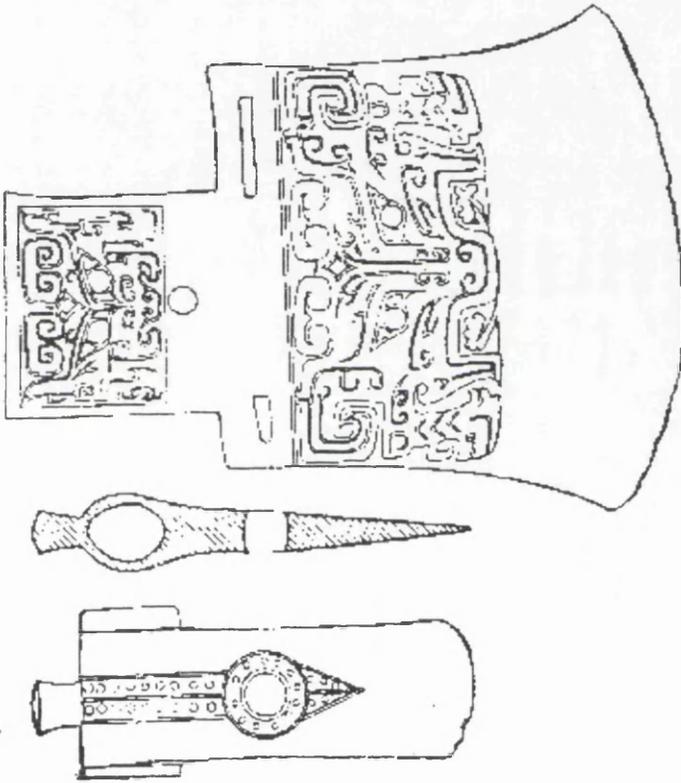
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<sup>99</sup> Chen Fangmei, 1997.

<sup>100</sup> Chen Shi and Yang Xin-ping, *Zhongyuan wenwu*, 1984, pp.71-5; Yang Xizhang & Yang Baocheng, 1986, pp.128-38; Chen Zhida, 1989, pp.329-330;

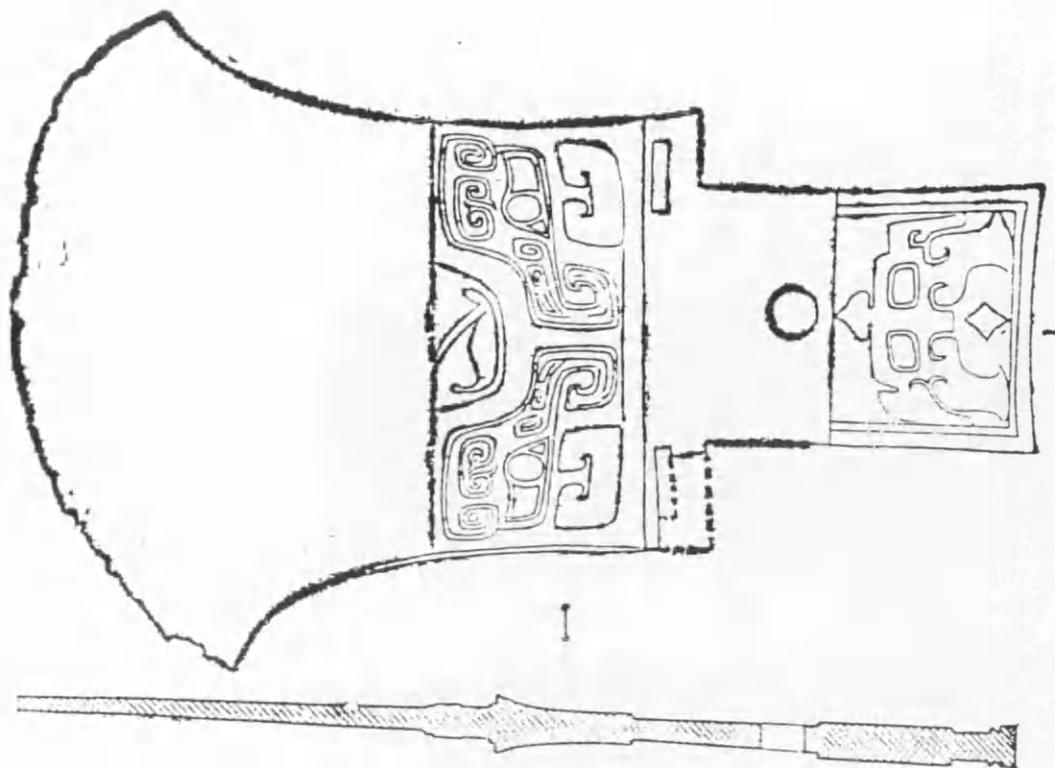


g. 3:32 *ge*. M29 Dasikongcun, length 28 cm. KG 1989.7, p.594, fig.7:2.



g. 3:33-1 Type I *yue*-axe, M539 Dasikongcun, length 22.4 cm. KG 1992.6, p.513, fig.7:1.

g. 3:33-2 Type II *yue*-axe, M539 Dasikongcun, length 14.5 cm. KG 1992.6, p.513, fig.7:2.



g. 3:34 Type I *yue*-axe, M25 Dasikongcun, length 29.2 cm. KG 1989.7, p.592.  
fig.3:2.

Anyang area.<sup>101</sup>

The variations in the Type I *yue*-axe in the Anyang area mainly depend on differences of the body and *nei*, which change from rectangular to square.<sup>102</sup>

### 3.3.3. Mao-Spearhead

Except for Type V spearheads, all other types of spearhead were used at the Anyang area. The development of spearhead forms from period I to IV can be traced on the basis of the following two criteria: one is the distinction between the *ye*-blade and the *qiao* for shafting. The other is the extension of the *ye*-blade. The first of these may relate to the practical usage regarding the problem of securely fixing the spearhead to the shaft. The second concerns its effective function for spearing.

The Type I spearhead excavated from Sanjiazhuang (fig.3:35),<sup>103</sup> although it is unique, is an important example to indicate that the spearhead existed in its original simple form in period I in the Anyang area. At present, no spearheads dating to the Erligang period have been excavated from the Central Plains.<sup>104</sup> In the south, some spearheads of the Erligang period were excavated from Panlongcheng in Hubei (fig.3:36-1,36-2).<sup>105</sup> However, the shape of the spearhead from Panlongcheng is more advanced than this example of Type I from the Anyang area. In other words, the development of the spearhead forms in the Anyang area can be traced back to the simplest shape as Type I. The *ye* blade was still not separate from the *qiao*. The socket extends the length of the spearhead, thus the whole body of the spearhead is hollow inside. The cross-section of the hollow socket is round. This form of the spearhead probably did not function very well, and the Sanjiazhuang spearhead is the only example of this type presently known. During period II, it was replaced by Type II (fig.3:37) which became very common in the Anyang area.

The transition from the Type I to Type II spearhead can also be traced in the Anyang area. Two spearheads excavated from M 265 of the Western sector of Yinxu (fig.3:38)<sup>106</sup> which was dated to period II may represent a transitional form between the two types. As seen in the silhouette of these spearheads, the distinction between the *ye* blade and the *qiao* is clearer than in Type I spearhead. The *ye* blade although

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<sup>101</sup> According to the calculation by Chen Zhida in 1986, the total number of *yue*-axes excavated in the Anyang area is 15. But with the increasing number of the recent excavations, the total amount can be nearer 30. Chen Fangmei, 1997.

<sup>102</sup> Chen Zhida, 1989, p.329.

<sup>103</sup> KG 1983:2, p.128.

<sup>104</sup> WWZHSL 1955. 10, pp.24-41, KG 1965. 10, pp.500-506; KGXB 1957.1, pp.53-74; KG 1986.4, pp.324-326, Liao Yongmin 1957, pp.73-74; Yang Xizhang 1986a, pp.68-69.

<sup>105</sup> WW, 1976.1, p.56, fig. 24:1, 1976:2, p.26, fig. 32:6.

<sup>106</sup> KGXB, 1979:1, p.92, fig. 67:4.



fig. 3:35 Type I *mao*-  
spearhead, M1  
Panjiashuang Anyang,  
length 11.2 cm. KG 1983.2,  
p.129, fig.5:15.



fig. 3:36-1 *Mao*-spearhead,  
M3:8 Lijialou  
Panlongcheng Hubei.  
WW 1976.1, p.56,  
fig.24:7.

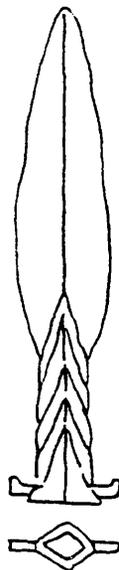
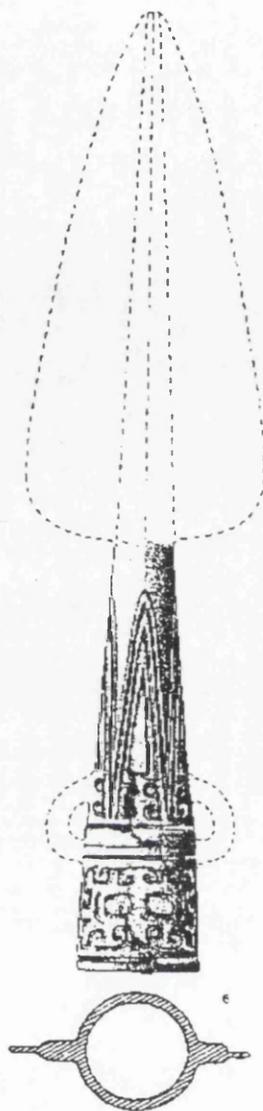
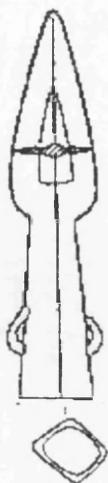
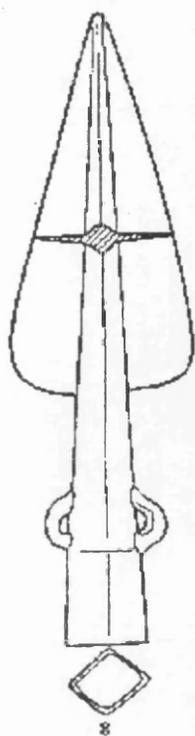


fig. 3:36-2 *Mao*-spearhead,  
M2:56 Lijialou  
Panlongcheng Hubei.  
WW 1976.2, p.26,  
fig.32:6.



g. 3:37 Type II *mao*-spearhead frn M729:6 western Sector of Yinxu, length 26.6 cm. KGXB 1979.1, p.92, fig.67:8.

fig. 3:38 *Mao*-spearhead from M265:1 western sector of Yinxu, length 16.4 cm. KGXB 1979.1, p.92, fig.67:4.

fig.3:39 Type II *mao*-spearhead from M1001 Xibeigang, length 10.6. Gao Quxun 1962, pl.247:6.

wider in proportion of Type I is not as wide as that of Type II. The hollow socket is still large in proportion to the whole spearhead.

From pit E 16<sup>107</sup> and Xibeigang tomb 1001 (fig.3:39)<sup>108</sup> of period II, the typical Type II spearhead appeared. The *ye* blade is clearly distinguished from the *qiao*, which is still hollow and gradually narrowing from the bottom to the top of the spearhead. The Type II spearhead is oblong in cross-section. In contrast, the size of the *ye* was extended. The hollow cylindrical *qiao* in the middle is clearly separated from the flat extended leaf-like *ye*. Two small rings were added to the sides of the lower part of the *qiao*. With the extended blades of the *ye*, the Type II spearhead must have functioned much better for piercing than Type I. With the changes to the *qiao*, the Type II spearhead can be fixed more securely to the shaft. Type II spearhead became very common and still existed during period III. 731 spearheads of period III were excavated from Xibeigang M 1004. According to the 1986 calculation the number of spearheads which have been excavated from the Anyang area, is over 900.<sup>109</sup> The proportion of a Type II spearheads among these is very high indeed.

However, another experiment to try to improve the function of the spearhead by expanding the proportion of the *ye* was made during period III. The silhouette of the spearhead excavated from M 958 in the Western sector of Yinxu (fig.3:40), displays a wide *ye* blade in contrast to the small hollow socket.<sup>110</sup> This shape, of which there are only a few examples, could only be an experiment to try and improve the Type II spearhead.

During period II when the Type II spearhead came to its zenith, another new shape, Type III already made its appearance. Five Type II spearheads (fig.3:41-1) and two Type III spearheads (fig.3:41-2) were found together in tomb 663 of Dasikongcun which was dated to period II according to pottery, bronze etc.<sup>111</sup>

On the Type III spearhead the *ye* has been widened as seen in the previous transitional shape, however, the hollow socket was shorter reaching about half of the height of the *ye* but extending a little from its base. The cross-section of the hollow cone of type of socket is either oblong or rhomboid. In other words, Type III spearhead is characterized by a wide blade and a shorter hollow cone-shaped socket and it was common during periods III and IV.<sup>112</sup>

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<sup>107</sup> Li Chi, 1932, pp.73-104.

<sup>108</sup> Liang Siyong & Gao Quxun, *Houjiazhuang*, M 1004, Pl.135:1.

<sup>109</sup> Chen Zhida, 1989, p.329

<sup>110</sup> KGXB, 1979.1, p.92, fig. 67:3.

<sup>111</sup> KG 1988.10, pp.865-873.

<sup>112</sup> In the western section of Yinxu, 48 out of 70 spearheads are of Type III. Most of them were dated to periods 3 and 5. KGXB, 1979.1, p.92; reference table III:15 in this thesis; fig.189.

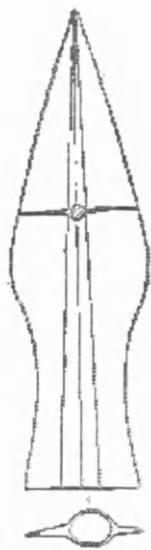


fig. 3:40 *Mao*-spearhead  
from M265 western sector  
of Yinxi. length 20 cm.  
GXB 1979.1, p.92,  
fig.67:3.



fig. 3:41-1 Type II  
spearhead, M660  
Dasikongcun, length 25.5  
cm. KG 1988.10, p.872,  
fig.17:right.



fig. 3:41-2 Type III *mao*-  
spearhead, M660  
Dasikongcun, length 18.6  
cm. KG 1988:10, p.872,  
fig.17:left.

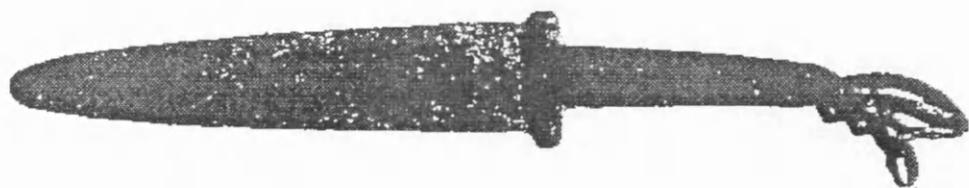


fig. 3:42 Dagger, possibly from Anyang. *BMFEA* 17 (1945), Pl. 32, 182(8).

There was much energy for change in the Anyang area during the Late Shang period. There was always some new shape while at the same time, another new shape was emerging. As seen on SM 269<sup>113</sup> and M 1127<sup>114</sup> of period III, a new shape Type IV spearhead came to co-exist with Type III.

On Type IV spearhead,<sup>115</sup> the hollow cone is still short in proportion as seen in Type III, however, it extends much further from the base of the *ye*. Moreover, the *ye* has narrowed again. Although Type IV already emerged during Yinxu period III, from the limited number of examples,<sup>116</sup> it seems not to have had enough time to develop in the Anyang area. But perhaps the narrowed *ye* form was more convenient and effective for piercing, for this trend in the design of the spearhead as seen in Type IV was carried on afterwards.<sup>117</sup>

### 3.3.4. . . . . Dagger

It is said that two *daggers* (fig.3:42) were excavated from Anyang, both display a patination typical of the bronzes from the Anyang area.<sup>118</sup> This suggests the possibility that the Anyang area included *daggers* among the repertoire of bronzes during the Late Shang period. However, due to the lack of scientific documentation regarding these two *daggers*, and as no *dagger* has yet been excavated in the Anyang area, there is no reliable evidence for the use of the *dagger* in the Anyang area in the Late Shang period.

There is however a clue for the use of the *dagger* in the Anyang area. Tomb M110 located on the northern side of Miaopu, included a "ge" (fig.3:43) which was double-bladed with a *lan* between the *yuan* and the *nei*, which is socketed. The *nei* is 8.3 cm in length and the hollow socket is 2.6 x 1.4 cm in diameter.<sup>119</sup> The *nei* of conical shape is difficult to fix to a shaft, unlike the flat *nei* usually seen on the *ge*. From the shape and the size of the *nei*, such a *nei* would have facilitated the direct handling of the *ge* rather than hafting the blade. Therefore, this weapon could be a *dagger* rather than a proper *ge*. Due to the fact that *daggers* are completely absent from the Anyang area, it is difficult to identify such a shape as a *dagger*.

Although this *ge* of M 110 could be a *dagger*, the following should be noted:

<sup>113</sup> KGXB 1991.3,p343,fig.13:1,2,3.

<sup>114</sup> KGXB, 1979.1, p.146.

<sup>115</sup> Beijing, 1987, fig. 189.

<sup>116</sup> For example out of a total of 70 spearheads excavated in the Western section of Yinxu (KGXB, 1979.1, p.91) only two were of Type IV.

<sup>117</sup> Hayashi Minao, 1972, p.108; Yang Hong, 1992, pp.78,105-6.

<sup>118</sup> B.Karlgren, 1945, pl.32, 182(8).

<sup>119</sup> KG 1989:2, p.133, fig.16:4.

(1). Even if the dagger had been used, it must have been an uncommon type of weapon in the Anyang area during the late Shang period.

(2). If this shape of dagger was used in the Anyang area during the Late Shang period, it seems to have little connection with the later development of the dagger of the Central Plains during the Western Zhou period.

In the absence of any excavated examples, it is not possible to comment further on the existence of the sword in the Anyang area during the late Shang period.

### 3.3.5. Knife

There are three main types of knife in the Anyang area during the Late Shang period. The most common one is the small thin knife which has not been included as a weapon since it is considered to be a tool.<sup>120</sup> The other three forms, Types I (fig 3:44)<sup>121</sup>, II (fig 3:45)<sup>122</sup> and III (fig 3:46)<sup>123</sup> are bigger in size and heavier in weight and so are included here. They are comparatively few in number. The knife as a weapon was not a common type in the Anyang area during the Late Shang period. For the further discussion please referred to Chpater III 3.4 & Chapter IV.

### 3.3.6. Bow-Shaped implement

Only type I bow-shaped implement appeared at Anyang. The body of type I is gently arched with two ares arching up and outward. The majority of this form, twenty-six in total, have been excavated from the Anyang area.

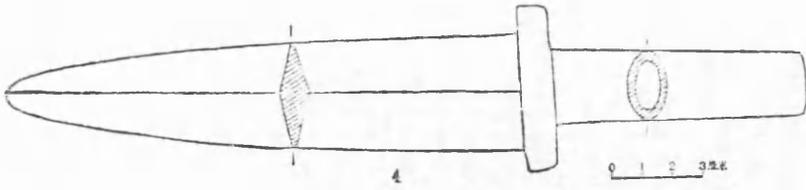
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<sup>120</sup> Chen Zhida-ta, 1989, p.331; Kao Quxun, 1967, p.355

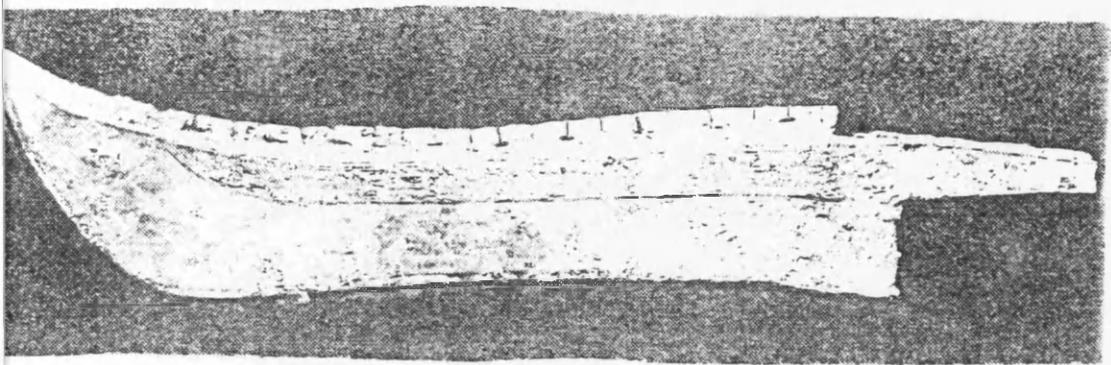
<sup>121</sup> Beijing 1980f, pl.65.

<sup>122</sup> KGXB 1991.3, p.15.6.

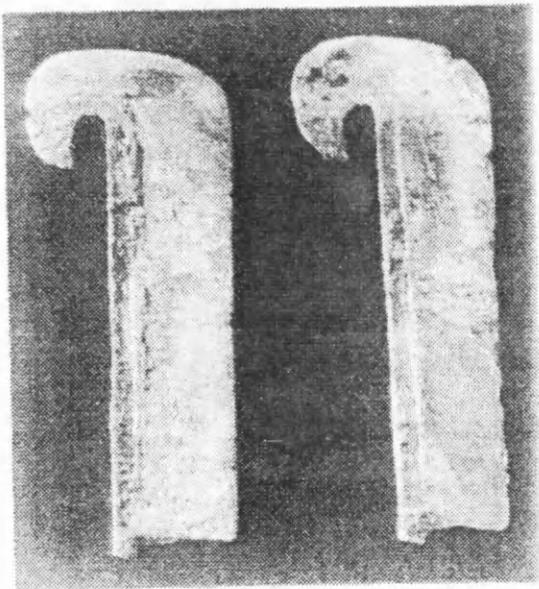
<sup>123</sup> Beijing 1981a, pl.29.1.



3:43 (dagger), M110 Miaopu Anyang, length 26.4 cm. KG 1989.2, p.133, fig.4  
16:4.



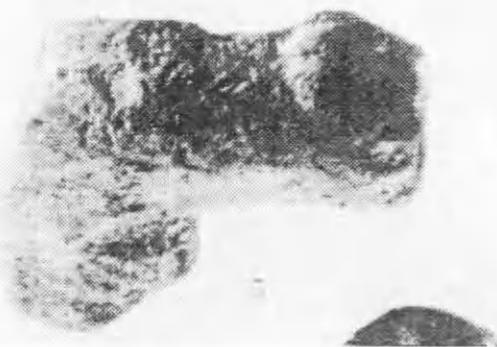
3:44 Type I knife, M5 Xiaotun Anyang, length 45.7 cm. Beijing 1980f, Pl.65:1.



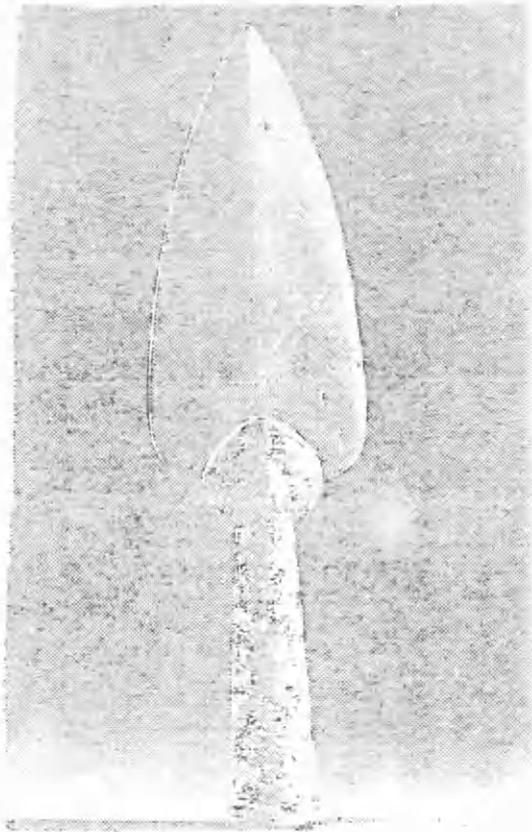
3:45 Type II knife, Qijiazhuang Anyang, length 25.8 cm. KGXB 1991.3, pl.15.6.



3:46 Type III knife, M51 Dasikongcun, length 32.7 cm. Beijing 1981a, pl.291.



3:47 Mould for Type V *ge*, Beijing 1987, pl.20.5.



3:48 *Mao* with jade *ye* and bronze *jiao* from M5 Xiaotun. Beijing 1993a, pl.36.

### 3.4 Analysis of the various kinds and styles of Late Shang bronze weapons in the Anyang area

As the first scientifically excavated site, the Anyang area has been the most important excavation site for over sixty years since 1927, with a great number of tombs and cultural remains (map 3.1). Since various kinds and styles of the bronze weapons originated in the Anyang area, it must have been a major centre for bronze weapons in the Late Shang period. Reasons for the creation of the various kinds and forms of Late Shang bronze weapons will be analyzed in the following section from aspects other than style.

#### 3.4.1. Technological aspects

Excavations of specialized casting sites and new moulds for Late Shang bronze weapons revealed the technological conditions necessary for the emergence of mass production and of new forms.

From the layout of the Anyang cultural remains, the bronze casting centres were located near Anyang, northeast of Xiaotun<sup>1</sup> Miaopubeidi<sup>2</sup>, Xiaomintun<sup>3</sup> and Gaolouzhuang.<sup>4</sup> (map. 3:1) It is worth noting that the casting sites for weapons appear to be different from those for bronze ritual vessels.

Bronze moulds found at the Xiaomintun site total area under 150 m<sup>2</sup> were for the most part the inner moulds of weapons and tools. These types of moulds are rarely found at the Miaopubeidi site.<sup>5</sup> Although it is still difficult to ascertain if the Late Shang bronze weapons found in the tombs and cultural remains were produced at the Xiaomintun casting site, it seems certain that specialized casting workshops for bronze weapons existed in the Anyang area. Such a specialized casting site may have arisen from the need for mass production of bronze weapons during the Late Shang period and for solving certain technical problems. A great quantity of Late Shang bronze weapons were excavated from the Anyang site, far more than from any other site. The need for mass production of bronze weapons may be one of the reasons behind the appearance of the specialized casting site at Xiaomintun.

Technical needs may be a second reason for the emergence of a specialized casting site. The inner molds identified at the Xiaomintun site are mainly for casting new types of weapons. Moulds for Type V socketed *ge* (fig.3:47) accounted for over 50% of all *ge* moulds. New technical problems posed by the new types of weapon

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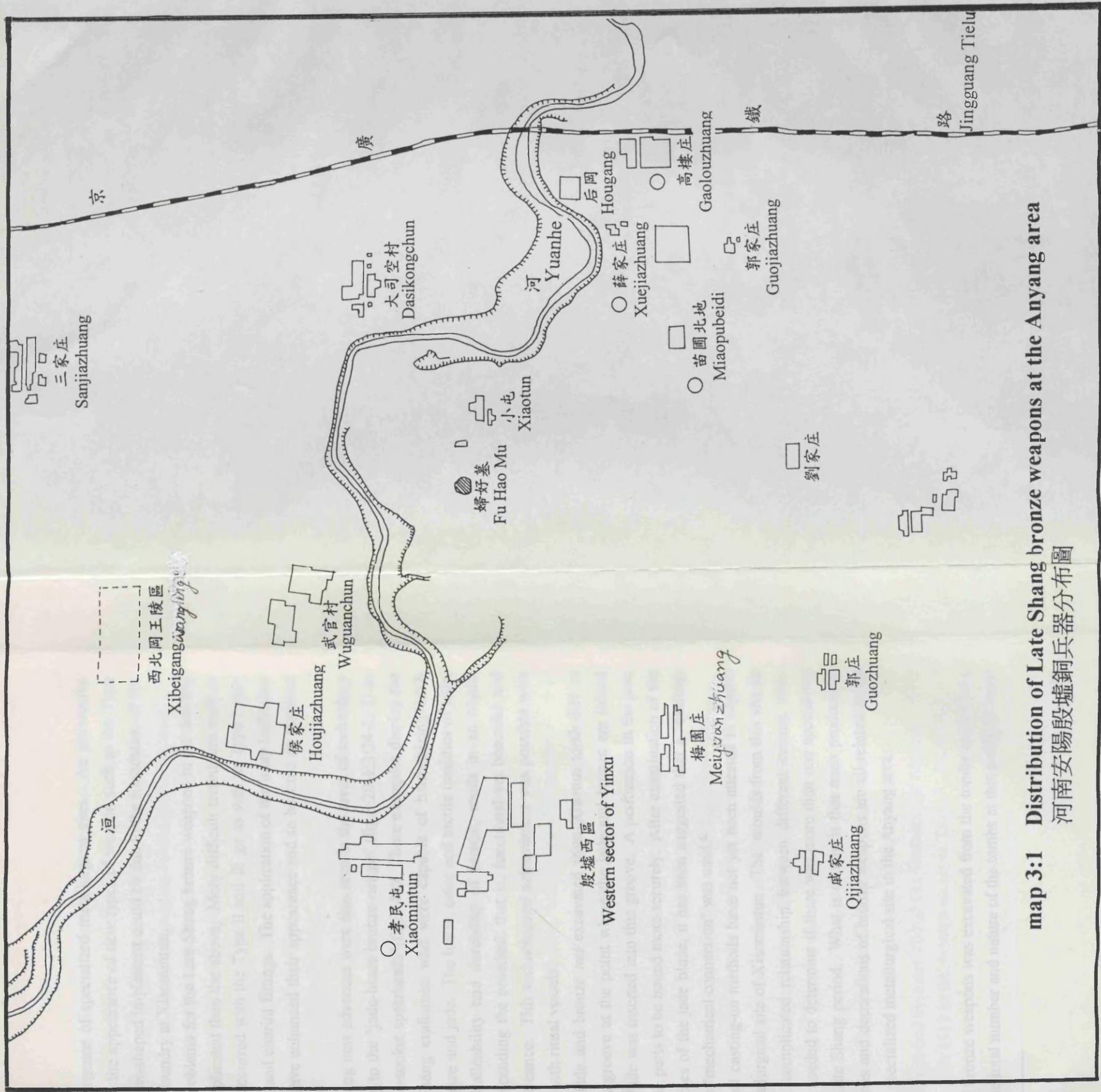
<sup>1</sup> Li Chi 1977, p.178 Shi Zhangru 1959,p.330.

<sup>2</sup> Beijing 1987, pp.11-60.

<sup>3</sup> Beijing 1987, p.67.

<sup>4</sup> KG 1963.4, p.213.

<sup>5</sup> Beijing 1987 ,p.69.



map 3:1 Distribution of Late Shang bronze weapons at the Anyang area  
河南安陽殷墟銅兵器分布圖

may have led to the emergence of specialized metallurgical sites. An alternative explanation would be that the appearance of new types of weapon such as the Type V socketed *ge* and the bow-shaped implement could be due to the foundation of the specialized metallurgical foundry at Xiaomintun.

Special technical problems for the Late Shang bronze weapons in the Anyang area were even more complicated than the above. More difficult techniques such as inlay techniques mainly occurred with the Type II and III *ge* as well as Type I *yue*-axe (fig.3:20-1; 5:4; 5:9), and chariot fittings. The application of the inlay technique to bronze weapons may have enhanced their appearance and so become an essential feature.

During the Late Shang new advances were also seen in the areas of technology and aesthetics, in relation to the "jade-blade bronze-*nei ge*" (fig.3:20-1;3:24-1, 2) as well as "jade-body bronze-socket spearheads"(fig.3:48). These examples display the expertise of the Late Shang craftsmen who were capable of harmonizing such different materials as bronze and jade. The lustre, color and tactile qualities of jade, complemented by the malleability and durability of bronze, result in an object possessing qualities transcending the practical, that is, functional yet beautiful and imbued with ritual significance. This technological achievement was possible with bronze weapons and not with ritual vessels.

A *ge* with jade blade and bronze *nei* excavated from Xiaotun tomb 331 at Anyang, Henan shows a groove at the point where the jade and bronze are joined (fig.3:20-1). The jade blade was inserted into this groove. A perforation in the jade near this joint allowed the parts to be bound more securely. After examination of the bronze filling the two holes of the jade blade, it has been suggested that a "casting-on" method rather than a "mechanical connection" was used.<sup>6</sup>

The above inlay and casting-on methods have not yet been attested in objects excavated from the metallurgical site of Xiaomintun. The moulds from this site do not wholly explain the complicated relationship between different casting sites. Further evidence is still needed to determine if there was more than one specialized casting site during the Late Shang period. What is certain is that mass production, new techniques, new types and decorations of bronze weapons are all related to the existence of at least one specialized metallurgical site in the Anyang area.

### 3.4.2. Ritual aspects

A great quantity of bronze weapons was excavated from the tombs and cultural remains in this area. The total number and nature of the tombs at this political center

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<sup>6</sup> *KG* 1987:4, pp.363-4.

are greater and more complicated than those in other areas. The relationship between the tomb and the status of the tomb masters can be traced through the complex nature of the tombs in the Anyang area. On the above basis, there seems to have been a specific ritual system for burying bronze weapons in tombs in the Anyang area according to the status of the tomb master. Such a burial system may have laid the political and social foundations for the various styles of bronze weapons in this area. In addition, it may explain the relationship between the bronze weapons and the social as well as political status of the tomb master.

#### **3.4.2.1. Bronze weapons in the tomb: an investigation of the relationship between the bronze weapons and the status of their tomb master**

According to the nature of the tomb and the status of the tomb master, the bronze weapons in the tomb are differentiated in scale. However, it is difficult to establish absolute criteria for judging the status of the tomb master and the nature of the tomb. This is because long inscriptions on vessels were not yet common during the Late Shang period. A few examples were inscribed with a personal name in addition to the clan mark. However, using objective criteria including inscriptions, type of tombs (i.e. the shape and the size of tomb), and other accompanying burial objects — their materials, kinds, types, quantity and degree of decoration — it is hoped to investigate the relationship between the scale of bronze weapons and the status of the tomb master and to reflect on the social and political meaning of the bronze weapons in the burial system of the Anyang area. Based on the above criteria, the tombs with bronze weapons will be classified into five types for discussion.

#### **Type I Tomb: Tombs in which the majority of the bronze objects are bronze weapons**

Type I tomb is characterized by the fact that the majority of the bronze burial objects are bronze weapons. According to the role of the bronze weapons found in the tomb, tombs of this type can be classified under two subdivisions:

#### **Type Ia: Tombs where the bronze weapons are of more than two kinds (table 3:4)**

Type Ia tomb is exemplified by tomb 160 at Guojiashuang of Anyang <sup>7</sup>; tomb 539 at Dasikongcun <sup>8</sup>; tomb 1713 in the western sector of Yinxi <sup>9</sup>; tombs 692 and

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<sup>7</sup> *KG* 1991:5, pp.390-392.

<sup>8</sup> *KG* 1992:6, pp.509-17.

<sup>9</sup> *KGXB* 1986:8, pp.703-712.

613 in the western sector of Yinxu <sup>10</sup>, tombs 3 at Xuejiazhuang <sup>11</sup>, tomb 269 at Qijiazhuang<sup>12</sup> tomb 663 at Dasikongcun<sup>13</sup>. They share the following two characteristics in reflecting the relationship between the bronze weapons and the status of their tomb master. Firstly, regarding quantity, the bronze weapons, which always accompanied the bronze vessels, account for the majority of the bronzes. For example: in tomb 160 at Guojiazhuang, the bronze weapons numbered over 200 pieces, not counting the 902 arrowheads, while there were 40 bronze vessels. In this tomb bronze weapons accounted for 83% of the bronze burial objects. Tomb 1713 of the western sector of Yinxu is another example with 69 bronze weapons or almost 80% of the 86 pieces of bronze burial objects in contrast to 17 bronze vessels.

Secondly, the placement of the bronze weapons as they were excavated, indicate a close relationship between weapon and tomb occupant. Examples from tombs Type Ia are as follows. In Tomb 3 of Xuejiazhuang, 13 *ge* were placed along both sides of the body: three near the side of the head; three near the shoulder, one near the breast; four near the waist; one near the arm (fig.3:49). In tomb 539 of Dasikongcun, the bronze weapons were placed along the two sides of the body: a Type II *ge* was placed near the right shoulder, a Type I *yue* was placed at the left side of the head and a Type II *yue* was placed on his left side of the head.(fig.3:50). In tomb 663 of Dasikongcun, five *ge* were placed by the right arm, one *ge* was placed at the left shoulder, two spearheads were placed near the right shoulder, three arrowheads were placed at the left of the left leg, and one bow-shaped implement was placed near the left leg (fig 3:51).<sup>14</sup> However, the remainder of the bronze weapons were placed near the sacrificial victim.

On the basis of the above examples, the majority of the bronzes are bronze weapons which were placed near the occupant. These characteristics are rare in other types of tomb. From the quantity, quality and positioning of the weapons within these tombs an intimate relationship is established between the bronze weapons and the occupants, who must have held positions of high military rank.

We will discuss the above issues as revealed in tombs of Type Ia from the following two aspects: firstly, the various styles and kinds of the bronze weapons and the organic relationship among them; concerning the burial system as revealed in tombs of type Ia the bronze weapons and the status of the occupant. Secondly, the relationship between the discussion will. show how the development of the Late

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<sup>10</sup> *KGXB* 1979:1, pp.27-118.

<sup>11</sup> *KG* 1986:12, pp.1067-1072.

<sup>12</sup> *Zhongyuan wenwu* 1986:3; *KGXB* 1991:3, pp.325-352.

<sup>13</sup> *KG* 1988.10. pp.865-874.

<sup>14</sup> *KG* 1988.10, pp.865-866.

Shang bronze weapons at the Anyang area was patronized by the occupants of this type of tomb. The *ge* was the most important bronze weapon, but various other kinds of bronze weapons were also required.

*Ge*, spear-heads, *yue*-axes, knives, and arrowheads are the five main kinds of Late Shang bronze weapons in the Anyang area. They were primarily found in Type Ia tombs such as Dasikongcun tombs 539 and 663, and Guojiazhuang tomb 160. Some Type Ia tombs only lack one kind, such as Tomb 269, in which arrowheads were not present.

These various kinds of bronze weapons in the tomb seem to have their different roles. Except for the overwhelming quantity of arrowheads, (e.g. 50 arrowheads in tomb 539 at Dasikongcun, 902 arrowheads in tomb 160 of Guojiazhuang) the *ge* was the most common kind and occurred in the largest quantity. For examples, 118 *ge* were found in tomb 160 of Guojiazhuang, thirty *ge* in Tomb 1713 in the western sector of Yinxu (fig.3:52), thirteen *ge* in tomb 539 of Dasikongcun; thirteen *ge* in tomb 269 of Qijiazhuang. The *ge* were of various shapes such as Type II, III, IV, V, VI, etc. The *ge* was further differentiated according to whether it was produced for burial only (*mingqi ge* 明器戈) or for utilitarian use (*shiyong ge* 實用戈). The *ge* was also important for its decoration typically placed on the *nei*. The *ge* from tomb 3 of Xuejiazhuang was even decorated with inlay.

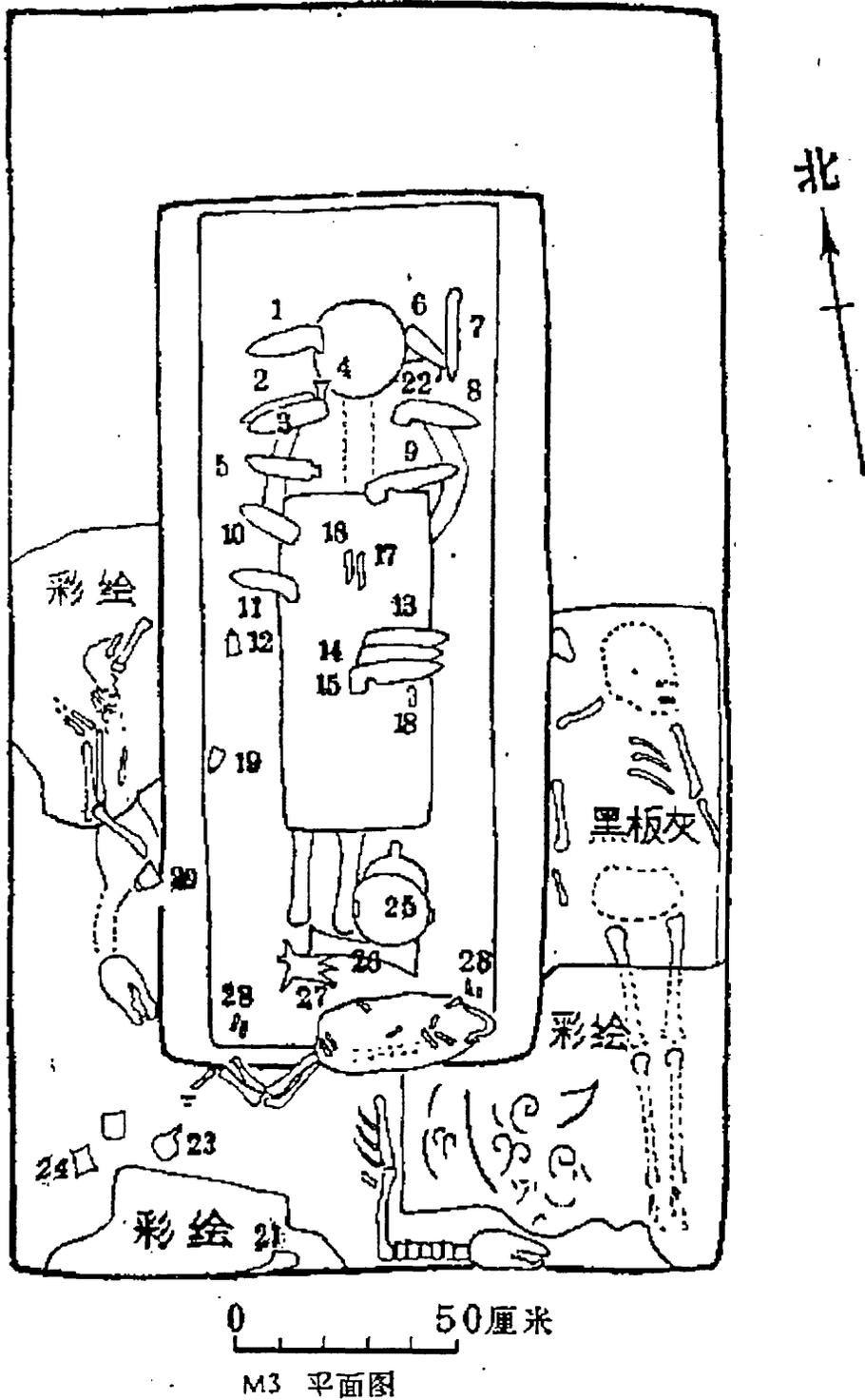
The spearhead, although not as common as the *ge*, often matches the *ge* in quantity in Type Ia tombs. The spear held the second most important role in tombs of Type Ia. 95 spearheads match 118 *ge* in tomb 160 of Guojiazhuang. Thirty spearheads match thirty *ge* in tomb 1713 of the western sector of Yinxu. Twelve spearheads match thirteen *ge* in tomb 3 of Xuejiazhuang. In tomb 3 of Xuejaazhuang, the same 10 *mingqi* spearheads inscribed with the character *yuan* were paired with ten *mingqi ge*. Spearheads matched with *ge* seem to occur in sets of ten. It is possible that sets of ten corresponded to a military system.<sup>15</sup>

In contrast to the significant role of *ge* and *mao* in Type Ia tombs, *yue*-axe, knife and bow-shaped implement are in a minority.

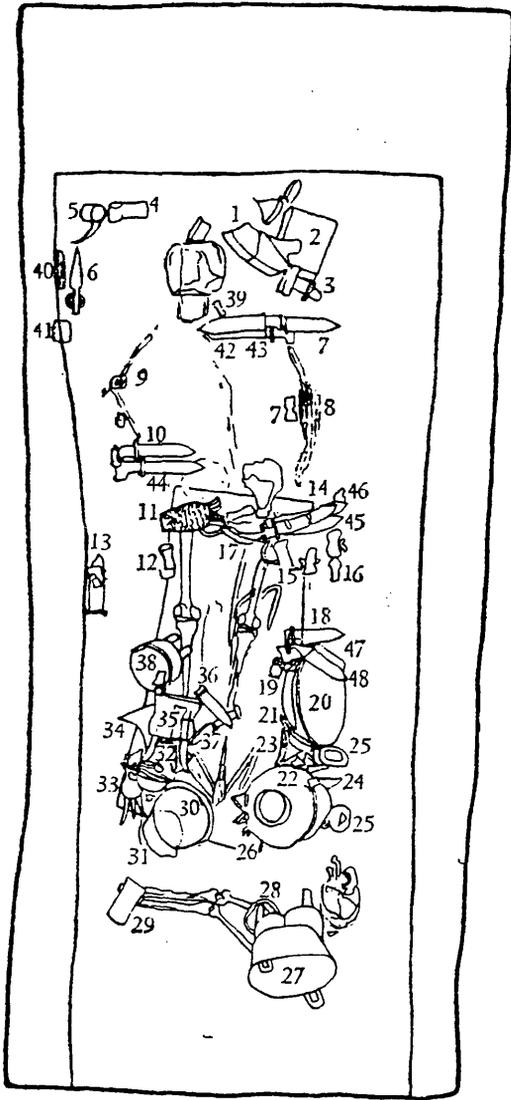
Although various types of bronze weapons were have been found in Type Ia tombs, it is obvious that the *ge* was the most common significant kind of bronze weapon. It is obvious that the *ge* was the most significant kind of bronze weapon, if we take into account its use in the burials of different classes, whereas other weapons are found in the burials of certain classes only. Is it possible, therefore, to judge the status of the occupant of Type Ia tombs? This second aspect of the burial system will be addressed in the paragraphs that follow.

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<sup>15</sup> Zhang Zhenglang, 1951, pp.14-16.



3:49 Plan of M3 Xijiazhuang Anyang Henan. KG 1986.12, p.1068, fig.3.

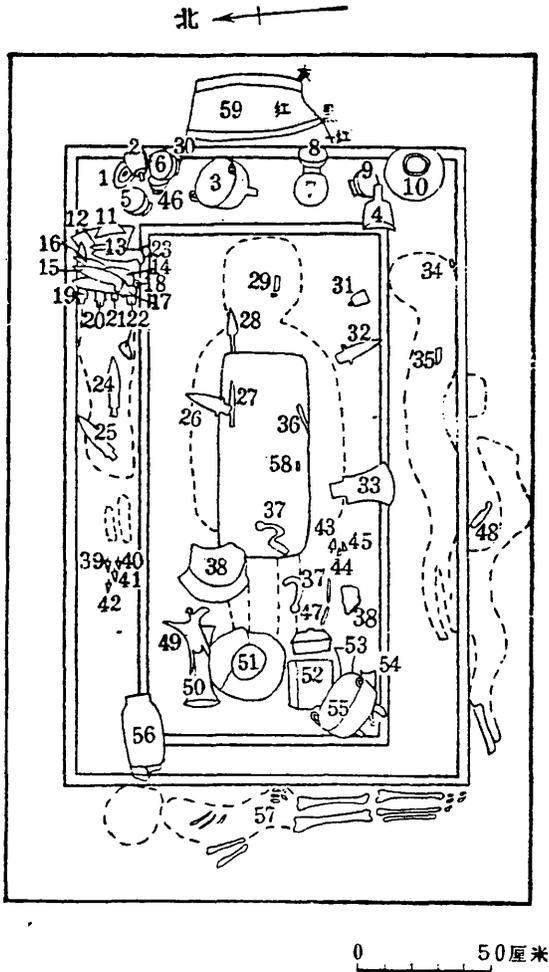


0 1米

图一 墓葬平面图

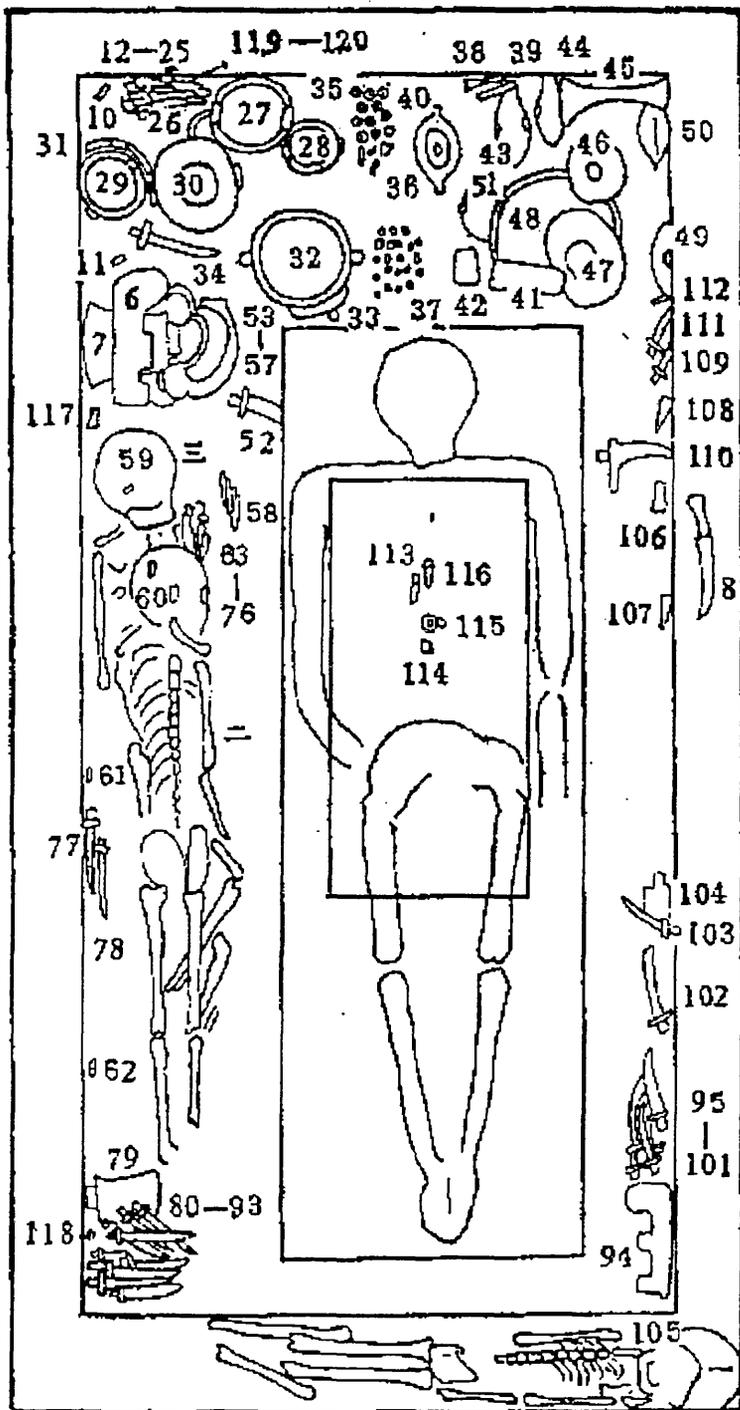
- 1.陶盆 2.铜笄形器 3,7,10,13,14,18,42—48.铜戈 4.铜  
 釜 5.铜斗 6.铜矛 8,26.铜镞 9,39.玉管 11.石鱼 12,  
 15,19.铜铎 16.铜斗柄 17.铜弓形器 20.铜盘 21.铜尊盖  
 22.铜卷 23,34.铜觚 24,33.铜爵 25.铜罍 27.铜甗  
 28.  
 陶豆 29.大铜铎 30.铜盂 31.蚌壳 32.铜卣 35.铜斝 36.  
 石铎 37.铜环首刀 38.铜鼎 40.铜铎 41.砾石

3:50 Plan of M539 Dasikongcun Anyang Henan. KG 1992.6, p.510, fig.1.



图二 M663 平面图

- 1、2、4. 铜铙 3、55. 铜鼎 5、6、8、9、30、46. 陶甬 7. 陶豆 10. 陶壺  
 11. 陶甬 12—18、22、23、26、32. 铜戈 19—21、24、25、27、28. 铜  
 矛 29. 石戈 31. 铜铃 33. 铜钺 34. 绿松石饰 35. 磨石 36. 石穿  
 37. 铜弓形器 38. 铜簋 39—45. 铜钺 47. 铜管 48. 铜刀 49、  
 54. 铜爵 50、53. 铜瓶 51. 铜瓶 52. 铜方彝 56. 陶甬 57. 小卵  
 石 58. 石柄形饰 59. 彩绘



3:52 Plan of M1713 Western sector of Yinxu. KG 1986.8, p.704, fig.2.

The status of the occupant of Type Ia tombs seems to have a definite correlation to the quantity of *ge*. In the context of the tomb, the role of the *ge* among the bronze weapons seems to be similar to the role of the *gu* and *jue* among the bronze vessels. The latter have been supposed to be criteria for judging the status of the occupant.<sup>16</sup>

The total number of *ge* seems to correspond to the number of *gu* and *jue* as well as to the number of sacrificial victims, although the proportions are not fixed. At the same time, it also corresponds to the size of the tomb. For instance, in tomb 160 at Guojiazhuang (13.05 square meters) 118 *ge* correspond to ten *gu* and ten *zhi* (functioning as *jue*), and four human victims. In tomb 1713 (4.68 square meters) in the western sector of Yinxu, thirty *ge* corresponded to three *gu* and three *jue* (one *gu* and one *jue* are pottery) and three human victims in tomb 663 of Dasikonucun eleven *ge* correspond to two *gu* and two *jue*, with four human victims as well and a tomb size of 6.6 m<sup>2</sup>. On the basis of the above examples, there seems to be a consistent proportion between the number of *ge* and *gu* as well as *jue* during the Late Shang period in the Anyang area. It would seem that ten *ge* corresponded to one *gu* and one *jue*.

However, the proportion was not fixed. Some tombs with about ten *ge* have two *gu* and two *jue* or three *gu* and three *jue* (including one pottery *gu* and one pottery *jue*). For example, in tomb 539 at Dasikongcun, thirteen *ge* correspond to two *gu* and two *jue*. Thirteen *ge* correspond to two *gu* in pair and two *jue* in pair, and one more *gu*, one pottery *gu* and one pottery *jue* in Tomb 269 at Qijiazhuang. Occupants with at least ten *ge* were often buried in a tomb of 5 square meters size with one human victim or dog sacrifice. There was one human victim in Tomb 539 at Dasikongcun with a tomb size of 5.96 m<sup>2</sup>. There was one human victim in Tomb 3 of Xuejiazhuang in a tomb of 4.48 m<sup>2</sup>. In Tomb 269 of Qijiazhuang, a dog sacrifice replaced the usual human victim.

In addition, the inscriptions on the bronze vessels which were grouped with the bronze weapons in the tomb sometimes revealed clues to the status of the occupant.<sup>17</sup> Bronze weapons were excavated from three Type Ia tombs together with bronze vessels inscribed with the character *ya* 卣. This character is often inscribed on the bronze vessels of the Late Shang and Early Western Zhou period. Owing to the lack of direct evidence, various theories on the meaning of *ya* have been put forward.<sup>18</sup>

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<sup>16</sup> Yang Xizhang, 1985, pp.87-90.

<sup>17</sup> 10 *ge* inscribed with *yuán* are unusual, being directly inscribed with the name. However, the status of the *yuán* is still unknown because of the lack of evidence from the oracle bones.

<sup>18</sup> 卣 *ya* has been explained as sacrificial temple (*Bo Gu Tu* vol. 1, p.55) for the building of the Ming-tang in a sacrificial temple (Gao Quxun, 1969, pp175-188; Chang Kwang-chih, 1991, pp.25-34; Chang Kuang-yüan, 1987, p.33), or the center of the cosmos (Sarah Allan,

On the basis of the evidence that the *ya* character appears on the vessels of Type Ia tombs in which the majority of bronze objects were bronze weapons, the theory that the *ya* character indicates a high-ranking military officer seems reasonable.

On the basis of the above two aspects, the status of the occupants of Type Ia tombs could be as a member of the military aristocracy. Such a tomb often has more than 10 *ge* and various kinds of other types of bronze weapons such as *yue*-axe, bow-shaped implement, spearheads and knife. The number of spearheads often corresponds to the number of *ge*. Within Type Ia tombs, the bronze weapons were often excavated together with at least one human victim and bronze vessels, often two bronze *gu* and two bronze *jue*. The size of this type of tomb was commonly around 5 square metres.

Table 3:4 Burial objects<sup>19</sup> in Type Ia tombs

Site	bronze <i>ge</i>	jade <i>ge</i>	bronze <i>gu</i>	bronze <i>jue</i>	pottery <i>gu</i>	pottery <i>jue</i>	total of bronze weapons and tools	bronze vessels (total)	human victim	inscrip- tion	Size	period	sources
Dasikongcun M663	11		2	2			26	9			6.6m <sup>2</sup>	II late	KG1988.10 pp.865-871
Dasikongcun M539	13		2	2			68	14	1	Ya*	5.96m <sup>2</sup>	II	KG 1992.6
Western sector M 1713 of YinXu	30		2	2	1	1	69	17	3	Ya	4.68m <sup>2</sup>	IV	KG 1986.8
Western sector of YinXu M692	15		1	1	1	1	15	2	2		4.32m <sup>2</sup>	?	KGXB 1979.1
Western sector of YinXu M613	10		1	1	1	1	11	4			6.372 m <sup>2</sup>	IV	KGXB 1979.1
Qijiazhuang M269	13		2	2	1	1	26	21	(dog)	Yuan	4.035 m <sup>2</sup>	III	KGXB 1991.3
Xuejiazhuang M3	13		1	1	1	1	13	3	1		4.48m <sup>2</sup>	II	KG 1986.12
Guojiazhuang M160	118	5	10	10			200 +	40	4	Yuan	13.05 m <sup>2</sup>	II	KG 1991.5

\* There are 6 inscriptions in this tomb, five of them including the character 𠄎.

1987) . It has also been explained as either an indication of the status of an official (Qing Shan, 1956, pp.44-53) or status of the military official (Chen Mengjia, 1956, pp.508-511, Cao Dingyun, 1980, pp.143-150; Hu Houxuan, 1983, pp.191-20) .

<sup>19</sup> Burial objects of a tomb were selected with regards to the relationship between the *gu*, *jue* and *ge*.

**Type Ib: Tombs where the bronze weapons are of one or two kinds only (table 3:5)**

The characteristics of the tomb and the burial scale of Type Ib tombs are different from those of Type Ia in the following two respects: only having one or two types of weapons, and the frequent presence of pottery vessels. In tombs of Type Ib the majority of the bronze objects are bronze weapons, but mainly of only one kind in contrast with Type Ia tombs which usually contain various kinds of bronze weapons in the tomb. Tombs of this type are more common than Type Ia. Representative tombs of Type Ib have been mainly found in the western sector of Yinxu.

In the Western sector of Yinxu, where 166 tombs out of a total of 939 contained bronze weapons<sup>20</sup>, 104 tombs contained only one kind of bronze weapon while 42 tombs contained at least two kinds of bronze weapons. The former are mainly of Type Ib tomb. The *ge* was the most common bronze weapon in Type Ib tombs. No less than 75 of the 104 tombs with bronze weapons of Type Ib tomb included bronze *ge*. The *ge*-related tombs represent 72% of the tombs containing bronze weapons.

table 3:5 Type of weapons found in tombs of the western sector of Yinxu

Tombs with bone weapons	Tombs with lead weapons	Tombs with jade weapons	Tombs with stone weapons	Number of Tombs with bronze weapons					Tombs with ritual bronzes	Tombs with pottery	Total number of tombs
				with <i>ge</i>	with arrows	bow-shaped implement	with spear	at least two kinds*			
5	12	17	7	75	21	1	7	42	38	143	939
				51.4%	14.3%	0.7%	4.8%	28.8%			

\* This type of tomb is out of the category of type Ib tomb

Tombs of type Ib usually contain a total of less than five bronze weapons. The weapons were often placed near the occupant. (fig.3:53-1,53-2) Moreover, among the ritual vessels found with the bronze weapons in these tombs, pottery were commonly found as well as bronze vessels, also contained pottery vessels with bronze weapons. In 143 tombs with bronze weapons also contained pottery vessels, only 38 contained bronze vessels as well. Therefore weapons account for the majority of bronze objects among the 143 tombs in the western sector of Yinxu.

Thus, the evidence shows that in type Ib tombs there were often no more than one

<sup>20</sup> According to the excavator's calculation, about 166 tombs contained bronze weapons out of a total of 939 tombs. (KGXB 1979, p.114)

or two bronze weapons and that these were mainly *ge*. Burial vessels were chiefly made of pottery, and the size of the tombs generally range from one to five square meters. The status of the occupant must therefore have been inferior to that of the occupants of Type Ia tombs. Scientific examination of the skeletons in the 143 tombs which contained bronze weapons in the western section of Yinxu, has shown that the occupants were male. It is reasonable to assume according to the scale of their burials that they could have been soldiers.<sup>21</sup> Such tombs constitute 15% of the 939 tombs in the western sector of Yinxu, and were intended for persons of a certain rank only.

Besides the typical form of Type Ib tomb described above, another more unusual type of tomb should be noted. In this type of tomb, the majority of funerary objects are bronze weapons just as in Type Ia and Ib tombs but the weapons are more diverse. Owing to there being so few examples of these tombs, they are somewhat exceptional. For example, 3 knives, 2 bow-shaped implements and 30 arrowheads were excavated from tomb 20 at Xiaotun, Anyang (fig.3:54-1).<sup>22</sup> According to Shi Zhangru the bronze weapons from M20 were separated into two groups. The first group contained a bow-shaped implement, ten arrowheads, a *ge*, and a knife.(fig.3:54-2) Outside this group were another bow-shaped implement, ten arrowheads, a *ge*, and two knives (fig.3:54-3). From the other contents of the tomb such as the three sacrificed humans, four horse skeletons, and two chariots this undisturbed tomb is a chariot pit<sup>23</sup>. If Shi Zhangru's conclusions are correct then this type of tomb which contains a number of different types of bronze weapons, but no bronze ritual vessels, perhaps represents the scale of bronze weapons in the chariot. One *ge*, one knife, 6 arrowheads and one bow-shaped implement were excavated from Tomb 164.<sup>24</sup> Shi Zhangru suggested that this tomb was that of a mounted warrior by the fact that the tomb had few bronze weapons and only one corpse.<sup>25</sup> He considered that a complete set of bronze weapons in the Anyang area consisted of a *ge*, a knife, the bow-shaped implement, arrowheads and arrows. These weapons were used both by high military officials and by ordinary soldiers.<sup>26</sup> According to my research entire sets of the above bronze weapons were found in some exceptional Type Ib tombs such as Tomb 20 and M164 of Xiaotun. In most tombs, however, the *ge* was used.

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21 *KGXB* 1979.1, p.118.

22 Shi Zhangru, 1972, pp.1-34.

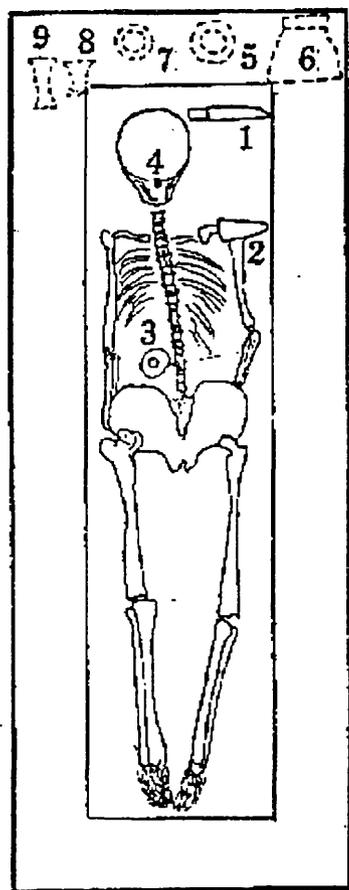
23 Shih Zhangru, 1970, p.153.

24 Shi Zhangru, 1970, pp.1-135.

25 Shi Zhangru, 1972, p.34.

26 Shi Zhangru,1950, pp.19-77.

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0 50厘米

图一 M9 平面图

g. 3:53-1 Type Ib tomb, M9  
Guojiazhuang Anyang. KG  
1988.10, p.866, fig.11.

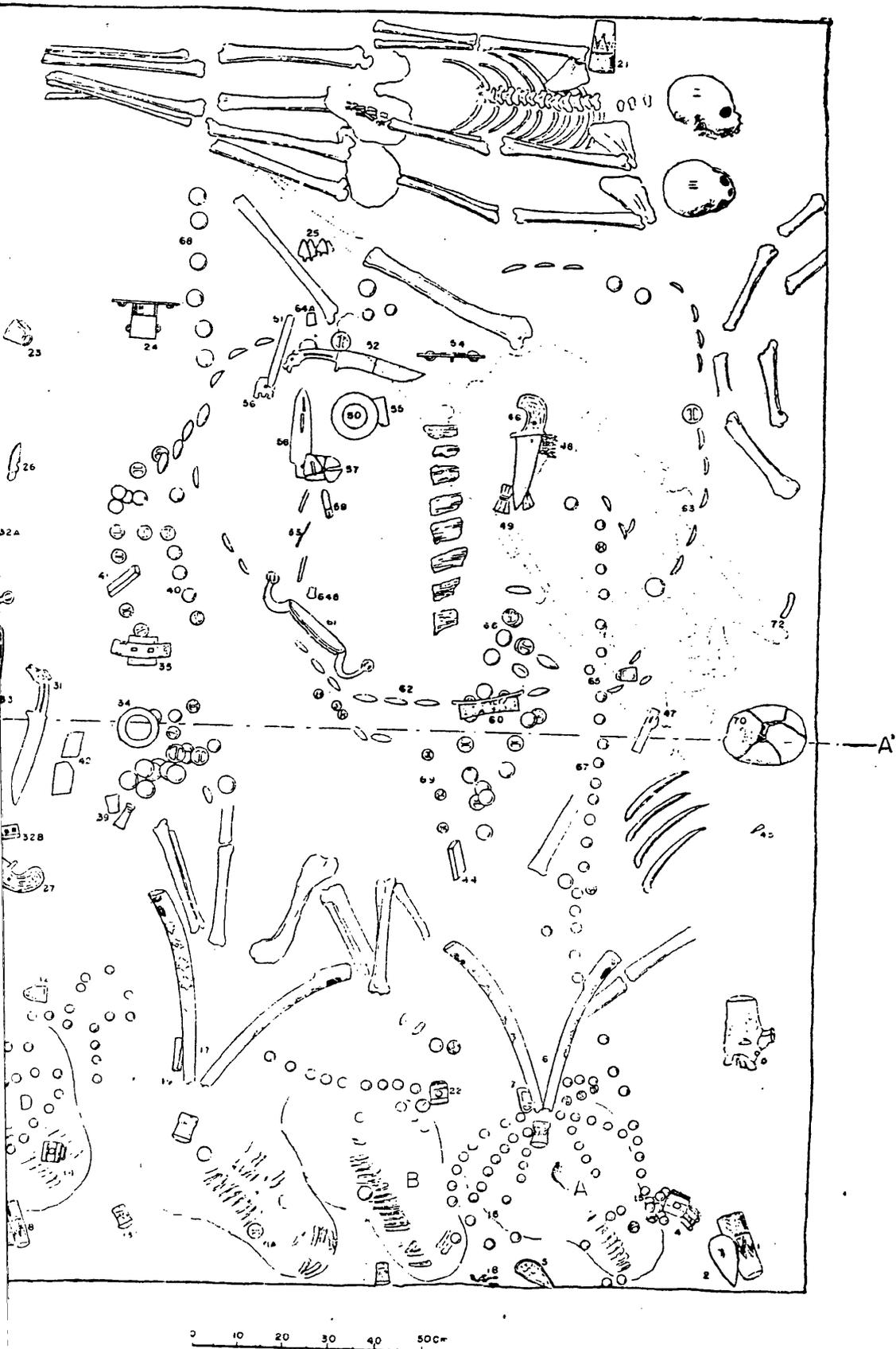


0 50厘米

M656 平面图

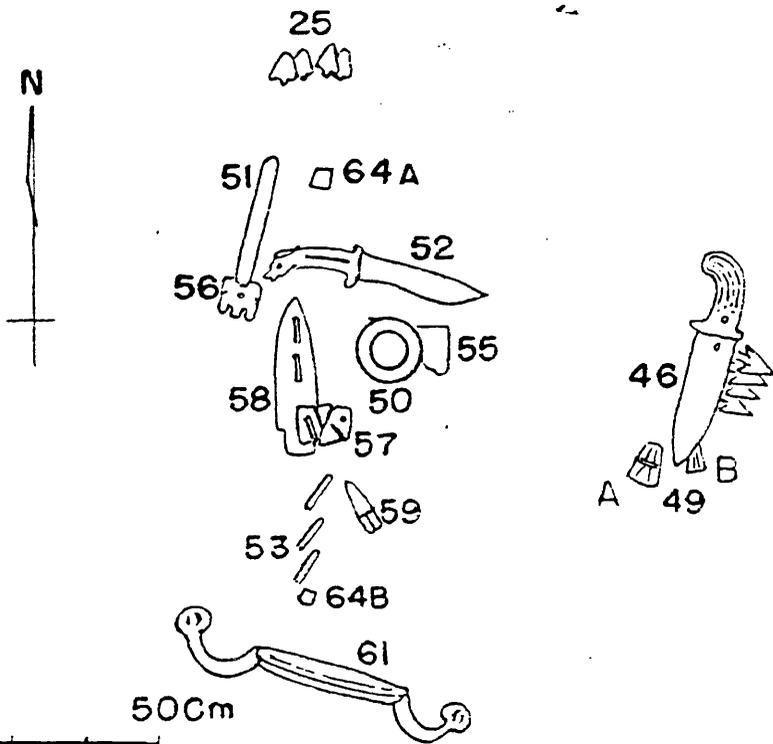
1.铜戈 2.陶豆 3.陶甗

fig. 3:53 -2 Type Ib tomb, M656 western  
sector of Yinxu. KGXB 1979.1,  
p.51, fig.36.



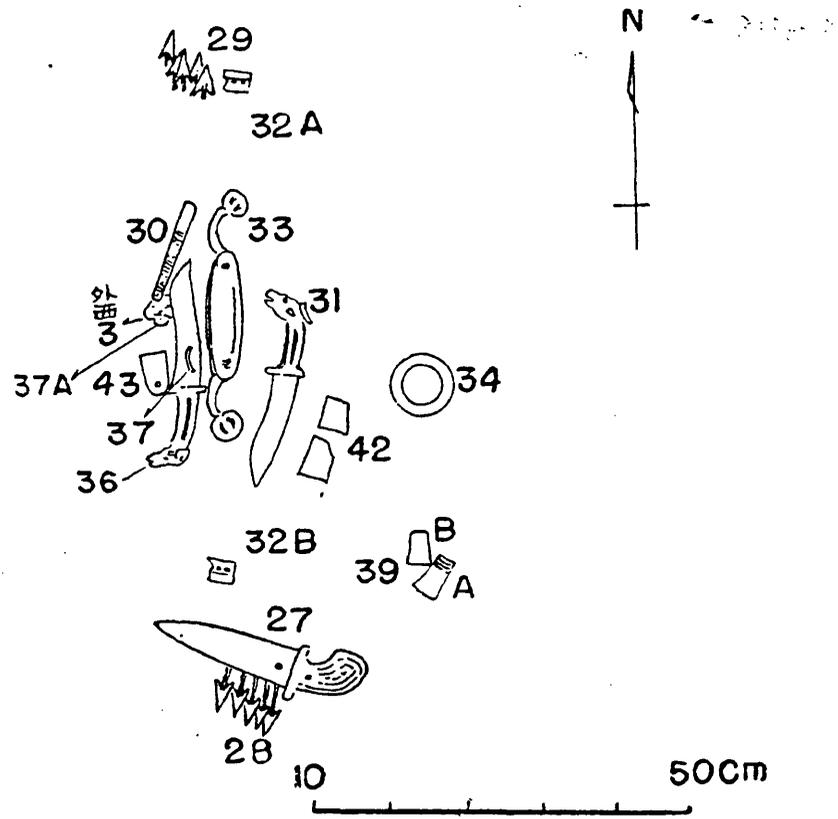
3:54-1 Plan of M20 Xiaotun. Shi Zhangru 1972, p.24, fig.8.

26

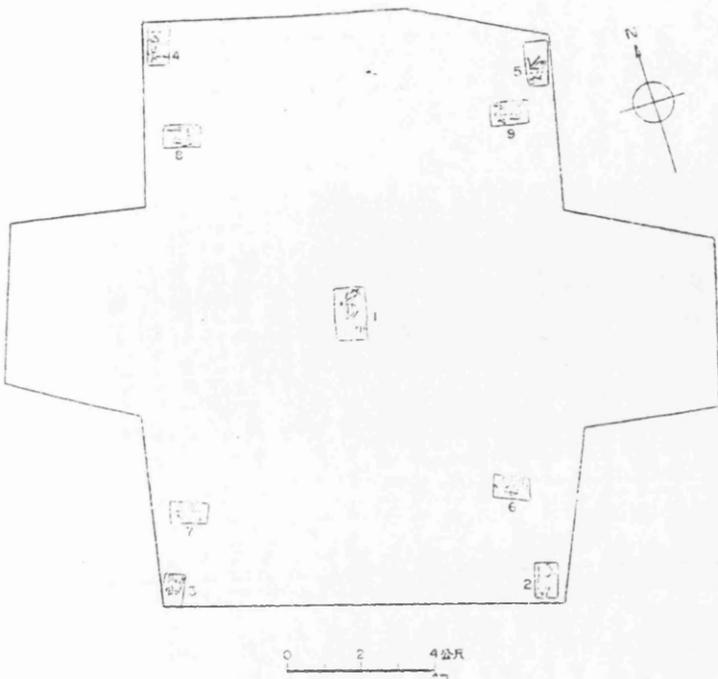


插圖三十一：M20第一區的武器

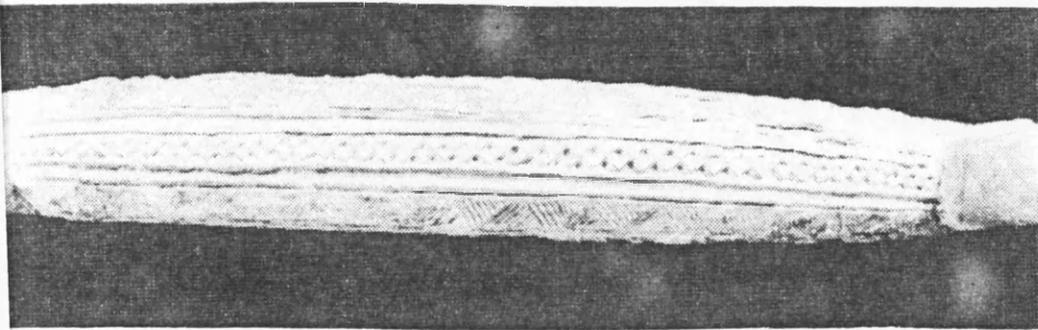
3:54-2 Plan of M20 Xiaotun. Shi Zhangru, 1972, p.112, fig.31.



3:54-3 Plan of M20 Xiaotun. Shi Zhangru, 1972, p.130, fig.42.



3:55 Plan of M1001 Xibeigang. Gao Quxun 1962, p.29, fig.10.



3:56 Bow shaped implement, M2124 Xibeigang. Gao Quxun 1973, pl.2:1.

### Type Ic: Tombs in which a human sacrifice is found in addition to bronze weapons

In some tombs more than one skeleton was found together with bronze weapons. These skeletons were found either in the waist pit, a pit under the main chamber, or on the tomb shelf. They differed from the skeleton inside the main chamber and were immolated human victims sacrificed for the tomb master occupying the main chamber. The bronze weapons placed near such victims, display different characteristics from those near the tomb master.

The most noticeable example of bronze weapons accompanying human victims was found at the royal tomb M1001. Each of the eight pits located in the four corners of the main chambers contained one dog sacrifice and one *ge* together with one human skeleton, (fig.3:55). Such human victims are considered to be guardians over the tomb chamber.<sup>27</sup> They were accompanied only by a *ge* and a dog, without any pottery vessels. A human victim with a *ge* and a dog was also found in the waist pit under the rectangular main chamber of some tombs which were smaller than the royal tombs. Such victims were also guardians. This is further evidence that the *ge* was the most common type of weapon in the Anyang area during the Late Shang period.

However, some human victims were buried with more bronze weapons. In the large Wuguan tomb, there are forty-one human victims, seventeen on the east side and twenty-four on the west side of the upper tomb shelf. From the skeletons and accompanying objects, the excavators suggested that the human victims on the east side were probably male. One human victim (E9) on the east side was buried in an inner coffin with a large number of objects including three bronze weapons and four bronze vessels. One bronze *ge* was placed near the head of the skeleton, one *ge* near the foot, and one bow-shaped implement near the right arm.<sup>28</sup> This immolated human may have been of a higher status than the other victims. The importance and the common occurrence of *ge* is again attested through its association with sacrificial victims of such higher status.

In conclusion, the status of both the tomb master and the human victims of the above three types of tombs which were excavated with a majority of bronze weapons as funerary furnishing may be assumed to be closely related to military affairs. Such persons were either guardians who were buried with dog sacrifices, or soldiers who were buried with pottery vessels and one or two kinds of bronze weapon, or else military nobles who were buried with various kinds of bronze weapons and bronze

<sup>27</sup> Beijing, 1979c, p.107.

<sup>28</sup> Guo Baojun, 1951, pp.33-35

vessels. All such burials include the *ge* indicating the commonness and importance of this weapon in the development of bronze weapons in the Anyang area during the Late Shang period. The rank or status of the occupants are mainly judged by the number of *ge* (corresponding to bronze *gu* and *jue* in certain types of tomb), and also according to whether the bronze weapons were decorated with designs or with inlay, and whether the bronze weapons were functional or were solely made for burial.

### **Type II Tomb: Tombs with bronze weapons but in which the majority of the bronze objects are vessels.**

Type II tombs differ from Type I in having more bronze ritual vessels than bronze weapons. Because of this, it is obvious that the occupant was possibly of the nobility. Such tombs can be classified according to the various ranks of the nobility. Some of the tomb masters were possibly kings as signified by the four-ramp tomb type. Royal tombs are therefore classified as Type IIa. Others may have been members of the royal family according to the inscriptions on the bronzes, and therefore their tombs are classified as Type IIb. Where the status of the tomb occupant is difficult to ascertain for lack of direct evidence, it is classified here as Type IIc tomb.

### **Type IIa: Tombs with four ramps— or "Royal tombs"**

Type IIa tombs such as M1004 are characterized by the great quantity of bronze weapons. Eight large tombs with four ramps were located at Xibeigang, Houjiazhuang. Seven of these tombs are located in the west and one in the east (fig.3:55). According to the great size of these tombs, the great quantity of sacrificial objects and human victims, and the number of small graves surrounding them, Xibeigang has been accepted as the royal tomb cemetery. The eight four-ramp tombs have been considered to be possibly the tombs of kings.<sup>29</sup> The eight royal tombs have all been robbed, therefore the original number of bronze weapons buried in them will remain unknown. No bronze weapons were found in tomb 1002.<sup>30</sup> A few bronze weapons remained in tombs M1001, 1003, 1227, 1550, 1500.<sup>31</sup> Tomb 1004 was also robbed, however, the remaining bronze weapons still demonstrate the great quantity of objects that were originally buried in this royal tomb. 72 *ge* and 731 spearheads and over 200 helmets were excavated from this tomb. The seventy *ge*

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<sup>29</sup> Gao Quxun, 1959, p.15.

<sup>30</sup> Gao Quxun, 1965, p.100.

<sup>31</sup> Gao Quxun, Seven of the large tombs ( M1001, 1002, 1003, 1004, 1217, 1550, 1500) have been fully reported in *Archaeologia Sinica* 3 (Houjiazhuang) Nos.2-8 (1962-76) by Academia Sinica in Taipei, However, the report of M1400 has still not been published.

were excavated in the south passage<sup>32</sup>, 731 spearheads and over 200 helmets were excavated in the north section of the south passage.<sup>33</sup> No tomb can match tomb 1004 in the large quantity of bronze weapons, in total over a thousand. The role of the sacrificial pit in the royal tombs is reflected in M1001. Here, there were nine small pits: one in the centre under the floor of the wooden chamber; and eight at the four corners, two at each corner. In each pit, a human skeleton was buried along with a bronze *ge* and a dog. They were possibly the tomb guardians at the four corners of the tomb. These skeletons in the four corners of the tomb were possibly the tomb guardians. For practical purposes, they held bronze weapons of the current type to guard the tomb and its occupant. In contrast, it is worth noting that *ge* made of different materials, of stone or jade, were used for the pit under the floor of the wooden chamber. Not being intended for practical use, we may infer that the materials used had a symbolic significance, reflecting those used for more ancient types of weapon, as well as indicating the higher status of the occupant.

Tomb guardians with a *ge* and a dog were also common to the other royal tombs. However, most of them had only one in the pit under the main chamber. The nine guardians in M1004 are exceptional.

In addition, another phenomenon of M1004 is worth noting. Seventy of the total of 72 *ge* were of type V and were mainly inscribed with "卩".<sup>34</sup> The same inscription inscribed on the same types of *ge* was also excavated in another royal tomb, M1001<sup>35</sup>, as well as in M692 and 727 of the western sector at Yinxiu<sup>36</sup> and in pit E16 at Xiaotun<sup>37</sup>. A similarly inscribed *ge* was also excavated at Shilou in Shanxi<sup>38</sup>. They are all identical in shape with a length of about 25 cm (table 3:6) and inscribed. They are distributed among the tombs of the Anyang area and were found in particularly large quantity in M1004. Did they represent a special troop of

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<sup>32</sup> Gao Quxun, 1959, p.154.

<sup>33</sup> Gao Quxun, 1959, p.146 ; 133.

<sup>34</sup> The archaeological report does not mention this fact. However, by examining the original *ge* at Academia Sinica, the following *ge* were inscribed with "卩".

R6774: 1-30 ( except 16 which was heavily corroded )

R6774: 33-57 ( except 33, 53 which were heavily corroded )

R6775: 3: 3049: 1-5 ( except for 3 which was broken, and 4 and 5 which were heavily corroded )

R6776: 1

R6777: (1) A

(2) B

(3) C

(4) D was heavily corroded.

<sup>35</sup> Gao Quxun, 1962, pp.316-319

<sup>36</sup> KG 1979.1, pp.88-89

<sup>37</sup> Li Chi, 1949, p.20.

<sup>38</sup> WW 1981.8, p.50

guards for the occupant of HPK M1004?

Table 3:6 Size and decoration of Type V *ge* with *zi* inscription

Tombs no.	<i>ge</i> no.	length(cm)	Sources
HPK M1004	R674:45	25	Liang Siyong Gao Quxun.1970.p25
M1004	:55	24.5	same
M1004	:48	24.8	same
M1004	:51	25	same
M1004	:49	25	same
M1004	:17	24.7	same
M1004	:3	23.5	same
M1004	:8	23	same
M1004	:30	24.1	same
M1004	:31	24.2	same
M1004	:1	24	same
M1004	:6	24.1	same
M1004	:29	24	same
M1004	:56	23	same
M1004	:53	23.9	same
M1004	:4	24.6	same
M1004	:36	25	same
M1004	:1(damaged)	20.7	same
M1004	:47	25.4	same
M1004	:54	24	same
M1004	:44	25.5	same
Western sector of Yinxu M727	2	25.3	KGXB 1979.1 pp.88-89
		23	
Xiaotun E16	54		Li Chi 1949, p.20

The oracle bone records revealed a hint for the meaning of the inscription "  $\psi$  ". On *Buci tongzuan* No.581: " 孟方登人，其出伐  $\psi$  師高". According to Guo Moruo's survey, 孟方 was located to the east of Anyang. " $\psi$  師" was a place where a particular military unit was stationed on its way to attack the 囂fang. This place

was west of Linzi and east of Anyang.<sup>39</sup> If his annotation is right, the name of the place for stationing a particular military unit was the same as that inscribed on the *ge* found in large quantity in the great royal tomb, HPK M1004.

### Type IIb: Tombs of the “Royal family”

Either the scale of the bronze weapons found in the tomb or inscriptions referring to members of the royal family, may sometimes provide more direct evidence for ascertaining the status of the occupant. Among the tombs containing bronze weapons, tomb no.5 at Anyang is considered from inscriptional evidence to be a royal tomb, that of Lady Hao. In tomb no.5, 190 bronze objects were inscribed out of a total of 211. Nine different personal and clan names were included. A proportion of over 50% of the inscribed objects were inscribed with Fu Hao 婦好 or Hao好.

The name Fu Hao 婦好 appears on about 240 or 250 pieces of oracle bones of period I, and on five or six pieces of oracle bones of period VI<sup>40</sup>, including a single piece, no 661 in *jiabian*.<sup>41</sup> Therefore, there are two theories about the status of Fu Hao. The first, which is now generally accepted and which is supported by the evidence of the present research on bronze weapons and bronze *jue*,<sup>42</sup> is that she was the consort of Wu Ding; the second, that she was the wife of Kang Ding, would still mean that she was a member of the royal family. In either case, therefore, tomb 5 is representative of the tombs of the royal family.

As a royal tomb, tomb 5 contained a large number of bronze weapons. 143 bronze weapons including *ge*, bow-shaped implement, *yue*-axe, arrowhead and *zun* stand, were excavated from the fourth and sixth layers of the tomb, a rectangular pit of 22.4 square metres. Including those fashioned of jade and bronze, 174 weapons were excavated from tomb 5. Among the undisturbed tombs with rectangular pits, only M160 of Guojiazhung can compare with tomb 5 with regard to the quantity of bronze weapons. From the large quantity of both bronze weapons and vessels, the occupant of tomb 5 was not only a member of royal family, but also possibly a military noble. The dual status of the occupant corresponds to the oracle bone records regarding Fu Hao of the Wu Ding period. She was not only the consort of Wu Ding, but also a general of high rank. She not only conducted the ceremony for ancestor worship,<sup>43</sup> but also led the army to conquer the Tufang in the North, the

<sup>39</sup> Guo Moruo, 1933, p.127.

<sup>40</sup> KG1977.5, p.342.

<sup>41</sup> Yan Yiping, 1981, pp.1-103.

<sup>42</sup> Chen Fangmei, 1988, pp.45-94.

<sup>43</sup> "The diviner called Fuhao to worship X." "貞乎婦好𠬞" (Yiban 5086)

Qiangfang in the West, the Yifang in the East, and the Bafang in the southwest.<sup>44</sup>

A jade *ge* from tomb 5 was inscribed with "Lufang offers five *ge* as tribute". The name of "Lufang" was also recorded in the oracle bones.<sup>45</sup> Lufang may have been one of the Shang tributary states.<sup>46</sup>

The inscriptions on the bronze and jade weapons indicate their different sources: Except for two *yue*-axes inscribed "Fu Hao" indicating their owner, two smaller *yue*-axes inscribed "Yaqi" were excavated from Tomb 5. The name "Qi" ( 啓 ) was recorded in the oracle bones.<sup>47</sup> "Yaqi" was also inscribed on a non-excavated *ge*.<sup>48</sup> Yaqi was considered to be a military officer.<sup>49</sup> If this interpretation is right, could the *yue*-axe inscribed "yaqi" excavated from Tomb 5, have belonged to a military officer under the general Fu Hao? More evidence is needed to support such conclusions. However, one can suppose that the campaigns against several Fang conducted by Fu Hao and her association with other military officers are among the reasons for the variety of styles of weapon found in her tomb .

Tomb 18 at Xiaotun is the another example of a Type IIb tomb which was possibly a royal tomb including a great quantity of bronze objects.<sup>50</sup> Here again, the total number of the bronze weapons is less than that of the bronze vessels.

Because the skeleton had completely decayed, it is difficult to judge whether the occupant was male or female. It is assumed to have been female because of the small teeth and the narrow lower chin bone.<sup>51</sup> Some of the names inscribed on the vessels from this tomb may indicate that the occupant was in the circle of the royal family. The *zun* and the *jia* inscribed *ziyu* 子漁 in the tomb may indicate a relationship between the occupant and Ziyu. According to the oracle bone records, Ziyu had the right to attend the sacrificial ceremonies.<sup>52</sup> In another oracle bone record: he was referred to as 大示 interpreted as 大宗 meaning the oldest son in the lineage.<sup>53</sup> He was even supposed to be the oldest son of Wu Ding <sup>54</sup>.

Another inscription appearing on two vessels from tomb 18 indicates a close

<sup>44</sup> "King should not call Fu hao to fight the Tu fang" (*Heji* 6412)(*Kufang* 237) "貞王勿乎婦好往伐土方" "Fuhao gathered three thousand people to fight *qiang*." 登婦好三千...乎伐羌(*Kufang* 310) The above oracle bone records belong to period I of Wuding .

<sup>45</sup> Hu Houxuan, 1965, no.1947.

<sup>46</sup> Beijing, 1980f, p.131.

<sup>47</sup> 甲戌卜, 賓貞, □□啓古王事.(*Jiabian* 3337)

<sup>48</sup> Luo Zhenyu 1937, vol.19, p.19.

<sup>49</sup> Beijing, 1980f, pp.95-100.

<sup>50</sup> *KGXB* 1981.4, pp.495-505.

<sup>51</sup> *KGXB* 1981.4, p.493.

<sup>52</sup> "called Ziyu to worship father Yi" 貞乎子漁出于父乙 ( *Qian* 1.25.2 )

<sup>53</sup> *KGXB* 1981.4, p.514.

<sup>54</sup> Dong Zuobin, 1933, p.65

relationship to the royal family. This is the character *ci* 此 which appeared on the *yan* from this tomb and again, together with the character *Hou* 侯 (meaning marquis), appeared on the *gui* from this tomb. This inscription 此 also appeared on the objects from M1001<sup>55</sup> and M1004<sup>56</sup> at Xibeigang. In tomb 18, since it only appears on the vessels, it cannot be identified as the name of the occupant, but it does indicate a possible relationship between the occupant and the royal family. This burial included 24 bronze vessels and 7 *ge* (and 10 arrowheads). It can be classified as a Type IIb tomb, with a certain number of bronze weapons and a larger number of bronze vessels.

The bronze weapons in Tomb 5 reveal how the technological achievement of the bronze weapons was patronized by the royal family. The techniques of inlay and of combining jade and bronze have been found here. Two *ge* of Type II and type III were inlaid with turquoise. Two other *ge* were made with a jade blade and a bronze *nei*.<sup>57</sup>

### **Type IIc: Tombs of the nobility**

Lacking specific evidence, some tombs which were excavated with a certain amount of bronze weapons and vessels are classified as belonging to neither the king nor the royal family. They were supposed to belong to members of the nobility but not necessarily to military officers on the basis of the following clues:

1. In the type IIc tombs, bronze vessels number at least ten. The number of bronze weapons is smaller, less than ten. Two to eight human victims were found in tombs of this type.

2. The bronze weapons in this type of tomb were not necessarily buried close to the occupant.

Representative tombs of Type IIc are M331, M388, M333 and M232 at Xiaotun (table 3:3a). As previously stated (section 3.2.4 above) these tombs has not been robbed. The numbers of bronze vessels within the tombs were 19, 10, 10, and 10, respectively. In contrast, the numbers of bronze weapons within the same tombs were 6, 5, 1 and 6. Compared with the number of bronze vessels, the number of bronze weapons was much less. The bronze weapons were sometimes buried close to the occupant but more often closer to the human victims. For examples, five bronze *ge* were buried between the outer and inner coffins close to five human victims in M331 (fig.3:12). In M232, two bronze weapons were buried close to the human

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<sup>55</sup> Gao Qixun, 1962, fig.242:2,245:2.

<sup>56</sup> Gao Qixun, 1970, fig.51:9.

<sup>57</sup> Beijing, 1980f, pp.107-8.

victims. Another one was nearly in the corridor of the tomb. (fig.3:14). One jade-blade *ge* with bronze-*nei* in the inner coffin of the same tomb was supposed to have been buried to close to the occupant although the skeleton had decomposed.<sup>58</sup>

### 3.4.2.2. The roles of the various kinds of bronze weapons in the tomb

Although the scale of the bronze weapons in the tombs of the above six types were different, they shared common traits which formed the basis of the ritual ceremony of burying bronze weapons with the dead. The most important of them are:

1. The various shapes of *ge* form the core of the bronze weapons.
2. The various kinds of bronze weapons and their relation to the status of the occupation of the tombs.

These traits will now be discussed in this context.

#### 1. The various shapes of *ge*—form the core of the bronze weapons

##### a. The status of the occupant can be judged by the number of *ge* in a tomb

The *ge*, in its various forms, was the core weapon in the tomb. It was common to all the six types of tomb. From royal tombs to small rectangular pits, the *ge* was the main type of bronze weapon found. *Ge* were also the most common, almost the only type of weapon, that was buried with human victims. *Ge* appeared in the chariot and horse pits, such as M20 of and M164 at Xiaotun.<sup>59</sup> *Ge* also appeared in small graves or "sacrificial pits"<sup>60</sup> which seldom contained any other burial objects.<sup>61</sup> Therefore, *ge* was the most common and most basic burial object in the tombs containing bronze weapons.<sup>62</sup>

<sup>58</sup> Shi Zhangru, 1970, p.91.

<sup>59</sup> Shi Zhangru, 1972, p.12.

<sup>60</sup> Gao Quxun asserts that all the small graves "must be related to the ten large tombs". However, he is not certain about "to which big tombs the nine groups of small graves were dedicated as sacrifices" in the eastern section. (Gao Quxun, 1959, p9) Yang Xizhang and Yang Baocheng believe that the small graves could have been part of the royal burial rites. KG 1977:1, pp26-27, Chang Kwangchih, 1980, p.121.

<sup>61</sup> KG 1977:1, pp.12-36.

<sup>62</sup> In the tomb groups at Dasikongcun and western sector of Xiaotun, the proportion of tombs with *ge* out of the total of tombs with bronze weapons is about 65% (table 3:7) and 66% (table 3:8), respectively.

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As the core bronze weapon, *ge* represents the status of the nobles in the following two ways: a. Total number of *ge* in a tomb; and b. The differentiation of utilitarian *ge* from those not made for actual use.

a. The total amount of *ge* in the tomb as one of the criteria for judging the status of the occupant.

The number of *ge* was often much greater than the number of other bronze weapons (except for arrowheads), and occurred proportionally to the number of ritual vessels. The difference is obvious between Type Ia tombs which contained over 10 *ge* and Type Ib tombs which contained less than 10 *ge*. The former type of tomb often contained bronze ritual vessels, the latter often contained pottery vessels and were not limited to the bronze vessels.

Type Ia tombs with over 10 *ge* often contained 2 to 20 bronze vessels. In M160 of Guojiazhuang, 118 *ge* were found with 40 bronze vessels (Table 3:4). In Type Ia tombs, the total number of bronze *ge* often corresponded to the numbers of bronze *gu* and *jue*. Although the proportion was not strictly fixed, 10 *ge* approximately corresponded to one or two sets of bronze *gu* and *jue*. In type Ia tombs, other bronze weapons in addition to the ten or more *ge* were found together with bronze vessels. In such cases, the occupant was probably a military official or noble. This type of tomb was about 5 square metres or more in size. It often contained at least one human victim.

In contrast, type Ib tombs with less than ten *ge* often contained pottery vessels and only occasionally contained bronze vessels. This type of tomb was densely spread throughout the western sector of Yinxu. Among the 939 tombs in the western sector of Yinxu, there were 96 tombs with *ge* and 55 tombs with *ge* under ten. Of these fifty-five tombs with *ge* under ten, eighteen tombs had pottery and bronze

Table 3:7 Dasikongcun tomb group

No of Tombs	Tombs with bronze weapons	Tombs with <i>Ge</i>	Tombs with <i>Mao</i>	Tombs with <i>Zu</i>	Tombs with <i>Yue</i>	Tombs with knife	Tombs with <i>Ge</i> and <i>Mao</i>	Tombs with <i>Ge</i> and <i>Zu</i>	Tombs with <i>Mao</i> and <i>Zu</i>
166	35	23	3	7	1	2	5	2	1

Table compiled from data in *KGXB* 1955.9, pp.88-89.

Table 3:8 Western sector of Yinxu

No of Tombs	Tombs with bronze weapons	Tombs with <i>ge</i>	Tombs with spears	Tomb with arrowheads	Tombs with bow-shaped implement	Tombs with more than one type of bronze weapon
939	143	96	5	22	2	17

Table compiled from data in *KGXB* 1979:1, pp.121-144.

vessels, thirty-six tombs contained pottery, and one tomb was without either pottery or bronze vessels.<sup>63</sup> (table 3:9) Therefore in the tombs with under ten *ge*, pottery was often found and bronze vessels only occasionally. Thirty-seven of the fifty-five tombs, a proportion of about 2 out of 3 contained only one *ge*. There are ten tombs with two *ge*, a proportion of about 1 in 5. Still fewer tombs contained more than three *ge* (table 3:9). In other words, tombs with one or two *ge* were the most common type in the western sector of Yinxu.

Pottery was often buried in the tombs with less than ten *ge*. How did the total number of *ge* correspond with the amount of pottery within a tomb? Among the tombs in the western sector of Yinxu, the numbers of pottery vessels do not necessarily correspond with the numbers of *ge*. It is possible that the status of the occupant of the tombs with under ten *ge* are similar. In tombs with either one *ge* (table 3:10) or two *ge* (table 3:11), no more than four to five (table 3:12) and often only three pottery vessels were buried (fig. 3:53-1,53-2). The tombs with seven *ge* were buried with three pottery vessels.(table 3:12) The tombs with four *ge* were often buried with three or four pottery vessels.(table 3:12) Some tombs with under ten *ge* also contained about two or three bronze vessels. The size of tomb also indicates that the status of the occupant in tombs with less than ten *ge* was similar: such tombs are under five square metres and often only two to three square metres in area.

**b. The differentiation of *ge* for practical use from those made solely for burial use**

The differences between *ge* made for practical use and those made solely for

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Table 3:9 Tombs with bronze *ge* in the western sector of Yinxu

Number of bronze <i>ge</i>	Number of tombs with both accompanying bronze and pottery vessels	Number of tombs with only accompanying pottery vessels	Number of tombs without accompanying vessels
1	11	25	1
2	3	7	
3	1	1	
4	2	2	
5	1	0	
7		1	
Total	18	36	1

burial reveal not only the differentiation in status of the occupants but also the various styles of *ge*. The differences in the function of *ge*, in its relation with the status of the occupant, and in its material and style of *ge* are issues for the following discussion.

The differentiation of the function of *ge* in relation to the status of the occupant. The utilitarian *ge*, *shiyong ge* 實用戈 and *mingqi ge* 明器戈 or surrogate *ge*, the *ge* for burial usage, are the two main concepts in the archaeological reports of the tombs containing bronze weapons. The former indicates the sharp and thick *ge* which was actually used. The latter indicates the unsharpened, thin and poorly-made *ge* which was made for burial only.

The differentiation of the utilitarian *ge* from the surrogate *ge* may relate to the following two facts:

1. The *ge* was the core bronze weapon in the tomb.
2. A certain number of *ge* appeared in one tomb.

The complicated usage of surrogate *ge* and utilitarian *ge* in the tombs may relate to the different status of the occupants. The requirement of the utilitarian *ge* to protect the tomb was the same in both the royal and the royal family tombs. The royal tombs at Xibeigang have all been plundered and the number of bronze weapons belonging to the kings is unknown. However, the human victims buried with the utilitarian *ge* are an indication of the scale of the bronze weapons in the royal tomb.

Human victims were also buried with the utilitarian *ge* in the tombs of the royal family. In tomb 5, except for one *ge* which was thinner and without a hole, all of the *ge* were for practical use. Although the archaeological report of tomb 5 did not clearly indicate the location of the *ge* in the tomb, it is obvious that either the occupant or the human victim was buried with the utilitarian *ge*. There were at least 16 human victims in tomb 5.<sup>64</sup> In M18, possibly a tomb of the royal family, two utilitarian *ge* were buried with the human victim in contrast to seven surrogate *ge*.

The phenomenon according to which the human victim was buried with the utilitarian *ge* in the royal tomb is different in the type Ia tomb. In type Ia tomb, the differentiation of the utilitarian *ge* from the surrogate *ge* is very obvious. In M160 at Guojiazhuang, 118 *ge* were found of which "more than ten" were surrogate *ge* and the rest all utilitarian.<sup>65</sup> In M539 at Dasikongcun, one utilitarian *ge* was found in contrast to twelve surrogate *ge*.<sup>66</sup> In M613 of the western section of Yinxu, two

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<sup>64</sup> Beijing, 1980f, p.8.

<sup>65</sup> KG 1991.5, p.390.

<sup>66</sup> KG 1988.10, p.806.

utilitarian *ge* were found in contrast to eleven surrogate *ge*.<sup>67</sup> According to some archeological reports, the utilitarian *ge* were placed near the head and along the sides of the occupants of M539 and M663 at Dasikongcun and M3 at Xuejiazhuang. In M663, at Dasikongcun, the human victims were buried with both utilitarian *ge* and surrogate *ge*.<sup>68</sup> It is possible that the occupants of Type Ia tomb, who may have been military nobles, were buried with the utilitarian *ge* to protect them, and that human victims were buried with surrogate *ge* when there were not enough utilitarian *ge*. Type Ib tombs with one or two surrogate *ge* were common in the western section of Yinxu, where there were 133 surrogate *ge* out of a total of 230 *ge*. Therefore, the surrogate *ge* appeared not only in the Type Ia tomb with many *ge* but also in the Type Ib tomb with only one or two *ge*. Here too, the surrogate *ge* was possibly used when the number of utilitarian *ge* was not enough for the requirements of the burial ceremony.

### c. Differentiation in function, form, decoration, and materials

The various shapes of *ge* in the Anyang area are related to their differentiation by function, decoration and material. On the basis of function, the *ge* can be classified as utilitarian *ge*, surrogate *ge* and ritual *ge*. By material, *ge* can be classified into jade, jade+bronze, bronze, lead. Techniques used in the decoration of bronze *ge* were inlay and sunken lines.

The differentiation in function between the utilitarian *ge* and the surrogate *ge* depended on the thickness of the *ge*, and the degree of skill in its manufacture, as well as the materials of bronze or lead. The surrogate *ge* was often made either with poor bronze or with lead. Compared with bronze, lead has a much lower melting point and little tensile strength. What is the meaning of the emergence of the lead *ge* in the burial system of the bronze weapons at the Anyang area during the Late Shang period? The lead *ge* did not appear to substitute the bronze surrogate *ge* but to be another type of surrogate *ge*. The materials of the surrogate *ge* were therefore various (both bronze and lead). The surrogate *ge* became common during the second stage of the Yinxu period, and continued to develop until the fourth stage. It appeared to be common during the third stage and to become less frequent during the fourth stage in the tomb groups of the western section of Yinxu. The tomb scale of the lead *ge* corresponds to that of the one or two bronze surrogate *ge*. The lead *ge* was often found with two to four pottery vessels and occasionally with five bronze vessels. The size of the tombs with lead *ge* ranged from 1.32 to 4.96 square meters. The emergence of the lead *ge* may relate to a shortage or a rise in cost of the bronze

<sup>67</sup> KGXB 1991.3, p.342.

<sup>68</sup> KG 1988.10, p.370.

materials during the Yinxu period III. This caused the middle or lower class of the military officials to use lead *ge* in their burials. However, the lead *ge* was never as common as the surrogate bronze *ge* in the tombs of the Anyang area.

The *ge* with jade blade and bronze *nei* could be considered a ritual *ge* on the basis that it was not for practical use as a weapon. Inlay was often used as decoration on this type of *ge*. Comparing with the other materials of *ge*, the *ge* with jade blade and bronze *nei* was rare. It appeared M331, M5 and M18. Owing to the fact that the occupant of M5 was female and both M18 and M331 were also considered possibly female,<sup>69</sup> the *ge* with jade blade and bronze *nei* has been considered as having a particular association with women.<sup>70</sup>

The various shapes of *ge* in the Anyang area relate to the various functions of *ge*. The *shiyong* or utilitarian *ge* was found in Type I, II, IV, V but mainly in Type II and V.

Table 3:10 Tombs with one <sup>or two</sup> bronze *ge* in the western sector of Yinxu

Tomb number	Period	Type of <i>ge</i>	No. of <i>ge</i>	Pottery	Bronze vessels	Size of tomb(m <sup>2</sup> )	Notes
M323	II	IIIb2	1	3		1.50	
M336	II	IVb2	1	2		2.70	
M354	II	II	1	3	2	1.89	
M391	II	?	1	5	2	6.80	one bow-shaped implement
M627	II	IIIa	1	3	2	2.42	
M656	II	IIIb1	1	3		2.11	
M675	II	III	1	1		2.10	
M516	II	IIIb2	1	3		2.30	
M951	II	IIIb2	1	3		1.14	
M945	III	IIIb1	1	3		3.00	
M413	II	IIIb2	2	4	2	3.12	
M419	II	IIIb2	2	3		2.80	
M778	II	IIIb2	2	3		2.41	
M161	II	V	2	3	2	4.60	
M991	II	IIIb2	2	4		3.30	

<sup>69</sup> Shi Zhangru, 1974, p.160.

<sup>70</sup> Huang Xinkai, 1994, p.61.

M265	II	IIIb2	2	4		2.83	2 mao, <i>mao</i>
M74	III	IIIb2	2	5	2	3.99	<i>mao</i>
M126	III	II IVb2	2	3		4.74	<i>mao</i>
M372	III	IIIa2	2	3		3.64	2 mao, <i>mao</i>
M777	III	IIIb2	2	1	2	3.51	2 mao, <i>mao</i>
M819	III	II IV	2	3		4.49	2 arrowheads
M1010	III	IIIb2	2	2		4.17	<i>mao</i>
M994	III	IIIb2	2	3		1.59	<i>mao</i>
M945	III	IIIb1	1	3		3.00	
M531	III	IIIb2	1	4		1.95	
M67	III	IIIb2	1	3	2	3.77	
M356	III	IIIa1	1	2	2	3.12	one jade <i>ge</i>
M637	III	IIIb2	1	1		2.97	
M757	III	IIIb2	1	3	2	3.24	
M773	III	IIIb2	1	3		2.67	
M294	III	V	1	3	2	4.96	two lead <i>ge</i>
M815	III	IIIb2	1	2		1.84	
M8	III	IIIb2	1	1		1.57	
M11	III	IIIb2	1	1		2.06	
M32	III	II	1	3		2.18	
M917	III	IIIb2	1	2		1.93	2 mao
M958	III	IIIa1	1	3		1.38	2 mao
M973	III	IIIb2	1			1.38	
M976	III	V	1	4	3	4.34	
M1139	III		1	5		3.125	
M347	IV		1	5		2.53	bronze
M363	IV	IV + V	1	2	7	4.17	one small jade <i>ge</i>
M374	IV	IIIb2	1	3		2.64	2 mao
M676	IV		1	3		3.40	
M729	IV	IV	1	5		4.38	2 mao
M269	IV	IV	1		6	2.80	2 small jade <i>ge</i>
M263	IV	IV	1		6	1.20	
M1125	IV	IIIb2	1		3	4.20	spearhead

Tomb number	Period	Type of <i>ge</i>	No. of <i>ge</i>	Pottery	Bronze vessels	Size of tomb (m <sup>2</sup> )	Notes
M518	IV	IIIa2 IIIb2	2	4		2.00	
M279	IV		2	4		3.55	1 <i>mao</i>
M1052	IV	IV IIIa2 IIIb2 ?	2	3		2.97	2 <i>mao</i>

Table 3:11 [NB: incorporated in Table 3:10]

Table 3:12 Tombs with three or more bronze *ge* in the western sector of YinXu

Tomb number	Period	Type of <i>ge</i>	No. of <i>ge</i>	Pottery	Bronze vessels	Size of tomb(m <sup>2</sup> )	Notes
M619	II	II IVb2	3	3		4.72	
M918	II	IVb1	3	3		2.30	
M271	II	V IVa2	4	4	4	3.36	
M515	II	IVb2	4	3		2.44	
M243	II	IVb2	4	4			robbed
M14	III	IVb2	4	3		1.36	
M1127	III	II IVb2	2 2	2	4	4.42	2 <i>mao</i> 1 knife
M626	III	IVb2 V	4 1	3	2	4.50	
M50	III	IVb2	7	3		1.84	+ 2 stone <i>ge</i>

Table 3:13 Utilitarian *ge* and *mingqi ge* in tombs of type IIa (possibly royal tombs)

Tomb number	utilitarian <i>ge</i>	No. of <i>ge</i>	decor	position	Period	Reference	Note
Tombs at Houjiazhang							
HPKM1550:40	II	3			II	Gao Qixun 1976, pp.109-111	
HPKM1550:40	IIIb1	1	bird inlay?		II	Gao Qixun 1976, pp.109-111	
HPKM1550:40	V	3			II	Gao Qixun 1976, pp.109-111	
HPKM1004	?	3			II	Gao Qixun 1970, p.29	eastern grave for sacrificed human B11
HPKM1004	V	70			II	Gao Qixun 1970, pp.154-157	

HPKM1004	IIIb1	2	bird		II	Gao Qixun 1970, pp.154	
HPKM1001	II	3	<i>taotie</i>		II	Gao Qixun 1962, pp.316-320	disturbed
HPKM1001	IIIa1 IIIb2 ?	3	bird inlay?		II	Gao Qixun 1962, pp.316-320	disturbed
HPKM1001	II	2				Gao Qixun 1962, pp.316-320	9 immolated victims
HPKM1001	II	1	bird inlay?			Gao Qixun 1962, pp.316-320	2 immolated victims
HPKM1001	II	1				Gao Qixun 1962, pp.316-320	3 immolated victims
HPKM1001	II	1	<i>kui- long</i>			Gao Qixun 1962, pp.316-320	4 immolated victims
HPKM1001	II	1				Gao Qixun 1962, pp.316-320	5 immolated victims
HPKM1001	V	1				Gao Qixun 1962, pp.316-320	6 immolated victims
HPKM1001	II	1				Gao Qixun 1962, pp.316-320	7 immolated victims
HPKM1001	II	1				Gao Qixun 1962, pp.316-320	8 immolated victims
Tombs at Wuguancun							
WKTME9	II	1	petal inlay	E9 north		KGXB no.5(1951)	
WKTME9	II	1	none	E9 south		KGXB no.5(1951)	
WKTME9	V	1	petal 布紋	E9 south		KGXB no.5(1951)	
WKTME13	II	1	none	E13		KGXB no.5(1951)	
WKTME13	II	1				KGXB no.5(1951)	
WKTMW1	II	1	<i>taotie</i> 布紋	W1 west		KGXB no.5(1951)	
WKTMW12	V	1	布銘	W12 right		KGXB no.5(1951)	
WKTMN4	II	1	inlay, incription			KGXB no.5(1951)	Northern ramp immolated human ?
Waist pit	I	1				KGXB no.5(1951)	

Table 3:14 Utilitarian *ge* and *mingqi ge* in Type II tombs (brackets show *ge* types)

Tomb number	utilitarian <i>ge</i>	No. of <i>ge</i>	Position	Decor	<i>mingqi ge</i>	Position	Decor	humans	Period	Notes
M5	8(II)	8		Taotie inlay	0			16	II	Total of 91 <i>ge</i> (only 52 are of recognizable forms)
	4(IIIa)	4		Taotie, snake, <i>kuilong</i> inlay	0				II	
	2(V)	2		Taotie, snake, <i>kuilong</i> inlay	0				II	
	2 (jade blade bronze <i>nei</i> )	2			0				II	
	36(IIIb1)	36		bird inlay					II	
Xiaotun M18	2(II)	2	A corpse's shoulder; C corpse's shoulder		7(IIIa)		bird	5	II	Total of 5 corpse: A:18-20 (age) male B:13 (age) male C:18-22? (age) D:30 (age) male KGXB 1981:4

Table 3:15 Utilitarian *ge* and *mingqi ge* in tombs of Type Ia

Tomb number	No. of <i>ge</i>	<i>shiyong ge</i>	No. of <i>ge</i>	Position	Decor	<i>mingqi ge</i>	No. of <i>ge</i>	Position	Decor	humans	Period	Reference
Guojiazhuang M160	118	V	+90	?	Taotie	IIIb2	+10	?	bird	4	III	KG 1991:5
Dasikongcun M539	13	I Ib	I	right shoulder tomb master	thread-relief	IIIb2	12	scattered	bird	1	III middle	KG 1992:6

ng	13	IIIa	13	1 jade <i>ge</i> ; shoulder 3, chest 1, head 3, tomb shelf 1	11 bird inlay					1 female child	II early	KG 1986:12
an	11	IIa IIb	1 5	left & right shoulder of tomb master 1 each; 1 outer coffin		IIIb2	5	immolated human		4	II late	KG 1988:10
	10	IIIb1	2	?	?	IIIb2	8	?	?	?	II	KGXB 1981:4
g	13	V IV	1 1	outer coffin	<i>kui long</i>	IIIb2 same inscription on IIIb1	10 1	outer coffin		none	III late	KGXB 1991:3
	30	IV III + V	29 ?	?				?		3	IV	KG 1986:8

16 Numbers of *ge* and vessels in tombs with lead *ge* in the western sector of Yinxu

Type of <i>ge</i>	No. of <i>ge</i>	Pottery vessels	Bronze vessels	Size of tomb	Period	Note
lead	1	4		1.80	III	
lead (IVb2)	2	4		1.86	III	
lead	1	3		3.38	III	
lead	2	3	2	4.96	III	two lead <i>mao</i> ; one bronze <i>mao</i>
lead	2	3		2.97	III	
lead	1	3		1.32	III	one lead knife
lead (IIIb1)	1	2	lead 4	3.64	IV	

Table 3:17 *Ge* and vessels numbers in three tombs with both bronze and lead *ge* in the western sector of Yinxu

	Type of <i>ge</i>	No. of <i>ge</i>	Pottery vessels	Bronze vessels	Size of tomb	Period	Note
M64	bronze(II) lead(1)	1 1	3	2	2.16	III	1 lead <i>mao</i> (IA), one lead arrowhead and ring.
M355	bronze (IIIb2, IIIa1) lead(9)	2	2	5	3.93	III	one lead ring two bronze <i>mao</i> inscription
M684	bronze (VI), lead	1 1	3		2.7	III	

## 2. The various kinds of bronze weapons and their relation to the status of the occupant of the tomb

### a. Spear, the second choice of bronze weapon

The spear was less common than the *ge*, but more common than the *yue*, knife and the bow-shaped implement in the Anyang area during the Late Shang Period. Both the total number of spearheads, and the frequency of occurrence of the *mao* in tombs with bronze weapons was less than those with *ge*.

For instance, in the western section of Yinxu, there was a total of 230 *ge* and 70 *mao*. Tombs containing *mao* are less common than those with *ge* among tombs containing bronze weapons. Therefore, the *ge* was the basic weapon in these tombs. In contrast, *mao* seldom appeared independently and were often accompanied by the *ge*.<sup>71</sup> Therefore spears were the second choice in tombs with bronze weapons. Within the tombs containing large quantities of bronze weapons, the number of *mao* occurs in a certain proportion to the number of *ge*.

Although the *mao* was not as popular as the *ge*, it was buried with the dead of various ranks. The *mao* appeared in type Ia tombs which were possibly those of military officials of high rank. Thirty *mao* were buried in M1713 of the western section of Yinxu. In M160 of Guojiazhuang, ninety-five *mao* were found. Twelve *mao* were buried in M269 of Qijiazhuang. In M1713 of the western section of Yinxu, thirty *mao* were accompanied by thirty *ge*. Fourteen *mao* were in one group and fifteen *mao* were in another group. Each of the two groups also contained fifteen *ge*. 95 *mao* were accompanied by 118 *ge* in M160 of Guojiazhuang. Twelve *mao* were accompanied by thirteen *ge* in M269 of Qijiazhuang. It is possible that a certain amount of *ge* were buried with a number of corresponding *mao* in the tombs of

<sup>71</sup> In M975 and M261 of the Western section of Yinxu, spearheads appear independently of other bronze weapons. (KGXB 1979.1, pp.144-5).

military officers of higher rank. The *mao* was therefore the secondary choice for this type of tomb as well. (Table 3:19)

The *mao* was probably also important in the royal tombs, although most of the royal tombs were plundered. As regards the abnormally high proportion of 731 *mao* accompanied by 72 *ge* in M1004 of Xibeigang, it isn't clear whether this was the original condition of this tomb, and if so, whether this represents the general condition of royal tombs. Nevertheless, one still can suppose that the *mao* was important in royal tombs.

However, apart from royal tombs and type Ia tombs which were possibly those of military officials, spearheads were also buried in some type Ib tombs.

These Type Ib tombs generally contained pottery vessels or one or more bronze vessels. They normally contained <sup>or</sup> two types of bronze weapons since the spearheads were often accompanied by the *ge*. For example, three spearheads, one *ge* and 3 pottery vessels were found in M1053 of the western sector of Yinxi; two spearheads, two *ge*, three pottery vessels and two bronze vessels appeared in M234 of the same site; one spearhead, one *ge* and seven bronze vessels appeared in M101 of Dasikongcun.<sup>72</sup>

However, there were no spearheads in either M5 or M18, two possible tombs of the royal family.<sup>73</sup> Moreover, most of the tombs of human victims contained *ge* rather than spearheads. Again, this evidence shows that the spearhead was not as popular as the *ge* in the Anyang area during the Late Shang Period.

#### **b. *Yue*, knife and bow-shaped implement: three less common bronze weapons at the Anyang area during the Late Shang Period**

Compared with the *ge* and *mao*, the *yue*, knife and bow-shaped implement were uncommon in the Anyang area during the Late Shang Period. These conclusions are based on the following facts: the total number of the excavated examples of these three forms of weapons, and the number found within a single tomb.<sup>74</sup>

<sup>72</sup> Beijing 1987a, pp.237-251;348.

<sup>73</sup> Three jade spearhead were found in the M5. Beijing 1980f, p.140, colorplate 19.2;plate 117.2,114.1.

<sup>74</sup> According to the total amount of the excavated *yue*, knife and bow-shaped implement are approximately under 50 pieces for each kind of bronze weapon:

Kind of weapon	Type	Total amount
<i>Yue</i>	I	23
<i>Yue</i>	II	1
Knife	I	16
Knife	II	17
Knife	III	19
Bow-shaped implement		31

These less common kinds of bronze weapons played different roles in the tomb. They were probably included among the burial furnishings in order to reveal the particular social and political status of the occupant.

### c. The particularity of the *yue* at the Anyang tombs

*Yue* was of the abnormal type of weapon during the late shang period. At the Anyang area, type I *yue* was the main type as previous mentioned. Twenty-three type I *yue* have been excavated there up to now. The proportion is about 60% of the type I *yue* in China. However, in comparison with the great quantity of the other types of bronze weapons such as *ge*, 23 pieces is much lesser. From 1928 to 1937, the Anyang excavations were conducted by Li Chi at Xiao-tun and Xibeigang. At the unrobbed Xiao-tun tomb groups, no bronze *yue* was excavated. At the robbed Xibeigang royal tomb groups, only one *yue* was remained at M1368, which is a small tomb related to the royal tomb.

From 1969 to 1977, 939 Yin tombs and five chariot tombs were excavated at the western sector of Yinxu, no *yue* was excavated.

Due to the fact that the royal tombs at Xibeigang have been robbed, it is unknown that whether the *yue* was originally buried or not. However, the *yue* at the Anyang area was mainly excavated with a certain amount of bronze vessels, jade with inner and outer coffins, human and animal victims (table 3:18).

The tombs with bronze *yue* excavated were special in the following two aspects: Firstly, The bronze *yue* was often excavated with the bronze vessels in the tomb. Within ten unrobbed tombs out of sixteen tombs with bronze *yue* excavated, at least two bronze vessels were excavated with the bronze *yue*, two bronze vessels were excavated with *yue* at M1 Sanjiazhuang<sup>75</sup> (fig.3:34) and M664 Dasikongcun;<sup>76</sup> three bronze vessels at M25<sup>77</sup> Dasikongcun<sup>78</sup>; five bronze vessels at M18 Tianhushan. Moreover bronze *yue* was excavated with at least eight bronze vessels at the other six bronze *yue* excavated tombs: Eight bronze vessels at M539 Dasikongcun (fig.3:33)<sup>79</sup>; nine at M663 Dasikongcun;<sup>80</sup> ten at M28 Tianhushan<sup>81</sup>; seventeen at M1713

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<sup>75</sup>. KG 1983.2, pp.126-132.

<sup>76</sup> KG 1988.10, pp.865-874.

<sup>77</sup> KGXB 1986.2, p.169.

<sup>78</sup> KG 1989.7, pp.591-597.

<sup>79</sup> KG 1992.6, p.513.

<sup>80</sup>. KGXB 1988.10, p.883.

<sup>81</sup> KGXB 1986.2, p.169.

Table 3.18 Late Shang Type I yue excavated near Anyang area

site	Lidage	Sanjia-zhuang M1	Xibeigang M259	Dankongyan M664	Dankongyan M663	Dankongyan M25	Western Yinxu M1713	Dankongyan M74	Xibeigang M1384	Qijiazhuang M269	Gaojiazhuang M160	hooshan M18	hooshan M28	Western Yinxu M14	Western Yinxu M5,799	800	840	1156	Quozhuang M6	Dankongyan M539	
no.	1	1	1	1	1	1	2	1	1	2	3	1	1	1	4	4	4	4	1	1	
L	7	21	20	26	24.7	22.5	19.3	7.3	22.1	22.2	34	24.5	18	16.5	18	39.5	24.4	17	22.4		
Fig. of blade		17	16	16.2	16.6	16.6	16.6	4.7	16.8	16.3	29			8	37.3	38.5	14.8	13.4	16.8		
Fig. of shoulder		12.5		10.8	11.7	11.6			9.1	9.1					28.9	29	11.8	9.9	13.6		
width of shoulder	6.8	6.7					3.4	4	8.3	8.5					5.9	5.6	7.8	6.5	7		
L. of ear						6	8.5	5	5.5	5.5					11.5	11	7	4.7	7.6		
width of ear																					
body				animal mask	triangle	triangle	triangle	triangle	animal mask	whole circle; suspending leaves	animal mask	whole circle; suspending leaves	animal mask	animal mask	tiger and human head	tiger and human head	animal mask	whole circle; suspending leaves	animal mask	animal mask	
ear				animal mask	动物面具	动物面具	动物面具	动物面具	动物面具	动物面具	动物面具	动物面具	动物面具	动物面具	动物面具	动物面具	动物面具	动物面具	动物面具	动物面具	动物面具
inscription					松林石											姆好 亞					
other	20	2	5	5	25	6	67	67	29		200 t	1	4		134	41		133		67	
weapons and tools																					
bronze vessels	3	4	2	2	9	3	17	17	20		40	5	11		210			17		12	
shell																					
bone	7	7	7	7	10	8	46	46	3		3										
JD	D	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
human	6	x	14	x	4	x	3	x	祭身器	x	4	x	x	x	16					1	
victim																					
animal victim	2	2	6		1				1		3				2	6				1	
inner coffin	v				2.04 x 0.86		2.00 x 0.64				2.5 x 0.88										
outer coffin	3.7 x 2.9 x 1.25	2.8 x 1.55 x 1.2	2.8 x 1.55 x 1.2	2.5 x 1.56 x 0.8	2.5 x 1.56 x 0.8	2.85 x 1.40 x 1	2.66 x 1.26 x 0.60	7 x 0.5 x 0.25	2.67 x 1.2 x 0.7	3.26 x 1.52 x 0.88		2.2 x 1.3						2.95 x 1.1	3.10 x 1.15 x 0.50		
L x W x D	5.2 4.2 3.8	2.15 1.60 2.3	3.50 1.60 2.3	2.64 1.24 1.04	3.3 2 2	3.14 1.90 1.56	3 1.56 1.56	7 0.85 1.8	1.65 0.85 1.2	3.03 1.53 5.55	4.5 2.9 8	3.15 1.45 2									
Position		left head of occupant	left head of occupant	right shoulder of occupant	left side of the waist of occupant	tench pit			right side of occupant	southern side of coffin	near head or waist of occupant	middle of tomb								outer coffin left side of occupant	
Period	Late Shang	I	II	II	II	II	IV	IV	III	III	III	III	III	III	III	III	III	III	III	III	
Reference	Beijing 1956a p.12	KG 1983.2 p.128	KGXB 1987.1 p.113	Beijing 1986b p.132	KG 1988.10 p.873	KG 1989.7 p.592	KG 1986.8 pp.703-717	KGXB 1955.9 p.80	* CYWW 1986.3 p.12	KGXB 1991.3 p.345	KG 1991.5 pp.590-1	KGXB 1986.2 p.169	KGXB 1986.2 p.169	KGXB 1986.2 p.169	Beijing 1986b p.132	III	III	III	KG 1991.10 pp.902-909	KG 1992.6 p.513	

\*thanks of the information offered by Professor Gao Quxun .

western sector of Yinxu<sup>82</sup>, twenty at M269 Qijiazhuang<sup>83</sup>; forty at M160 Guojiazhuang<sup>84</sup>; 210 at M5 Xiaotun(table 3:19).<sup>85</sup> The tomb occupants of the bronze *yue* were thus special.

Secondly, the bronze *yue* was mainly excavated from Type Ia tomb which is characterized by the fact that the majority of the bronze burial objects are bronze weapons which are often much more than the bronze vessels in quantity. Ten Type Ia tomb out of sixteen tombs with *yue* at the Anyang area, are proportioned in 60%. For example, in M1713 of western sector of Anyang, 67 bronze weapons and tools in contrast with seventeen bronze vessels<sup>86</sup>; in M269 of Qijiazhuang<sup>87</sup>, 29 bronze weapons and tools in contrast with twenty bronze vessels; in M160 Guojiazhuang, over two hundreds bronze weapons and tools in contrast with forty bronze vessels.<sup>88</sup>; in M663 of Dasikongcun, 25 bronze weapons and tools in contrast with nine bronze vessels<sup>89</sup>; in M6 of Guojiazhuang, 133 bronze weapons and tools in contrast with seventeen bronze vessels.<sup>90</sup>

Therefore, the *yue* was occasionally excavated at Late shang tombs. It was mainly excavated from the tombs with a certain quantity of bronze weapons and tools, which is higher than that of the bronze vessels. The status of the occupant of the *yue*-excavated-tombs could be related to the higher rank of military officials. They were buried with the bronze vessels mainly ranging from two to twenty in quantity.

#### d. The knives

Three types of knives were buried in Late Shang tombs. The conditions of their burials are different. Type II knife is possibly a representative type. The Type II knife was buried in a certain type of tomb, revealing a particular relationship between the status of the occupant and the type of weapon. This Type II knife was often excavated from Type Ia tombs which were possibly those of the military officials of higher rank. (Table 3:19) It is longer than other kinds of bronze weapons, ranging from 25 to about 50 cm. It often appeared together with other kinds of bronze weapons. For example, the type II knife appears in Tomb 6 at Guozhuang with

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<sup>82</sup> KG 1986.8, pp.703-717.

<sup>83</sup> KGXB 1991.3, p.345.

<sup>84</sup> KG 1991.5, pp.590-591.

<sup>85</sup> Beijing 1980f, p.132.

<sup>86</sup> KG 1986.8, pp.703-7113.

<sup>87</sup> KGXB 1991.3, p.345.

<sup>88</sup> KG 1991.5, pp.390-391.

<sup>89</sup> KG 1988.10, pp.873-875.

<sup>90</sup> KG 1991.10, pp.902-909.

three other kinds of bronze weapons: *yue*, *ge* and arrowheads; in M 160 of Guojiazhuang (fig.3:2) with *yue*, *ge* and arrowheads and spearhead; in M 269 of Qijiazhuang with *yue*, *ge* and spearhead; in M 1713 of the western sector of Yinxu with *yue*, *ge* and spearhead (fig.3:52). Type II knife not only appeared at the tomb with these various kinds of bronze weapons, but also was usually found in the tombs in which *ge* and spearhead were the main bronze weapons typically with at least ten examples of each. For example, two type II knives appeared together with 118 *ge* and 95 *mao* in tomb 160 of Guojiazhuang; with 13 *ge* and 12 *mao* in M 269 of Qijiazhuang; and with thirty *ge* and thirty *mao* in tomb 1713 of the western section of Yinxu. In these tombs, also included at least fifteen bronze vessels. Fifteen bronze vessels in M 269 of Qijiazhuang, seventeen bronze vessels in tomb 1713 of the western sector of Yinxu, seventeen bronze vessels in tomb 6 of Guojiazhuang, and in tomb 160 of Guojiazhuang the type II knife was found together with 40 bronze vessels. Correspondingly, the size of all the above tombs was at least 4 square metres and sometimes even larger (Table 3:19).

These tombs also included

Table 3:19 Occurrence of Type II knives in tombs of Type Ia

Site	Type of tomb	Bronze weapons							Bronze vessels	Human victims	Size of tomb (m <sup>2</sup> )	Ref
		Type of	No	Length (cm)	<i>Ge</i>	<i>Yue</i>	<i>mao</i>	Arrow-heads				
Guojiazhuang M160	Ia	knife II	2	31	118	3	95	902	40	4	4.5 × 2.9	KG 1991:5 pp.390-2
Qijiazhuang M269	Ia	II	2	25.8 26	13	2	12		15		3.03 × 1.53	KGXB 1991:3 pp.343
Western sector of Yinxu	Ia	II III	2 1	31	30	2	30		17	3	3 × 1.56	KG 1986:8 pp.703-12
Guojiazhuang M6	IIC	II	1	29	1	1			17		3.2 × 1.35	KG 1991:10
Xibeigang M1335	?	II	10	47.5	?	?	?	?	?	?	?	Academia Sinica

Type II knife mainly appeared in tombs with a great amount of various kinds of

bronze weapons. It was often found together with at least 15 bronze vessels in a tomb whose size was often 4 square metres or larger. In general, the status of the occupant who was buried with bronze vessels was higher than those who were buried with pottery vessels only. It is possible that the occupants of tombs with the Type II knife were military officers of high rank. One may assume that the type II knife, when found in pairs could be the symbol of a person who qualified to be buried with at least fifteen bronze vessels and at least ten *ge* or ten *mao*.

However, the type II knife occasionally appeared in tombs with very few bronze weapons. One type II knife (not paired) appeared in tomb 6 of Guojiashuang with only one *ge* and one *yue* (and no 10 *ge* or *mao*). Moreover, the particular role of the Type II knife in the royal cemetery is seen in tomb 1335 of Xibeigang where ten Type II knives were excavated. This was an unusual discovery both in the quantity and in the length (approx. 47.5 cm) of the Type II knives. Due to the fact that the complete archaeological report of tomb 1335 of Xibeigang has not yet been published, the relation between this tomb and the other royal tombs are unknown.

The conditions of Type I and III knives in the Anyang area during the Late Shang Period are different from that of Type II knife. It is doubtful whether the Type I knife is a weapon. Three type I knives with remains of wooden objects appeared in tomb 186 of Xiaotun with nine skeletons. The archaeologist supposed that the wood remains could be originally have been a wooden *dou* and stand.<sup>91</sup> This isolated example is not sufficient to show that the function of Type I knife is necessarily connected to the wooden *dou* and stand. However, it is clear that the Type I knife appeared in this tomb without being accompanied by other kinds of bronze weapon. Further research is needed to define whether the type I knife belongs to the category of weapons.

The type I knife also appeared in tomb 1436 of Xibeigang. As the complete archaeological report of this tomb has not yet been published, this undocumented evidence does not further our understanding of the type I knife. A knife excavated from tomb 5 provides another aspect for the type I knife: in this tomb there were twelve type I knives, one type III knife, and no type II knives. The different types of knife from tomb 5 of Xiaotun reflect the complicated status of the occupant of the tomb. The Type II knife which was often buried with the military officials of higher rank was not excavated in this tomb. A type III knife with turquoise inlay excavated from tomb 5 at Xiaotun, is 36.2 cm long. The length and the elaborate decoration may relate to the position of the occupant. The type I knife which was rarely found in the tombs of military officials of higher rank was excavated at tomb 5 in considerable

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<sup>91</sup> Shi Zhangru, 1976, pp.59-67.

numbers. The type I knife was used in the central plain during the Erlitou and Erligang<sup>92</sup> periods, around seventeenth to fourteenth centuries B.C. A strong tradition of Type I knife was thus preserved at tomb 5. This may indicate that the tradition was patronized by the royal family.

Another type III knife was excavated from tomb 1713 of the western section of Yinxi, its length is 30.5 cm. Although the type III knife sometimes appeared in tombs of Type Ia and Type Ib, it mainly appeared in small tombs containing other bronze weapons. It was excavated from tomb 20 together with a *ge*, a bow-shaped implement and a whetstone forming a particular set.<sup>93</sup> Roughly-made Type III knives of less than 20 cm length, were found together with a small axe and a whetstone, in small tombs of Xibeigang, such as M1537, 1693, 1008.

#### e. The bow-shaped implement

The type I bow-shaped implement with the curved body is the most common, first appearing in the Late Shang period, especially concentrated in the Anyang area. Presently there are at least thirty examples (table 3:20). From these numbers, in the context of the Anyang bronze weapons, although this type is not comparable in numbers to the *ge* (for which at least there are 800 examples), they do appear in much greater numbers at Anyang when compared to the northern complex weapons such as the rattle pommel, animal-head pommel curved daggers and knives and socketed *yue*-axe.

Thirty bow-shaped implements were excavated from twenty-five tombs at the Anyang area (table 3:20) Sixteen type I tombs in contrast with four type II tombs indicates that the bow shaped implement mainly appeared at type I tombs in which the majority of bronze objects are bronze weapons. It was excavated from eight type Ib tombs and six type Ia tombs revealing that the bow shaped implement was used to be buried with the military officers of both the higher and lower rank. It also appears in type Ic tomb to bury with the human victims of the royal tombs such as M 1004 at Xibeigang and Wuguancun damu.

In contrast, it occasionally appears in type II tomb in which the majority of the bronze objects are vessels. Owing to most of the royal tombs were plundered, one does not know whether the bow-shaped implement was used in the royal tomb or not. However, M5 of Xiaotun were buried with six bow-shaped implement revealing the

<sup>92</sup> KGXB 1957.1, p.59, pl.5:8; WW 1983.3, p.74, fig.3:4; Huixian Fajuebaogao, Henan chutu Shang Zhou qingtongqi.

<sup>93</sup> Shi Zhangru concluded that such a set was common among the tombs with bronze weapons in the Anyang area. (Shi zhangru 1950, pp.19-77) However, it appears that such a set of bronze weapons was particular only to certain specific tombs in the Xiaotun area.

interesting of the royal family to this object.

Table 3:20 Bow-shaped implements from the Anyang area

Site	length	height	bow shaped	arrow head	ge	spear head	Knife	yue	knife pommel	charriot fittings	ritual vessels	position	reference	Type of tomb	Size of tomb
Dasikongcun M663, Anyang, Henan	33		1	7					rattle		9	bow shaped implement is at the left leg of the tomb occupant arrowheads are at the right	KG 1988.10, p.870.	Ia	6.6m <sup>2</sup>
Dasikongcun M51 Anyang, Henan	?			2	6	5			rattle		10	?	KG 1958.10, p.56	Ia	4.25
Dasikongcun M239 Anyang, Henan	44.6		1	3			1				2	?	KGXB 1955.9, p.51;83	Ia	1.49
Xiaotun M20, Anyang, Henan	38	6.6   7.2	1	10	2		1	rattle	✓			southwest near chariot	Shih zhangru 1970, p.112	Ib	5.6
Xiaotun Yinxu M5 (70) Anyang, Henan	40.7	7.4	6	37	50		4	rattle			210	?	Beijing 1980f, p.110	Iib	
Xiaotun Yinxu M5 (1122) Anyang, Henan	18.7	3.1		10				rattle				?	Beijing 1980f, p.110	Iib	
Xiaotun Yinxu M5 (60) Anyang, Henan	31	5.3						horse				?	Beijing 1980f, p.110	Iib	
Xiaotun Yinxu M5 (6) Anyang, Henan	34.5	5.3						horse				?	Beijing 1980f, p.110	Iib	
Xiaotun Yinxu M5 (1121), Anyang	34.5	5.5						horse				?	Beijing 1980f, p.110	Iib	

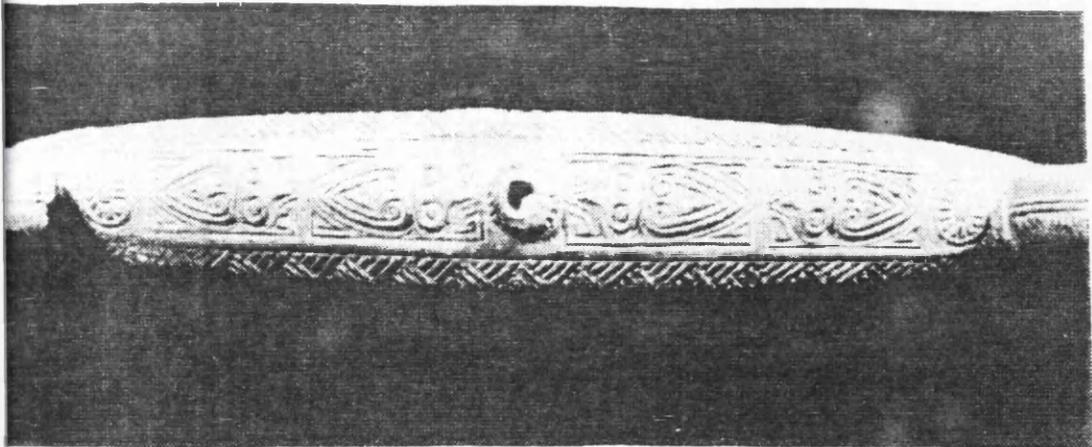
Site	length	height	bow shaped	arrow head	ge	spear head	Knife	yue	knife pommel	charriot fittings	ritual vessels	position	reference	Type of tomb	Size of tomb (m <sup>2</sup> )
Xiaotun Yinxu M5 (1123) Anyang	37.7	6.6							snake			?	Beijing 1980f, p.110	IIb	
Xiaotun M40, Anyang	39.8	4	1	20					rattle	✓		South of tomb	Shi Zhangru 1972, p.201	Ia	4.5
Xiaotun M164 (R1769), Anyang	37.5	5.8	1	5 1					rattle	✓		near tomb occupant	Shi Zhangru 1972, p.10	Ia	3.25
Xiaotun M238 (R1770), Anyang	40.6		1	12	1		1		bird		12	North West of tomb	Shi Zhangru 1970, p.394	IIc	2.45
Xiaotun M20 Anyang	38	7	1	10	2				rattle				Shi Zhangru 1970, p.150	Ia	
Wuguancun damu E9, Anyang	40		1		3				rattle	✓	4	On the right of E9	KGXB 1951.5, p.35	Ic	
Western Sector of Yinxu M824,	33.2		1	4					rattle		7	?	KGXB 1979.1, p.35	IIc	2.3
Qijiazhuang M269, Anyang	35.8	9.1	1		13		2		rattle		20	East of outer coffin	KGXB 1991.3, pp. 342-4	IIc	13.2
Western sector of Yinxu M216			1	15	1					✓	1	?	KGXB 1979.1, p.136	Ib	4.2
Xibeigang M1004 human victim in East Side			1	3	3		1						Gao Quxun 1970, p.29	Ic	?
Xibeigang M1049	33.4	3.0	1	34									Gao Quxun 1973, pl.2:2	Ib	?
Xibeigang M2020	39.8	3.9	1										Gao Quxun 1973, pl.7:1	Ib	?

Site	length	height	bow shaped	arrow head	ge	spear head	Knife	yue	knife pommel	charriot fittings	ritual vessels	position	reference	Type of tomb	Size of bomb
Xibeigang M1279	33.1	3.8	1	2									Gao Quxun 1973, pl.1:2	Ib	?
Xibeigang M1311	33.2	3.7	1										Gao Quxun 1973, pl.1:3	Ib	?
Xibeigang M2115	(remaining) 13.5	2.5	1										Gao Quxun 1973, pl.3:4	Ib	?
Xibeigang M2124	36.3	2.7	5	3									Gao Quxun 1973, pl.2:1	Ib	
	34.2	3.7											pl.2:3		
	37.8	4.2											pl.3:2		
	36.4	4.2											pl.3:3		
	34.6	4.8											pl.3:1		

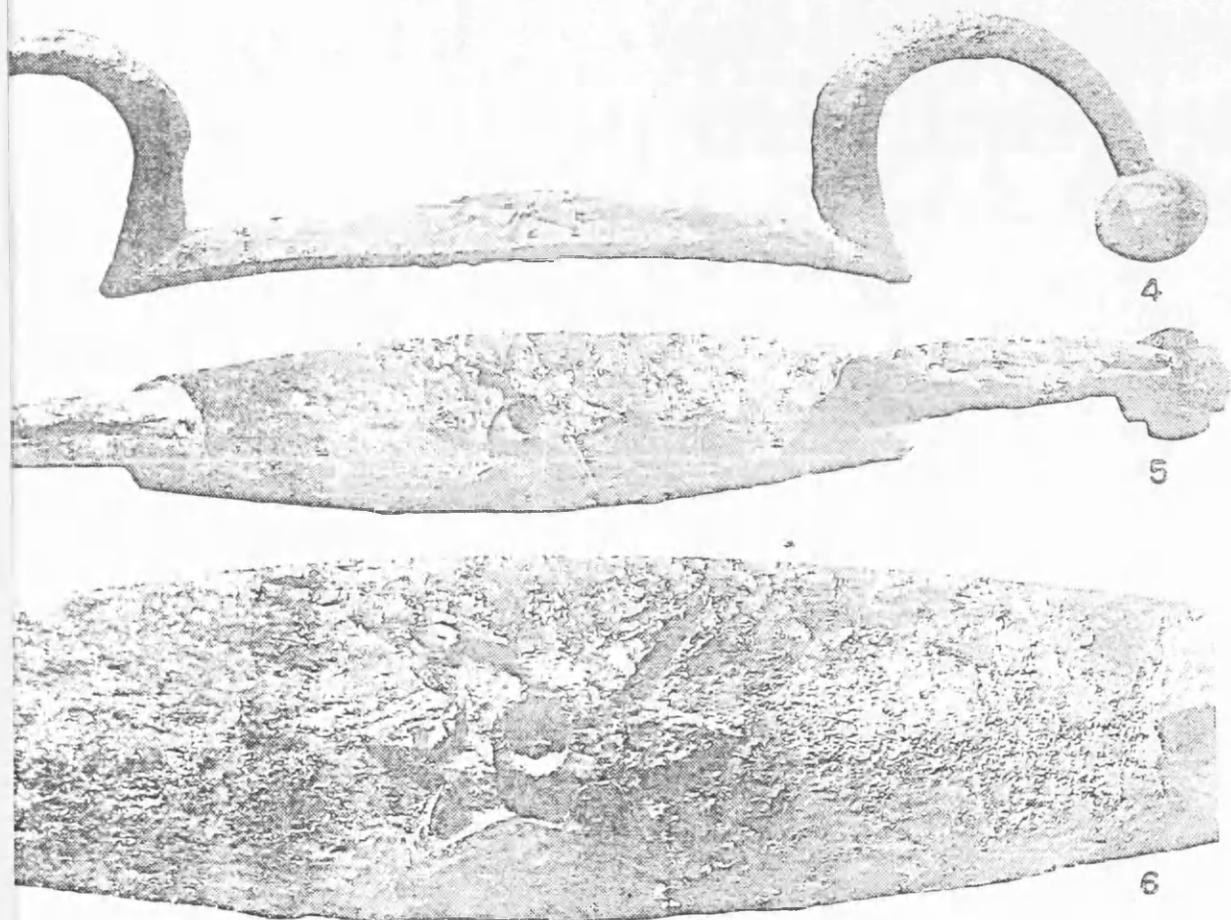
The bow shaped implement of the late Shang period is limited in number, however, some were specially decorated with the motives which is rarely used in the ritual vessels. The geometric design such as the shallow  $\pi$  lines in triangle form (fig.3:56) was used on Xibeigang M 2124; the sun-like decoration (fig.3:57) on Xibeigang M1049, the star-like decoration ( fig.3:58) on Xiaotun M20. The animal design such as the semi human with the head in high relief semi animal design was used on M20 Xiaotun(fig.3:59); the similar design in open work was used on M40 Xiaotun (fig.3:60); the *k'uei* dragon in high relief on M5 Xiatur. Besides the open work and high relief techniques, the inlay technique was applied to the designs on the bow shaped implement, as seen on Xibeigang M2124 (fig.3:61).

Although the bow shaped implement is less in quantity, and it not only appeared to bury with the officer of higher rank, but was often delicately decorated to play the important in the decoration of the Late shang bronze art.

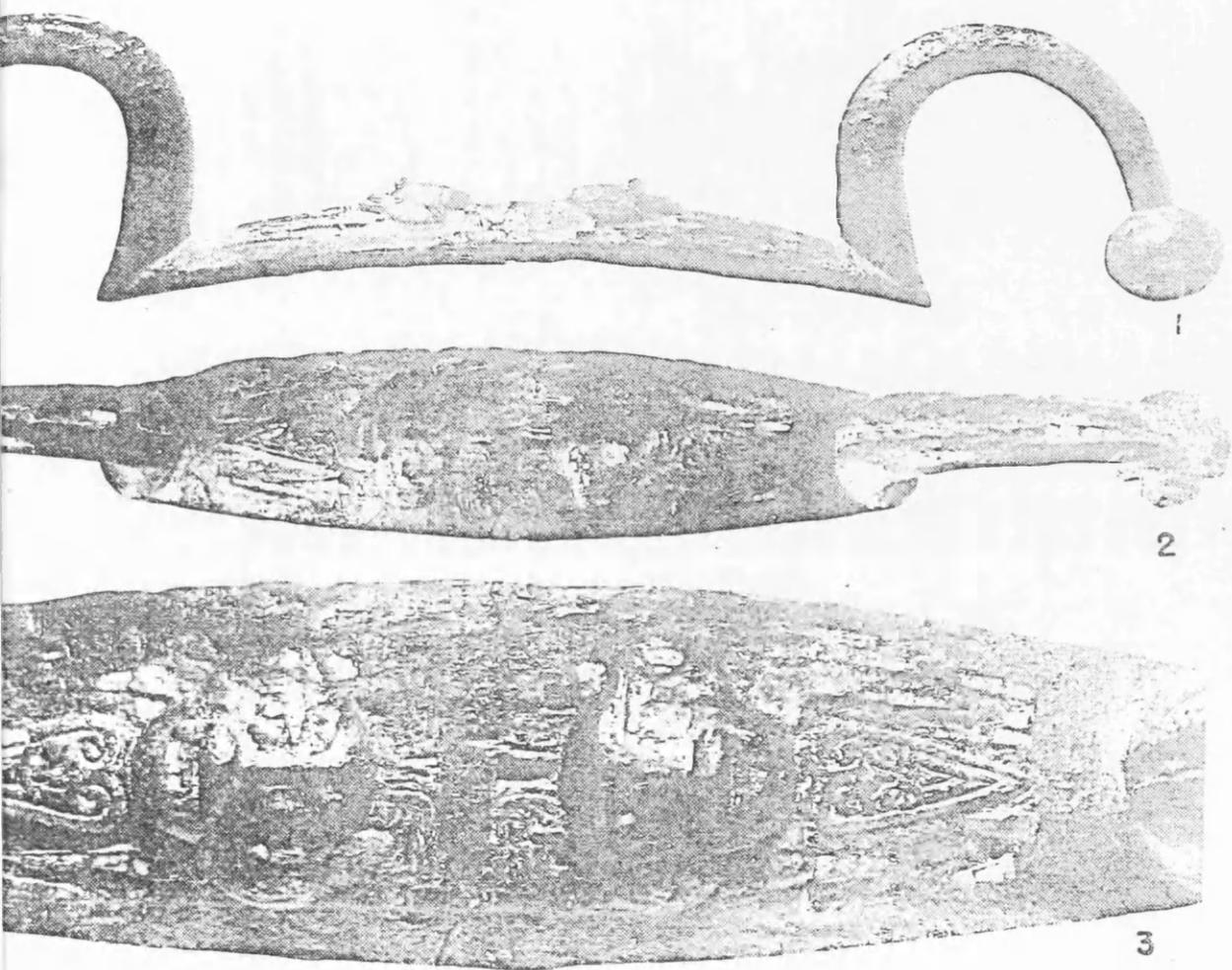
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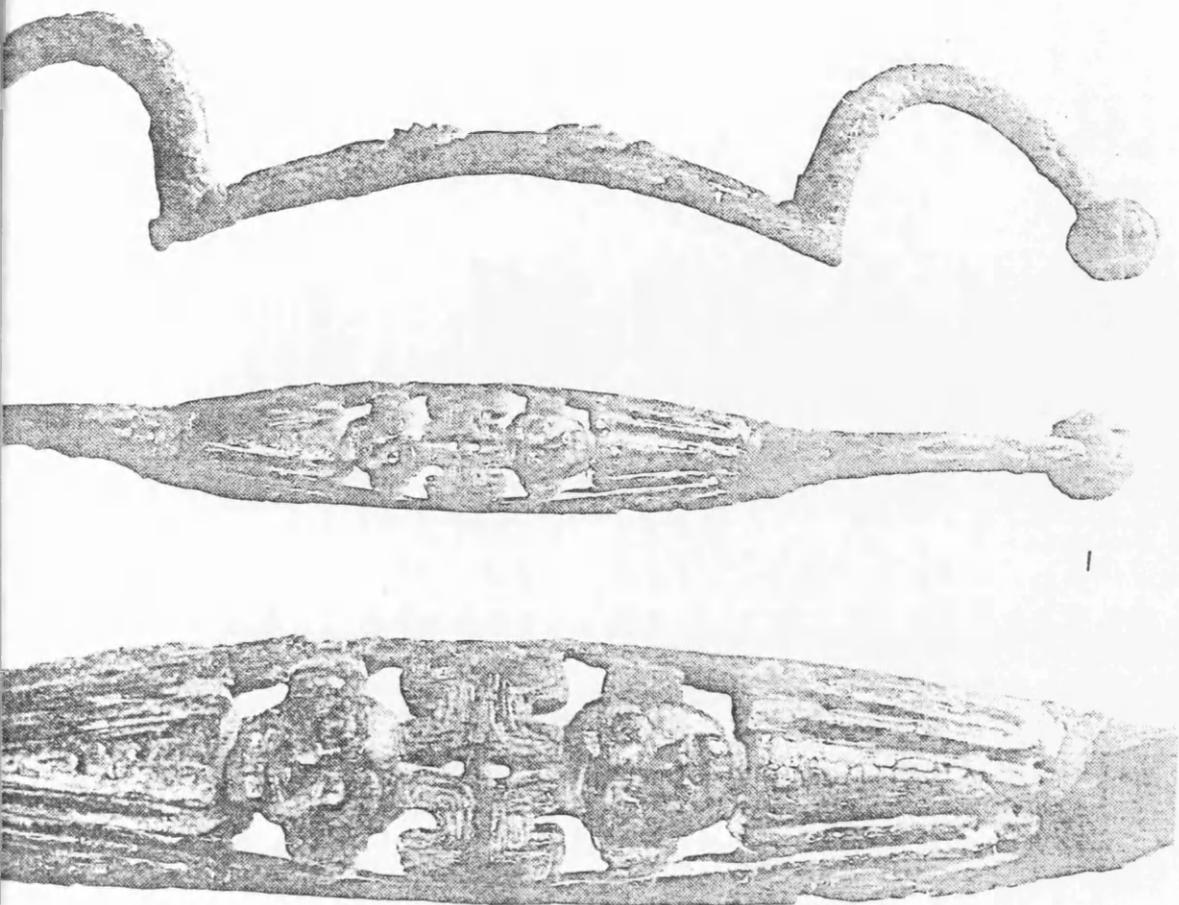
3:57 Bow shaped implement. M1049 Xibeigang. Gao Quxun 1973, pl.2:2.



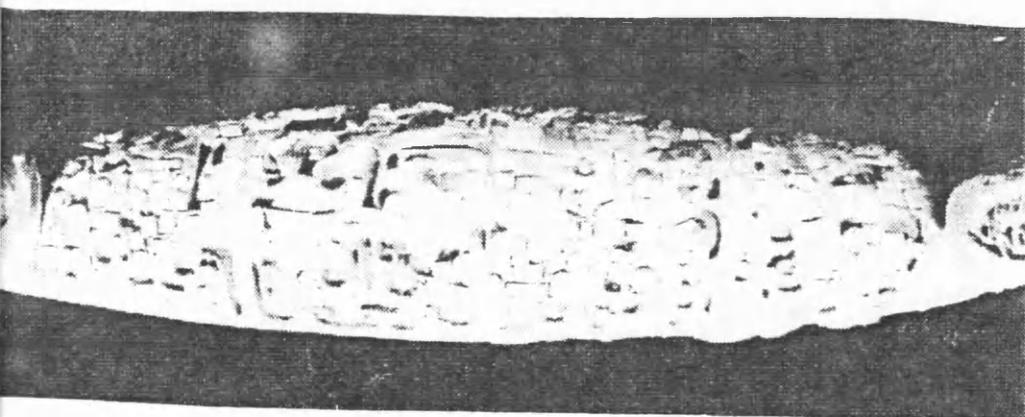
3:58 Bow shaped implement. M20 Xiaotun. Shi Zhangru 1970, pl.131:6.



3:59 Bow shaped implement. M20 Xiaotun. Shi Zhangru 1970, pl.131:3.



3:60 Bow shaped implement, M40 Xiaotun. Shi Zhangru 1970, pl.187:1.



3:61 Bow shaped implement, M2124 Xibeigang. Gao Quxun 1973, pl.3:2.

## Chapter 4: Late Shang Bronze Weapons outside Anyang: the emergence of regional styles

Late Shang bronze weapons outside the Anyang area are spread over a vast region, east to Shandong, north to Liaoning, northwest to the Ordos region, southwest to Sichuan and south to the Jiangxi and Zhejiang regions, even as far south as Guangdong. (map 4:1) On the basis of the distinct regional characteristics of the Late Shang bronze weapons, this vast region will be divided into four areas: the north, the south, the east and the southwest. Each region displays a different degree of intimacy with Anyang, as well as manifesting different degrees of indigenous styles. The following section will focus on the indigenous style of the weapons. The common style shared by many of these areas with the Anyang area will be discussed in Chapter 5.5. Archaeological recovery from these different regions also varies creating a disparity in our understanding of the different regions. These four regions seem at present to roughly correspond to the four quadrants (*fang* 方) as recorded in the oracle bones.

### 4.1. North

The "North" generally indicates the north in respect to Anyang, and includes Hebei<sup>1</sup> and northeastern Liaoning province<sup>2</sup>, Shanxi,<sup>3</sup> (map 4:3), and northern Shaanxi,<sup>4</sup> (map 4:4) as well as the northwest region of Inner Mongolia.<sup>5</sup> (map 4:2) These areas have been designated as the "north" on the basis of their indigenous style of the weapons and burial system. On the other hand this indigenous style of bronze weapons co-exists with the more common style of weapons from the Anyang area.

The indigenous style of bronze weapons in the north are exemplified by the following types of bronze weapons:

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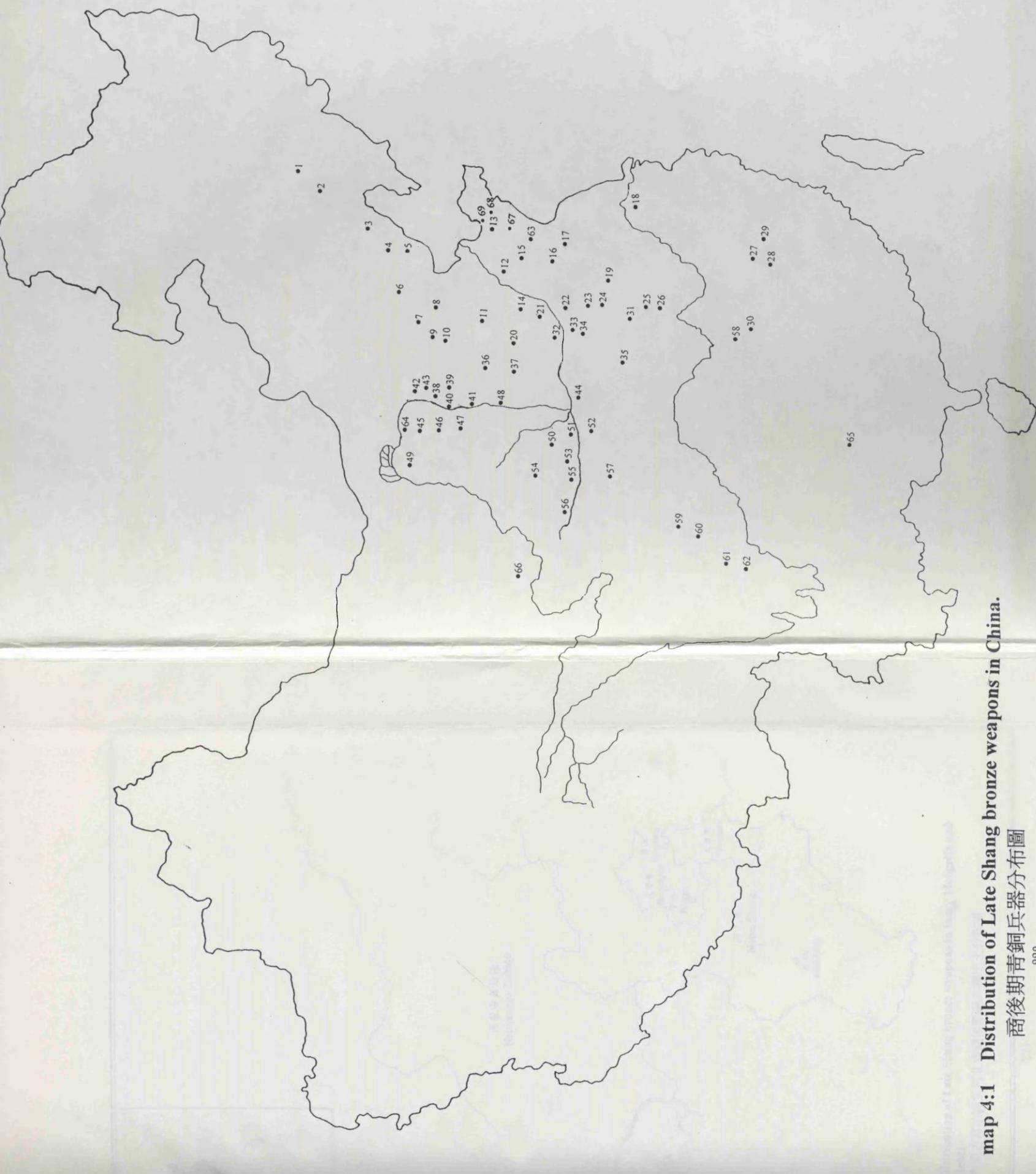
<sup>1</sup> KGXB 1992.3, pp.329-364; WW 1977.11, p.1; Beijing 1980a; Beijing 1985c; Beijing 1979a.

<sup>2</sup> WW 1977.12, p.23-27; KG 1978.6, p.387.

<sup>3</sup> WW 1958.1, p.36; KG 1972.4, p.29; WW 1960.7, p.51; WWZLCK 3, p.202; WW 1962.4, p.5; KG 1977.5, p.355; WW 1989.12, pp.90-91; WW 1972.4, p.63, 69; KG 1985.9, pp.848-849; WW 1982.9, p.49-52; WWZLCK 3, pp.46-49; KG 1981.3, pp.211-212; WW 1986.11, pp.1-18; WW 1981.8, pp.49-53.

<sup>4</sup> KGYWW 1986.5, pp.12-22; KGYWW 1988.4, pp.103-104; WW 1978.10; WWZLCK 3, pp.28-32; Kaoguxue jikan 2, pp.41-43; KG 1988.10, pp.955-7; WW 1988.6, pp.1-22; KGYWW 1981.2; KGYWW 1981.3, p.48; Hei Guang & Zhu Jieyan.

<sup>5</sup> KGXB 1988.3, pp.301-331.

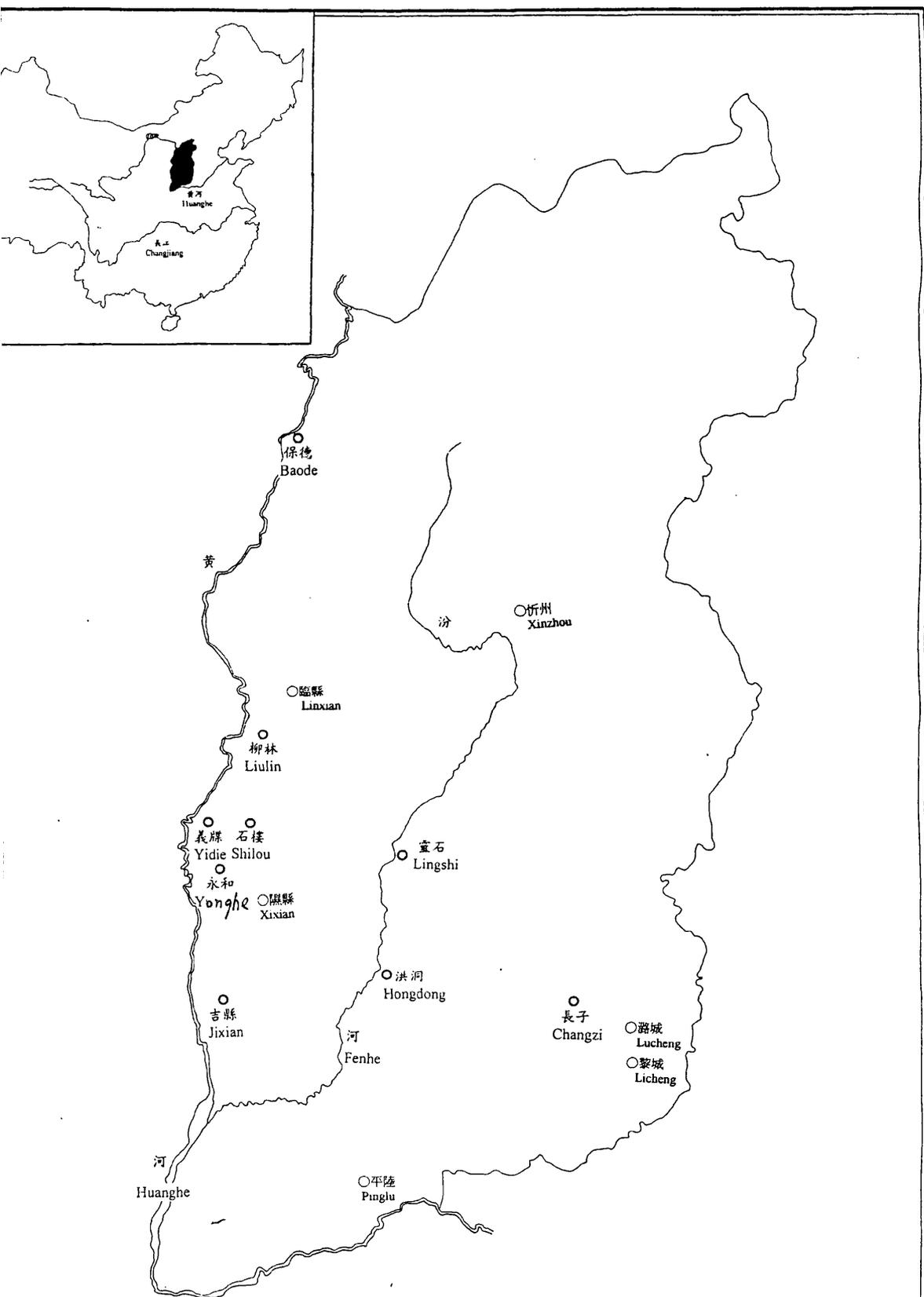


- 1 Gaku 新民
- 2 Shoumen 廣城
- 3 Anyangcheng 青龍
- 4 Chengluang 盤龍
- 5 Liding 平谷
- 6 Pengshan 鳳山
- 7 Fangshan 豐民
- 8 Humen 保定
- 9 Baotang 高城
- 10 Gaosheng 高台
- 11 Xingta 濟南
- 12 Jinan 濟南
- 13 Yidu 益都
- 14 Wun 武安
- 15 Chengxin 長清
- 16 Tengshan 滕縣
- 17 Tengshan 泰山
- 18 Cangshan 句容
- 19 Jiangcheng 濟上
- 20 Yingcheng 嶺上
- 21 Chengzi 嶺子
- 22 Anping 安陽
- 23 Zhongzhou 鄭州
- 24 Xiangcheng 新鄭
- 25 Xiangcheng 項城
- 26 Huangpi 黃陂
- 27 Fushengcheng 魯龍城
- 28 Qingjiang 清江
- 29 Xingzi 新子
- 30 Changsha 長沙
- 31 Luoshan 羅山
- 32 Luoshan 羅縣
- 33 Huoxian 涇縣
- 34 Yanbi 鄆師
- 35 Lufeng 濼縣
- 36 Lechi 濼石
- 37 Honggang 洪洞
- 38 Qingshan 清澗
- 39 Shilou 石樓
- 40 Yide 義縣
- 41 Tonghe 永和
- 42 Baode 保德
- 43 Lulin 柳林
- 44 Lishao 石寶
- 45 Zhukou 朱胡溝
- 46 Suide 威遠
- 47 Yanchuan 延川
- 48 Jishan 吉縣
- 49 Ardoboz 鄂爾多斯
- 50 Chubua 卓北
- 51 Xun 西寧
- 52 Lantian 藍田
- 53 Lishan 禮泉
- 54 Luyou 綏游
- 55 Fubeng 扶風
- 56 Qibai 岐山
- 57 Chenggu 城固
- 58 Ningshan 寧鄉
- 59 Pengxian 彭縣
- 60 Xufan 新繁
- 61 Hanxian 漢源
- 62 Shennan 石佛
- 63 Sashui 泗水
- 64 Yulin 蔚林
- 65 Wuning 武鳴
- 66 Huangjiang 黃中
- 67 Jishi 汧水
- 68 Weifeng 淮坊
- 69 Luoyang 洛北

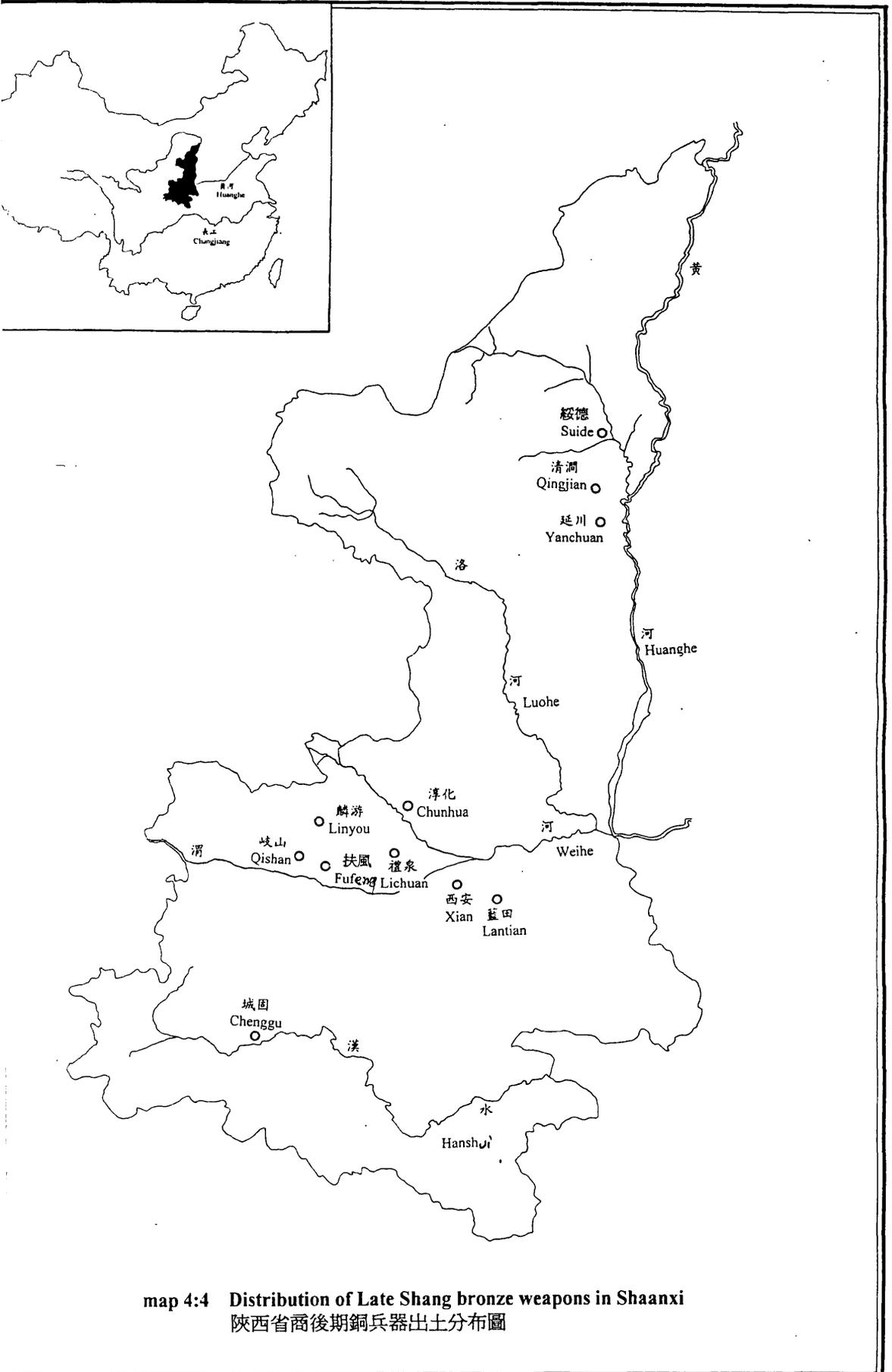
map 4:1 Distribution of Late Shang bronze weapons in China.  
商後期青銅兵器分布圖



map 4:2 Distribution of Late Shang bronze weapons in Inner Mongolia and Hebei  
 內蒙古自治區及河北省商後期銅兵器出土分布圖



map 4:3 Distribution of Late Shang bronze weapons in Shanxi  
 山西省商代晚期銅兵器出土分布圖



map 4:4 Distribution of Late Shang bronze weapons in Shaanxi  
 陝西省商後期銅兵器出土分布圖

#### 4.1.1. The curved dagger with rattle- or animal-pommel, Type II dagger: style, dating, distribution and origin

Of two types of Late Shang daggers, type II dagger was peculiar to the north. The curved dagger rattle-pommel carries a double-edged blade. The body of the dagger curves gently, and is divided into four parts: pommel, grip, guard and blade. The rattle is formed of an eight-section cage containing a small ball. The pommel is fashioned into the head of a horse, deer or ram. There is a small loop on the edge to facilitate its being carried. The grip is oblong in section, and often decorated with decor: such as zigzag pattern, and raised lines. The blade is wide and short, a thin raised median ridge runs the length of the blade.

From present archaeological finds, this type of rattle-pommel curved dagger with a flat-grip and linear guard and small loop is found in Shaanxi, Shanxi, and the Inner Mongolian region, all located north of Anyang. Examples of this type of curved dagger have been found at Caojiayuan, Shilou, (fig. 4:1)<sup>6</sup>, Liulin, Gaohong (fig. 4:2)<sup>7</sup>, Baode, Linzheyu (fig. 4:3)<sup>8</sup>, Chengguan, Jixian(fig.4:4)<sup>9</sup> in Shanxi Province, as well as Yijinhuluo in Inner Mongolia (fig. 4:5).<sup>10</sup>; Chaodaogou Qinglong<sup>11</sup> and Zhangbei in Hebei<sup>12</sup>.

The archaeological finds of these rattle-pommel curved daggers display their common relationship. The curved dagger often appears together with the socketed *fu*-axe (table 4:1) which is of the northern style. These two types are frequently found together especially in the Shanxi area. Unfortunately, there are no detailed archaeological reports describing the furnishings accompanying curved daggers from Inner Mongolia, so specifics regarding their assemblage remain unclear.

From the burial context and decoration of the rattle-pommel curved dagger, it is likely that the development of this type is centred in the Shanxi region. Of the six excavated finds of rattle-pommel curved daggers, four are from the this region. Small jingles are a common form of ornament found on other bronze objects from the Shanxi region. For example, small jingles are suspended from a large bell from Caojiayuan, Shilou (fig.4:6); a jingle hangs like a clapper on the inside of the foot of a *dou*, and small rattles embellish the single-pommel and double-pommel objects from Baode, Linzheyu (fig. 4:7); a jingle is suspended inside the foot of a *gu* found

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<sup>6</sup> Yang Shaoshun, 1981 b, pp.50.

<sup>7</sup> Yang Shaoshun, 1981 a, pp.211-2.

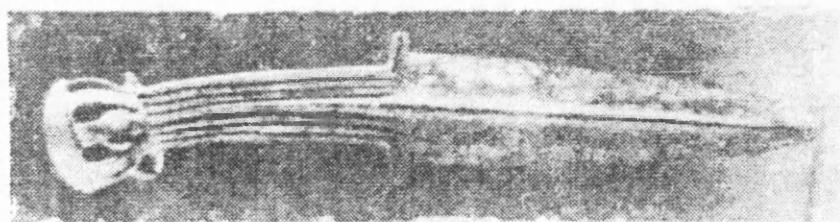
<sup>8</sup> Wu Zhenlu, 1972, pp. 62-6.

<sup>9</sup> KGYWW, 1988, 4pp.103-4.

<sup>10</sup> Tien Guangjin, *op.cit.*, p.2.

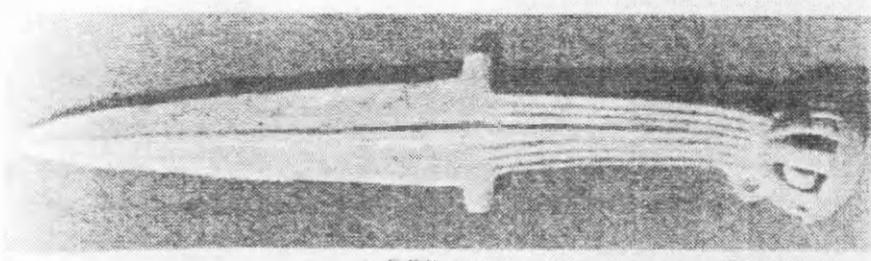
<sup>11</sup> KG 1962.12, p.644.

<sup>12</sup> WW 1984.2, p.944.

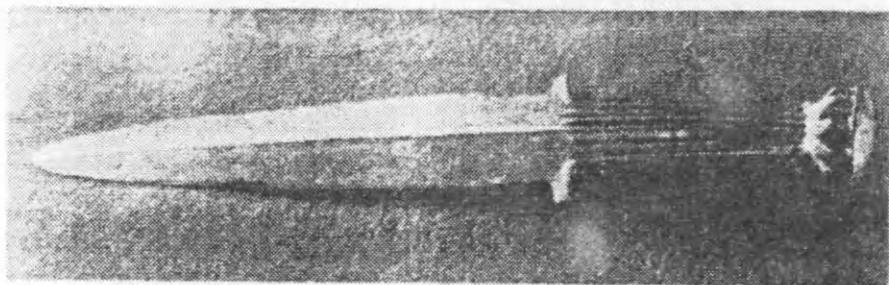


图一三 铜首剑

Curved dagger from Caojiayuan Shilou Shanxi, length 25.5 cm. Xie Qingshan, Yang Shaoshun, 1980, p.5, fig.13.



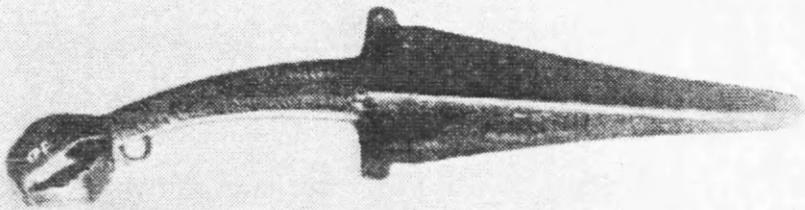
Curved dagger from Liulin Gaohong Shanxi, length 23.5 cm. Yang Shaoshun, 1981, pl.2:1.



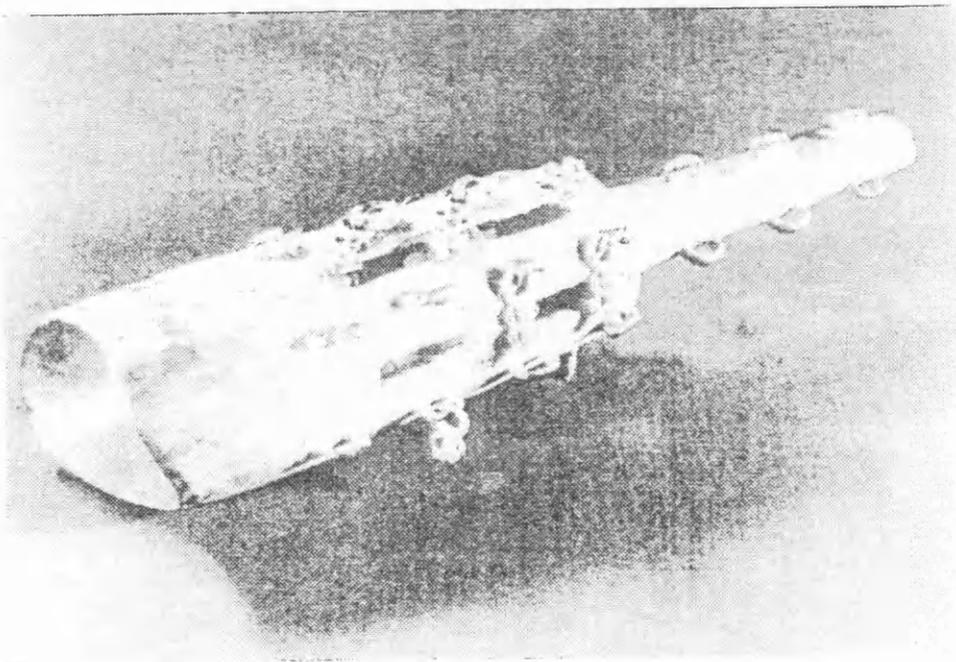
Curved dagger from Baode Linzheyu Shanxi, length 32 cm. Wu Zhenlu, 1972, p.62, fig.6.



Curved dagger from Chengguan Jixian Shanxi, length 25 cm. KGYWW 1988.4, p.103, fig.4.



Curved dagger from Inner Mongolia Tian Kuangjin, length 22.3 cm. Beijing 1986, p.5, fig.1:1.



A large bell with jingles from Caojiayuan Shilou Shanxi, length 29 cm. WW 1981.8, p.52, fig.19.

at Shilou, Shanxi. The addition of jangling ornaments is not commonly found on objects from other areas, indicating that the style of the rattle-pommel curved dagger is a local characteristic.

The curved-grip rattle-pommel curved dagger appears to be mainly of the late Shang period. Of the six excavated curved daggers, the Linzheyu example was accompanied by a bronze *you*, *ding*, and *po*. The style of these bronze vessels is similar to that of Anyang bronzes, and they have therefore been dated to the late Shang period, providing a basis for dating the rattle-pommel curved dagger. This type of curved dagger is rarely found in the early Western Zhou period. A comparative example dated to the early Western Zhou period while retaining Late Shang stylistic elements was recovered from Baifu tomb 3, Changping, Beijing.<sup>13</sup> The pommel cage is of five sections, each containing a single rattle, the pommel and slightly curved grip are longer than the blade itself.

Likewise, the curved-grip animal-pommel curved dagger is intimately related to the curved-grip rattle-pommel curved dagger in regards to period, regional distribution, and style. Both types belong to the category of curved-grip curved dagger, differing only in the substitution of an animal-head pommel in place of the rattle-pommel. The animal-pommel variation of this type of curved dagger centred in the north, exemplified by such pieces as a curved-grip ram-pommel curved dagger from Chaodaogou, Qinglong, Hebei (fig. 4:8)<sup>14</sup> and a deer-pommel curved-grip curved dagger from Changpei, Hebei (fig. 4:9).<sup>15</sup> This type of animal-pommel curved dagger is mostly dated to the late Shang period. At Daochaokou, the Qinglong hoard discovered in 1961 is a cache of mainly weapons. At the time there was little comparative material, and the report dated the cache to a period no later than the beginning of the Warring States. In light of the many archaeological finds following this discovery, including many late Shang bronze ritual vessels, scholars have come to acknowledge the cache as belonging to the late Shang period.<sup>16</sup>

It is worth noting that this type of animal-pommel curved dagger has been found even farther north in places such as Mongolia and Transbaikalia such as Southern Gobi, Buriatiya Mongolian Autonomous Region, and Chita (fig 4:10), Transbaikalia. B.B. Bonkob has dated this type of curved dagger from both Mongolian and Transbaikalia to the late Karasuk period.<sup>17</sup> Karasuk is a southern

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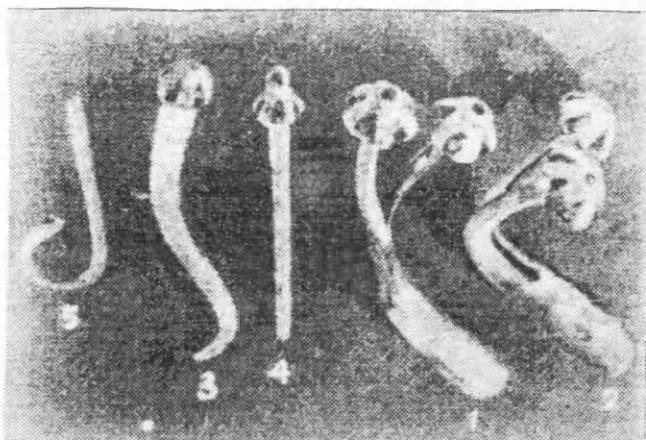
<sup>13</sup> KG1976.4, p.250.

<sup>14</sup> Zheng Shaozong, 1962, p.644.

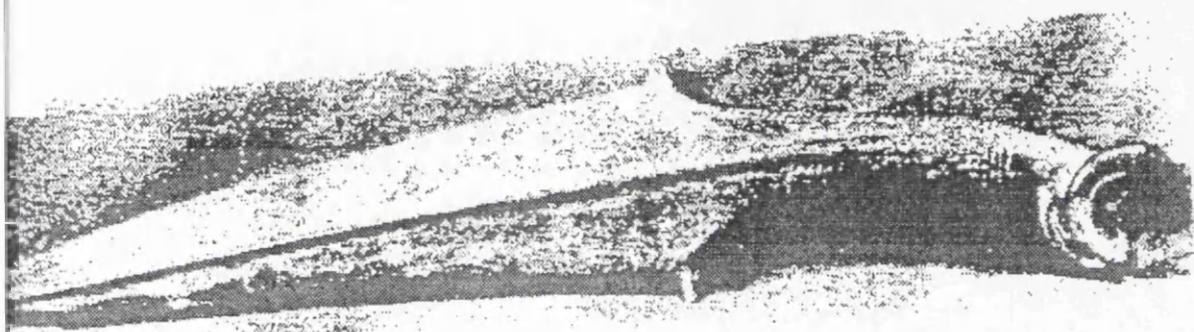
<sup>15</sup> Zheng Shaozong, 1984, pl.5:1.

<sup>16</sup> Wu En, 1978, p. 325; Lin Yun, 1987 p.133; Zheng Shaozong, 1984, p.43-45.

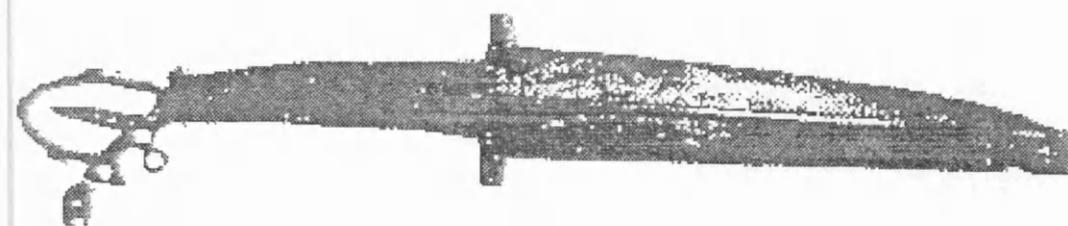
<sup>17</sup> B.B. Bonkob, "Bronze daggers from Gobi" *Sovetskaya Arkheologia* 1961, 3, cited from Wu En 1978, p.331-2, 360.



Single-pommel and double-pommel objects from Baode Linzheyu Shanxi. WW 1972.4, p.73, fig.3.



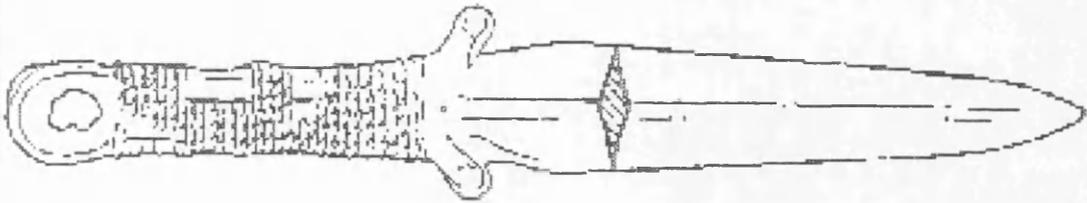
Ram-pommel curved-grip curved dagger from Chaodaogou Qinglong Hebei, length 30.2 cm. Beijing 1980a, p.39, pl.84.



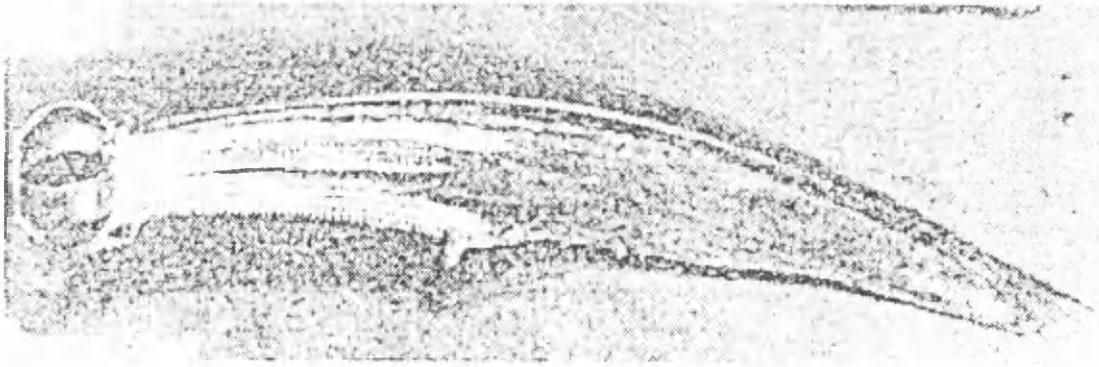
A deer-pommel curved-grip curved dagger from Changpei Hebei, length 32.8 cm. Beijing 1980a, p.40, pl.87.



0 Zabaikalie Chita. KG 1978.5, p.332, fig.5:8.



A curved dagger. Zhukaigou M1040, Inner Mongolia Autonomous Region. length 26 cm, KGXB 1988.3, p.325.



2 Rattle-pommel curved-back knife, Qinglong Chadaogou Hebei, length 26 cm. KG 1962.12, pl.5:1.

Siberian Minussinsk Basin bronze culture, but archaeologists of the former Soviet Union have not come to an agreement on the dating.<sup>18</sup>

H.J. Chernova's 1972 book *Periodization of the Karasuk Culture* lists 33 datable tombs and two C14 datings, the first is 2930±60b.p.(980B.C.), the second 2710±75(760B.C.b.p.). Such C14 dates correspond approximately to the Western Zhou period. According to the comments made by Wu En, a Chinese archaeologist familiar with Soviet archaeology, there is not enough evidence to confirm the earliest dates of twelfth to eighth century B.C. First, the tombs from this culture have for the most part been robbed. Second, there are no historical records and scholars have relied on similar artifacts from Yinxu and Western Zhou to arrive at their datings. Likewise, bronzes with animal motifs are not found in the earliest tombs of Karasuk. Therefore if Wu En's criticism and perceptions are correct, the animal or rattle-pommel curved daggers of Shanxi and northern Hebei antedate those of southern Siberia.

With the find of a curved dagger at Zhukaigou, Inner Mongolia, the question of the origin of the curved dagger becomes more complex. A curved dagger, length 26cm (fig.4:11) was recovered from Zhukaigou tomb 1040, from the Inner Mongolia Autonomous Region.<sup>19</sup> From a study of the accompanying pottery and *ge*, archaeologists have dated the tomb to the upper Erligang period, with a date no later than Yinxu period I. The difficulty with this dating is that there are no other contemporary examples of such a dagger from any other region.

The argument attributing the origin of the curved dagger to the Ordos culture has several weak points: First, this is the only example of curved daggers in the Ordos region dated so early. Using this single find to define the origin is rather forced. Secondly, this particular curved dagger has both a straight grip and a straight blade edge, and appears to be related to changes related to the post-Western Zhou Northern curved daggers.<sup>20</sup> Likewise, this particular curved dagger has a ring pommel, which is common on late Shang knives, but is much less common on other curved daggers. There is therefore a considerable gap between this curved dagger and the late Shang northern rattle- or animal-pommel curved daggers. Nor can we

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<sup>18</sup> V.A. Gorodov dates the culture to 1500-1000B.C.; S.A. Teplou-khov dates it to 1000B.C.; S.V. Kiselev gives the culture a date of 1200-700B.C. See E. Golomshtok, p. 316 (Gorodov) and p.319 (Teploukhov). S.V. Kiselev, *Drevnyaya istoriya yuzhnoi Sibiri*, pp. 99-105. map. p. 69, from Max Loehr, 1956, p.93, 1956.

<sup>19</sup> KGXB 1988, 3, p.290. The length of the blade is derived from the line drawing, figure 29. See also note 14.

<sup>20</sup> Most scholars are of the opinion that the post-western Zhou northern bronze daggers descended from the late Shang curved-blade dagger, then developed into the straight-blade dagger of the Western Zhou. (Zheng Shaozong, WW 1984, 2, p.48.; Wu En, 1978, p326; Zhai Defang, 1988, p278.

argue that these ring-pommel curved daggers are earlier than either the rattle- or animal-pommel curved daggers, as the straight grip is difficult to tie in with the development of the curved-grip of the animal/rattle-pommel curved daggers. Thirdly, from excavated examples, the animal-pommel knives and rattle-pommel knives are commonly accompanied by socketed *fu*-axes. Six examples recorded from northern tombs all display this common phenomenon. The ring-pommel curved dagger of the Zhukaigou tomb 1040 was accompanied by a *ge*. The socketed *fu*-axe is an archetypal northern weapon, which will be discussed in detail below. The *ge* on the other hand is a typical Central Plains type of weaponry. Based on a study of the pottery finds, scholars have placed the Zhukaigou tomb 1040 as possibly late Shang period.<sup>21</sup> In other words, the origin of the curved-grip curved dagger is difficult to define from present archaeological materials.

In addition, since the rattle-pommel curved-grip curved dagger commonly appears in the Shanxi region, and as its jingle-type ornamentation also appears on other types of bronzes, it is possible that the rattle-pommel curved dagger originated in the northern part of Shanxi. How are the rattle-pommel curved dagger and the animal-pommel curved dagger related? From the general areas in which they have been excavated, it appears that the latter is concentrated in the Shaanxi, Shanxi region, and the former in the Baikal Lake region and south to northern Hebei. It appears then that the origin of both types lies in the northern region. Further archaeological materials are needed to confirm this theory.

In conclusion, from present archaeological data, the curved-grip curved dagger is a late Shang northern type, and can be sub-divided into the rattle-pommel and animal-pommel variations. Excavated rattle-pommel curved daggers have been found in greater quantities, and have commonly been centered in the Shanxi and Ordos regions. The animal-pommel variation is more commonly found in Hebei and the Southern Siberian, different Baikal Lake regions. Whether the differences in form represent ~~and~~ regional origins, this type cannot be confirmed for lack of sufficient archaeological data. As this type is commonly found together with the socketed *fu*-axe (table 4:1), it may represent a late Shang popular northern style. In the development of the northern bronze curved daggers can the curved dagger found at Zhukaigou represent the earliest form? More data will be needed to before such conclusions can be drawn.

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<sup>21</sup> Cui Rui: 1991, pp.361-371.

Table 4:1 Excavated bronze curved daggers in the north.

Site	length (cm)	curved dagger		knife II			<i>fu-yue</i>	bow- shaped implem ent	<i>mao</i>	ritual vessels	other finds	reference
		II		rattle	animal	ring						
Caojiayuan Shilou, Shanxi	25.5		1				III	1			1	<i>WW</i> 1981.8 pp.211-2
Gaohong Liulin, Shanxi	23.5		1			doubl e ring 3	II II2		1		2	<i>KG</i> 1981,3 pp.211-2
Linzhe yu, Baode, Shanxi	32		1				II2			8	8	<i>WW</i> 1972 pp.62-6
Cheng guan, Jixian, Shanxi	29		1				II				2	<i>KG</i> 1985:9 pp.848-9
Zhangbei, Hebei	33.3	1 deer										<i>WW</i> 1984:2 p.44
Chaoaogou Qinglong, Hebei	30.2	1 deer		1	1	3	II				1	<i>KG</i> 1962:12 p.644
Jinyihuoluo Banner, Inner M.	22.3		1									<i>Tian Guangjin</i> 1986, p.4
Yanchuan Shaodaohu Qutoucun, Shaanxi	25		1				II					<i>KGYYW</i> 1988,4 pp.103-4

Regardless whether its origin lies in the Ordos region, or in some other northern area, the majority of this type of curved dagger are found in the north and it is scarce at Yinxi in the late Shang period.<sup>22</sup> In other words, close-combat curved daggers were not an essential Shang weapon and were perhaps not at all part of the

<sup>22</sup> Karlgren, 1945, pp.111-112.

Anyang tradition. Was instead the *ge* with its double edge preferred? More information is needed to answer these questions.

The northern nomadic peoples preferred the curved dagger, not only in the Late Shang, but also in the Spring and Autumn and Warring States period, possibly because it was easy to carry on horseback. Was it used by the nomads as a tool or as a weapon?<sup>23</sup>

At Linzheyu, Baode, Shanxi, this type appears in context together with a socketed *fu* and eight bronze ritual vessels, as well as jade *cong*. The Central Plains style is very obvious in the objects from this tomb, which appear to be a mixture of Central Plains and northern styles.

#### 4.1.2. The style, period, and cultural relationships of the rattle-pommel knives

Of three types of knife in use during the Late Shang Period, the type II knife was common in the Northern area. This curved-back knife has a curved body, with a curved back and grip. The weapon is divided into three parts: pommel, grip, and body. The rattle is often an eight-section openwork cage containing a small metal ball and there is a small loop on one side allowing the weapon to be hung. The grip is flat and the upper and lower end are often decorated with designs such as sawtooth pattern, little dot pattern, bow-string pattern. There is a hook-like protrusion where the blade and grip meet.

Examples of the rattle-pommel curved-back blade type have been found in Shanxi, and Hebei, such as at Qinglong Chaodaogou. (fig.4:12), a late Shang cache.<sup>24</sup> A different form of knife is seen in the north during the early Western Zhou, such as in the cache from Xinglong, Hebei. Here the blade is very short, and the back of the knife is straighter. The pommel and grip are longer than the blade itself. This change from curved-back to straighter back is the same as that seen in the late Shang to early Western Zhou daggers. In the Western Zhou the curved-back knife is rarely seen.

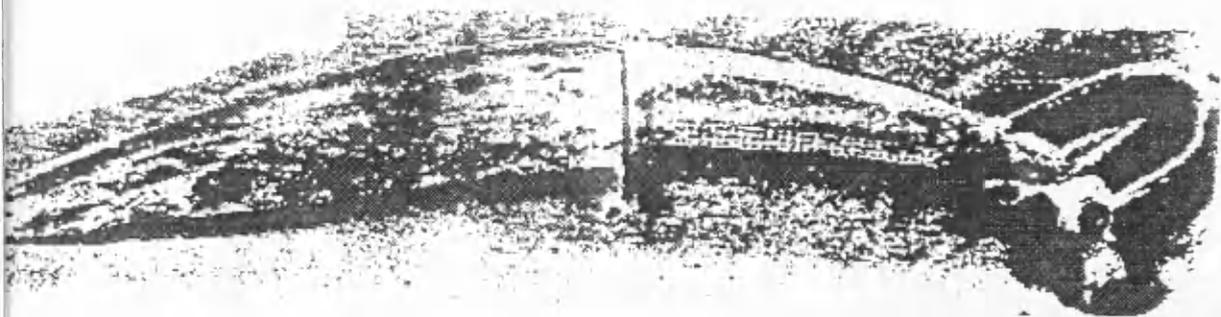
Excavated examples of the curved-back rattle-pommel knives are fewer than the curved-back rattle-pommel curved daggers, whereas curved-back knives with ring- or animal-head-pommels are much more common. (table 4:2). The curved-back knife with animal-head-pommel is found together with the rattle-pommel knife not only at Qinglong Chaodaogou, Hebei (fig. 4:13), but also at Yantoucun, Suide, Shaanxi (fig. 4:14),<sup>25</sup> Jingjecun, Lingshi, Shanxi (fig. 4:15),<sup>26</sup> Shizikou, Huaian,

<sup>23</sup> The fact that it has a rattle would appear to lessen the ability for a stealthy attack

<sup>24</sup> Zheng Shaozong, 1962, p.644; Zheng Shaozong 1984, pp.43-5.

<sup>25</sup> WW, 1975.2, pp.82-87.

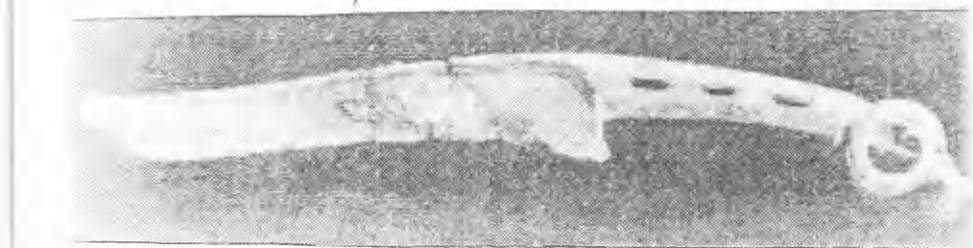
<sup>26</sup> WW 1986.11, p.4.



3 Animal-pommel knife, Qinglong Chaodaogou Hebei, length 29.6 cm. Beijing 1980a, p.37, pl.82 bottom.



4 Animal-pommel knife, Yantoucun Suide Shanxi, length 32 cm. WW 1975.2, p.83, fig.3.



5 Animal-pommel knife, Jingjiacun Lingshi Shanxi, length 27.5 cm. WW 1986.11, pl.4:4.



6 Animal-pommel knife, Qinglong Chaodaogou Hebei, length 24.3 cm. KG 1962.12, pl.8:2.

Hebei,<sup>27</sup> Xinglong Hebei.<sup>28</sup> Further north, finds include Jianping, Liaoning,<sup>29</sup> Baiyingchang, Naiman, Jilin.<sup>30</sup> Ring pommel examples have been found at Qinglong Chaodaogou, Hebei (fig. 4:16), Houlanjiagou, Shilou, Shanxi,<sup>31</sup> Yanghe, Xingcheng, Liaoning.<sup>32</sup> Most scholars have accepted a late Shang date for these tombs and caches.<sup>33</sup> It is certain that the rattle-pommel curved knife was present in the late Shang in the north, and from the fourteen northern finds, this type appears to have been more popular than the curved dagger type.

Table 4:2 Excavated bronze curved-back knife in the north

Site	Length	knife			dagger		fu- yue	bow- shaped imple- ment	mao	ge	arrow head	ritual vessels	other finds	reference
		II			II									
		rattle	animal	ring	animal	rattle								
Chaodao gou, Qinglong Hebei	29.6	1			1		IIc1							KG 1962:12 p.644
	26	1												same as above
	26.7			1										same as above
	24.3			1										same as above
	broken 21.5			1										same as above
Shizikou, Huai'an Hebei	22.4			1										KG 1988:10 p.942

<sup>27</sup> KG 1988.10, p.942.

<sup>28</sup> WW 1990.10, p.50.

<sup>29</sup> KG 1983.3, p. 679-674

<sup>30</sup> Li Tianfu, WWZLCK, no. 7, pp.72-114.

<sup>31</sup> WW 1962, 4/5, p33,34, fig. 4.

<sup>32</sup> KG 1978.6, p.387.

<sup>33</sup> Wu En, , 1978, pp.82-87; Beijing 1985a, 1985, pp.66-67; Zou Heng. 1980, pp.274-276; Lin Yun 1987, p.133.

Site	Length	knife II			dagger II		fu- yue	bow- shaped imple- ment	mao ge	arrow head	ritual vessels	other finds	reference	
		rattle	animal	ring	animal	rattle								
Xinglong Hebei (cache)	24.5 24.5	1	1				II d1	1			cover 1		WW 1990:11 p.58	
Houlan- jiagou, Shilou, Shanxi	35			1			I 1 1		1		5		KG 1962:4.5 pp.33-6	
Jingjie cun M2 Lingshi, Shanxi	24.4		1					2	19	11	16	18	2	WW 1986:11 pp.10-5
Yantou cun, Suide, Shaanxi	32		1								7	9		WW 1975:2 p.82-85
Jianping Liaoning (cache)	fragmen ted 19.2		1											KG 1983:3 p.689
Yanghe Xing- cheng, Liaoning	20.8 15.5 23.2			3			II c1							KG 1978:6 p.387
Fusun Liaoning	24.1			1										KG 1981:2 p.90
Naiman Baiyin chang, Jilin	?		1											WWZLCK 7(1983) p.103

More specifically, the animal-pommel type has been found spread over a large area, found as far as the Karasuk region, such as: Krasnoyan Topanovo, (fig.4:17).<sup>34</sup>

<sup>34</sup> Wu En, 1984, p.47, fig.1.

These finds are dated to the eighth and seventh century BC.<sup>35</sup> In other words, this Type I knife embellished with different forms of pommel is found scattered across the plains of northern China and southern Siberia. If Wu En's understanding and dating of the animal-pommel knives of southern Siberia is correct, there no longer exists the question of a possible influence of this type of knife on the Shaanxi-Shanxi, Hebei, Liaoning, and Jilin regions. However, the fact that Type I animal-pommel knives were found at Yinxu complicates the issue with regard to whether or not this type is a pure northern form and where its origin lies.

The popular northern curved-back knife in the animal-pommel form has also been found at Yinxu.<sup>36</sup> The similarity of style has already been mentioned by such scholars as Karlgren and Loehr, as well as Chinese and Soviet archaeologists. Regarding questions of origin and dissemination, most scholars, excluding Karlgren and Li Chi, agree that Yinxu was influenced by the north.

A re-examination of the curved-back knife's coexistence at Yinxu and in the north, including those knives with animal-pommels, rattle-pommels, and ring-pommels begins with a study of context, quantity, and period, as well as form and decor.

First the question of the northern influence on Yinxu must be addressed. Present archaeological finds have uncovered nine examples of the curved-back knife at Yinxu: three examples came from Xiaotun M20 (fig. 4:18-20);<sup>37</sup> three examples from Xibeigang M1537, M1693, M1008 (fig. 4:21-23);<sup>38</sup> one example from M5 (fig.4:24); a single example came from Yinxu Western Sector M1713 (fig.4:25);<sup>39</sup> and one example was found at Dasikong M51, Anyang (fig. 4:26),<sup>40</sup> (table 4:3). From these examples it is evident that the curved-back knife was present at Anyang during the second through the fourth periods.<sup>41</sup>

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<sup>35</sup> H.J. Chernova, (1972), p.39, cited from Wu En, 1984, p.58, footnote 12.

<sup>36</sup> Beijing 1980f, p.101.

<sup>37</sup> Shi Zhangru 1970 pl XXXVI

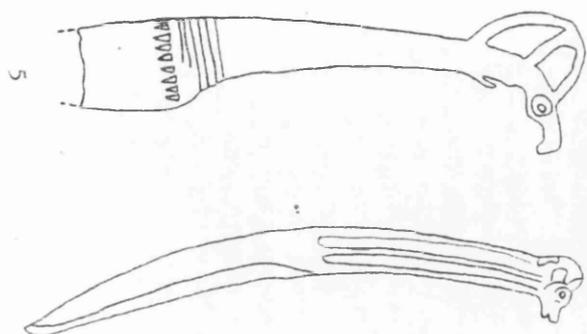
<sup>38</sup> Gao Quxun, 1967b, Pl.7.2.2.2.1.

<sup>39</sup> KG, 1986.8, p.709.

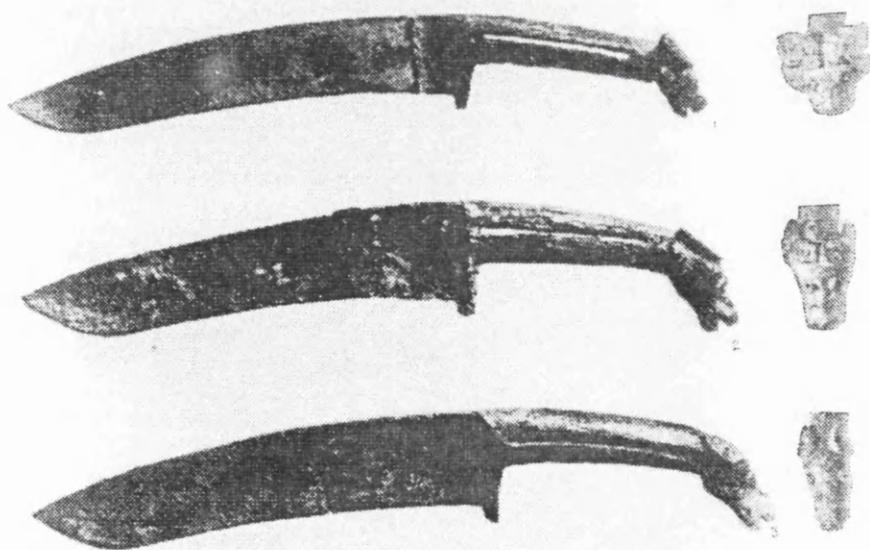
<sup>40</sup> Beijing 1981a, Pl.291, and KGTX 1958.10, p.56.

<sup>41</sup> Fuhao's tomb is dated to period II in Chapter III.

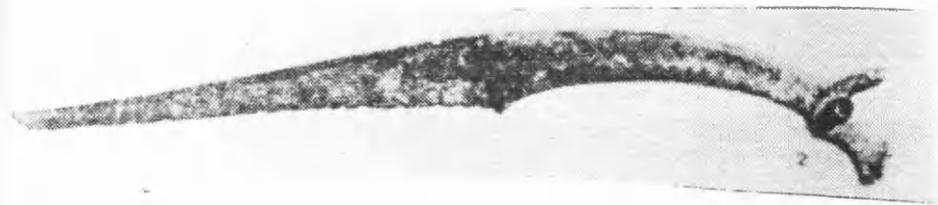
Yinxu Western Sector tomb 1713 includes bronze vessels such as the *li*-type bulbous leg *jia*, and *gu*-type *zun* which are similar to early Western Zhou forms, hence the tomb is dated between the Yinxu third and fourth periods, in accord with Yang Xizhang's dating. In addition, the other tombs all lack objects of Yinxu period I, hence the dating of these weapons to Yinxu period II through IV.



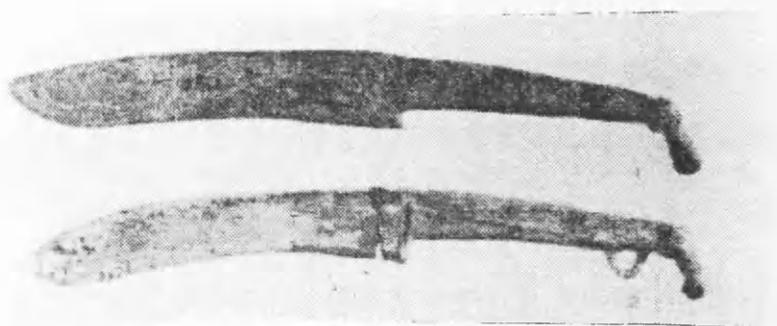
7 Krasnoyan Topanovo. Wu An 1984, p.47, fig.1:5,6.



3-20 Curved-back knives from Xiaotun M20, length 32 cm, 31.4 cm, 30.1 cm. Shi Zhangru 1970, pl. CXXXVI.

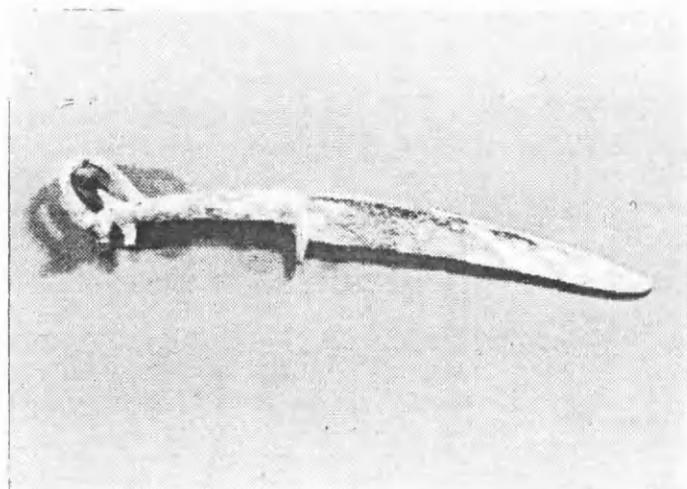


1 Curved-back knife from M1537 Xibeigang, length 19.2 cm. Gao Quxun 1967, p.376, pl.7:2.

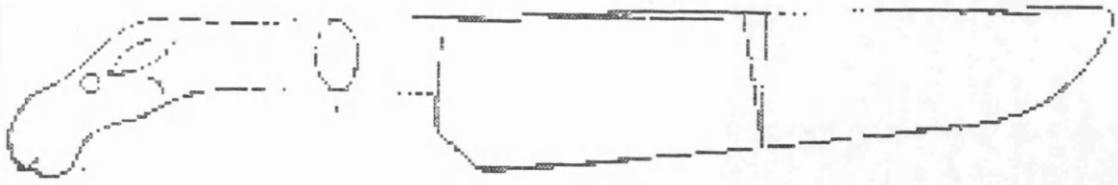


2 Curved-back knife from M1693 Xibeigang, length 18 cm. Gao Quxun 1967, pl.2:2.

3 Curved-back knife from M1008 Xibeigang, length 17.8 cm. Gao Quxun 1967, pl.2:1.



4 Curved-back knife from M5 Xiaotun, length 36.2 cm. Beijing 1980f, pl.66:1.



5 Curved-back knife from M 1713 Yinxu western sector, length 30.5 cm. KG 1986.8, p.709.  
fig.7:5.

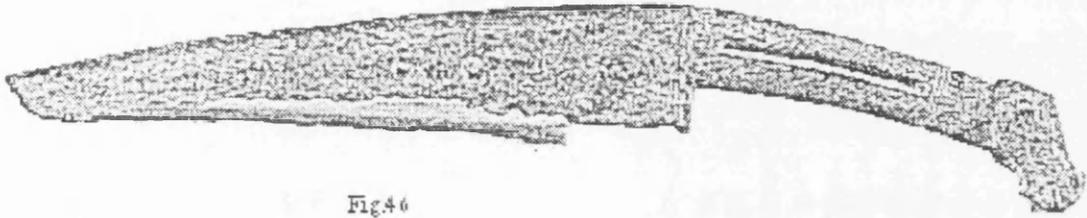
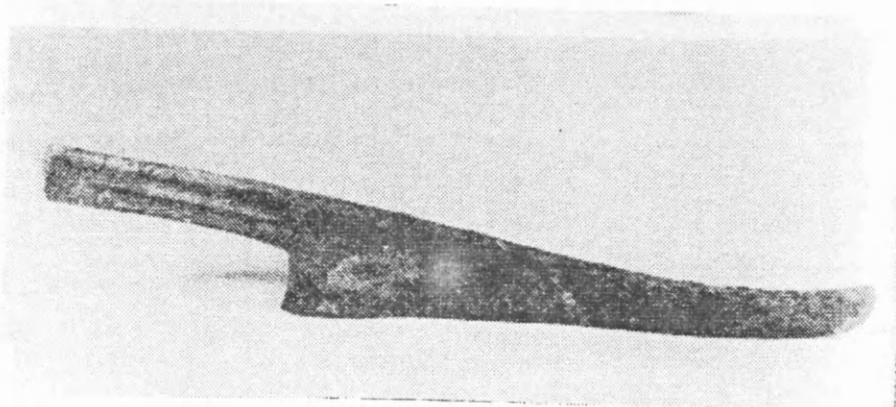


Fig.46

6 Curved-back knife from M51 Dasikongcun Anyang, length 32.7 cm. Beijing 1981a, pl.291.



7 Erligang cultural period straight-grip pommel-less curved-back knife, length 27.5 cm.  
Beijing 1981a, pl.97.

Table 4:3 Excavated Anyang curved-back knife

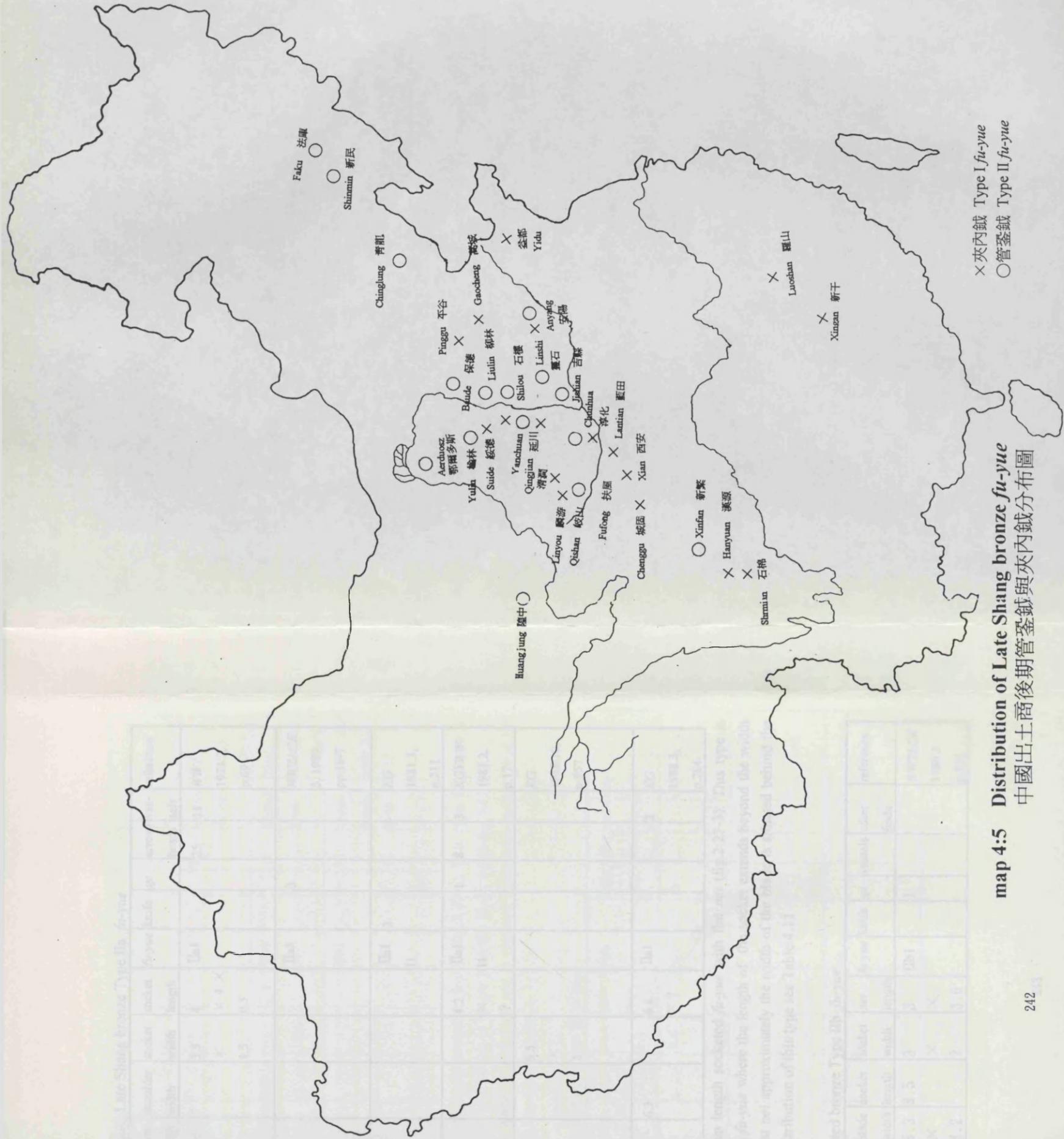
No.	Tomb	Length	Handle length	blade width	thickness	weight	pommel decor
R1858	Xiaotun M20	32cm	8.4cm	4.2cm	0.9cm	382.0g	horse
			Shi Zhangru 1970, p.126				
R1859	Xiaotun M20	31.4cm	8cm	4.4cm	0.9cm	371.5g	
			Shi Zhangru 1970, p.139				
R1857	Xiaotun M20	30.1cm	7.6cm	3.5cm	0.75cm	303.9g	ram
			Shi Zhangru 1970, p140				
R690	Xiaotun M5	36.2cm				450g	animal <sup>42</sup>
			Beijing 1980f,p.103				
	Western Sector of Yinxu M1713	30.5cm	12.2cm				
			KG 1986,8,p.709				
R1961	HPK M1537	18.2cm				43g	
			Gao Quxun 1967a,p.368				
R9306	HPK M1693	19.2cm				38g	
			Guo Quxun 1967a,p.372				
R8964	HPK M1008	17.8cm				46g	
			Guo Quxun 1967a,p.375				
	Dasikong M51	32.7cm					
			KGTX 1958,10,pl3:18				

#### 4.1.3. Socketed *fu-yue*: distribution (map 4:5)

The socketed *fu-yue* was mostly restricted to the North. There are four types, depending on the length of the tubular shaft-ring in relation to the width of the blade and shafting-plate.

Type II a: *fu-yue* with short socket and flat *nei* (fig.2:27-2): This type is characterized as a *fu-yue* where the length of the socket is shorter than the width of the blade. A flat *nei* approximately the width of the socket is situated behind the socket. For the distribution of this type see Table 4:4.

<sup>42</sup> The archaeological report considered the pommel decor of the curved-back knife at Xiaotun M5 to be the head of a dragon while (Beijing 1980f.p.103), Lin Yun considered it to be the head of a ram(Lin Yun 1987, pp.129-136).



× 夾內鉞 Type I fu-yue  
 ○ 管鑿鉞 Type II fu-yue

map 4:5 Distribution of Late Shang bronze 與夾內鉞分布圖  
 中國出土商後期管鑿鉞與夾內鉞分布圖

Table 4:4 Excavated Late Shang bronze Type IIa *fu-yue*

Site	length	blade width	shoulder width	socket width	socket length	<i>fu-yue</i>	knife	<i>ge</i>	arrow- heads	ves- sels	reference
Yidie Huiping, Shilou, Shanxi	17.8	10.5	7	3.5 × 1.5	4 × 4 × 0.5	IIa1			25	11	WW 1974.2, p.69
Jingjiecun M3, Lingshi, Shanxi	16.5 16.5					IIa3		3			WWZLCK 3. 1989 pp.46-7
Gaohong Liuling, Shanxi	15.7	7.5				IIa1 I1	3				KG 1981.3, p.211
Laoniupo Xi'an, Shaanxi	19.4	13 × 9.5			4.2 × ?	IIa1 I1		1	8	3	KGYYW 1981.2, p.17
Zhong jiao chang Shaanxi (collect)	18	7		3.5 × 2							KG 1988.10, p.957
Sishui, Shandong	16	8.3	6.3		6.8 × ?	IIa1				2	KG 1988.3, p.284

Type II b: Medium length socketed *fu-yue* with flat *nei* (fig.2:27-3): This type is characterized as a *fu-yue* where the length of the socket extends beyond the width of the blade. A flat *nei* approximately the width of the blade is situated behind the socket. For the distribution of this type see Table 4:11

Table 4:5 Excavated bronze Type IIb *fu-yue*

site	length	blade width	socket length	socket width	<i>nei</i> length	<i>fu-yue</i>	knife	<i>ge</i>	vessels	other finds	reference
Yidie, Shilou, Shanxi	13.6	8.3 × 8.2	8.5	3 × 2	3 × 3.6	IIb1		1			WWZLCK 1980 3 p.202

Gaohong, Liulin, Shanxi	13.7	7 × 4.8				IIb1	1 3				KG 1981.3 p.211
Linzheyu, Baode, Shanxi	16.8 17.1					IIb2		7	chariot fittings	WW 1972.4 pp.62-3	
Ordos (E.320)	12.7	7.5 × 3.1	8.8		2.7	IIb1			bladed tang	Tian Guangjin 1986 p.51	
Taohua zhuang, Luliang, Shilou, Shanxi	11.8	6.3				IIb1	1	16	arrow heads gold	WW 1960.7 p.52	

Type II c: Medium length socketed *fu-yue* (fig.2:27-4) This type of *fu-yue* is characterized by a socket which is longer than the blade width but which does not extend above the blade. A columnar *nei* is situated behind the socket. For the distribution of this type see Table 4:6.

Table 4:6 Excavated bronze Type IIc *fu-yue*.

Site	<i>fu</i> length	blade width	socket length	<i>fu-yue</i>	bow shaped implement	knife	dagger	snake, ring <i>shao</i>	vessels	other finds	reference
Chaodaogou, Qinglong Hebei	12.5		8	IIc1		II3	II			1	KG 1962.12, pp.644-5
Qinhe beipocun Chunhua, Shanxi	19.2	3.5									KGYYW 1988.5, p.22, fig.13
Heidou zui M2, Chunhua, Shanxi	2.2		4.4	IIc1 II d1 I 1	1	III1		1	1	3	KGYYW 1986.5, p.22, fig.12

Heidou zui M3, Chunhua, Shanxi	18.3		4.5	IIc1					1	arrow heads21	KG 1986.5, pp.16-7, fig.5
Shijia Chunhua, Shanxi	16.5		4	IIa1							KG 1986.5, p.21,fig.6
Xingcheng Yanghe Liaoning	14.4	4	6 ?	IIc1		II3				1	KG 1978.6, p.387
Faku Liuwan Liaoning	16.3	4.4	6.7	IIc1						collected	KG 1989.12, p.1085
Xinmin Dahong qi, Liaoning	?	?	?	IIc3							WW 1977.12, p.27

Type II d: long length socketed *fu yue* (fig 2:27-5). This type of *fu-yue* is characterized by a socket which is over twice as long as the blade width and which extends both above and below the blade. For the distribution of this type see Table 4:7.

Table 4:7 Excavated bronze Type II d *fu-yue*.

Site	<i>fu</i> length	blade width	socket length	<i>fu-yue</i>	knife	dagger	snake, ring <i>shao</i>	other finds	reference
Caojiayuan, Shilou, Shanxi	9.5	5.5	18.7	II d1		II 1	1	1	WW 1981,8 p. 50
Chengguan, Jixian, Shanxi	14.2	5	15.8	II d1		II 1	2	2	KG 1985,9 pp.848-9
Wang jiazui, Qishan, Shanxi	10.5	3.8	~ 1.5	II d1 II b1	III 1				Beijing 1979b pl13

Yanchuan Shaodaohu Qutoucun, Shanxi	10.6	7	15.3	IId1		II 1		1	KGYYW 1988.4 p.103
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In contrast, the curved-back knives were found in the northern plains as described above such as Qinglong, Chaodaogou, Hebei; Chujiayu and Houlanjiagou, Shanxi; and Suide, Shaanxi. Houlanjiagou has been dated to late Yinxu period I or period II, Suide has been dated to Yinxu period III (table 4:8).<sup>43</sup>

Table 4:8 Dating of sites with curved-back knives, according to different scholars.

Dating	Tao Zhenggang	Dating	Zou Heng	Chen Zhida, Zheng Zhenxiang	Zhang Changshou
Early: Pangeng to Wuding	Changzi Beiguan	Erligang to Yinxu I		Changzi Beiguan <sup>1</sup> Shilou Houlanjiagou <sup>2</sup>	Shilou Xiazhuang Shilou Houlanjiagou
Middle: Wuding to Kangding	Lingshi Jingjie Shilou Yidie Shilou Erlangpo	Yinxu II	Meiquanpocun <sup>3</sup> Niuziping <sup>4</sup> Shilou Houlanjiagou <sup>5</sup> Shilou Hejiaping <sup>6</sup> Shilou Xiaxinjiao <sup>7</sup> Shilou Taohuazhuang <sup>8</sup>	Shilou Taohuazhuang Shilou Erlangpo <sup>9</sup> Shilou Chujiayu <sup>10</sup> Shilou Xiaxinjiao Yangquanpo <sup>11</sup> Baode Linzheyu (portion belong to III)	Shilou Taohuazhuang Shilou Erlangpo
Late: Wuyi to Dixin	Shilou Taohuazhuang Baode Fuzheyu	Yinxu III	Baode Linzheyu <sup>12</sup> Shilou Yidie <sup>13</sup>		Suide Yantoucun Baode Linzheyu

<sup>43</sup> (table 4:14) citation of different scholars datings: Zou Heng, 1980 Beijing 1985a, pp.66-67. Chang Changshou, , KGXB 1979, 3, pp. 290-291. Tao Zhenggang 1983, pp.56-64.

The references to sites in this table are as follows:

- |               |                |
|---------------|----------------|
| 1. WWZLCK 3   | 2. WW 1962:4/5 |
| 3. WW 1974:4  | 4. WW 1972:4   |
| 5. WW 1962:4  | 6. WW 1959:3   |
| 7. KG 1977:5  | 8. WW 1960:7   |
| 9. WW 1958:1  | 10. WW 1981:8  |
| 11. WW 1972:4 | 12. WW 1972:4  |
| 13. KG 1972:4 | 14. WW 1974:2  |
| 15. WWZLCK 3  |                |

		Yinxu IV	Shilou Erlangpo Shilou Yidie <sup>14</sup> Shilou Taohuazhuang	Lingshi Jianjie	*
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It is important to note that the dating of Shanxi/Shaanxi region is achieved through a comparison of ritual vessels with their Central Plains counterparts. Although some scholars would place Houlanjiagou in the later half of period I at Yinxu, others place it in period II. From present archaeological data, the dates of the curved-back knife, which appears in both regions, could be similar. In terms of time period, there is no defining evidence that the north influenced Yinxu. Of course we cannot exclude the following possibilities: both areas were in close contact, when one area developed a new form, the other area would quickly follow. Therefore, the present dating is too general to determine which area was the originator. It is also possible that there was a simultaneous development in both areas.

In terms of quantities, the number of curved-back knives appearing at Yinxu is very small. The archetypal knife which appears at Anyang can be divided into two variations: the first is the Type I knife (fig.3:44), with a wavy back and a blade approximately 40 to 50 cm in length. The blade tip is pointed and arches upwards. This type of knife belongs to the short grip variety, requiring the addition of a wooden handle in order to grasp it. The second variation is the curved-back knife (fig.3:45),<sup>44</sup> which has a blade over ten centimetres in length. The blade is flat and thin, and the pommel is fashioned into a ring. Because this type is so thin and short it is excluded from the weapons in this study. The excavation of Fu Hao's tomb, at Yinxu as an example of a undisturbed tomb, which yielded a total of 23 knives. There were twelve examples of the wavy-back knife, ten examples of the Type III knife, and only one example of Type II, the animal-pommel curved-back knife.<sup>45</sup> Among the many tombs that have been excavated at Yinxu only nine tombs have yielded curved-back knives; and among the many knives found at Yinxu, there are no more than nine examples of this type. It is obvious that this type of knife is less common at Anyang, in comparison to the 16 examples found in the north.

Returning to a discussion of local origins, the above two types of knife at Yinxu, from Central Plains archaeological data, can be traced back to the Erligang

<sup>44</sup> For specific discussions on the Yinxu knife blades see Li Chi 1949b; Chen Zhenzhong, 1985, pp.73-78; Li Weiming, 1988, pp. 42-44.

<sup>45</sup> Beijing 1980f, pp.101-102.

cultural period (fig.4:27)<sup>46</sup>. On the contrary, it is difficult to propose an origin for Type II, the curved-back knife. In other words, the animal-pommel curved-back knife appeared almost suddenly at Yinxu around the Wu Ding period in Yinxu period II, and this sudden change cannot be accounted for by the internal development of Yinxu weapons, because of its scarcity at Yinxu. In contrast, at about the same time or slightly prior to this the curved-back knife appeared in the north in an assemblage of typical Yinxu bronze forms including ritual vessels and *ge*. The assemblage also included northern weapons, not common at Yinxu.<sup>47</sup> We can be certain from these finds, that there was rather frequent contact between the north and Yinxu, and that both sides became familiar with the different traditions. It is not impossible that Yinxu selectively absorbed some of the northern traditions, and that the animal-pommel curved-back knife was among them.<sup>48</sup> As Yinxu accounts for only a small percentage of these finds, it is difficult to trace their origin.

The particular style of the curved-back knife type, specifically the rattle-pommel variation, is intimately related to the rattle-pommel curved-back curved dagger, the latter definitely a northern style of weapon.

However, the curved-back knife, unlike the curved-back curved dagger which is mainly distributed in the north, has been found to a limited degree at Yinxu. Its appearance in the north differs from that of the curved dagger which carries a very visible northern style. The curved daggers in northern tombs of the late Shang are often accompanied by the socketed *fu*-axe which is an archetypal northern style appearing in tombs containing strictly weapon assemblages (table 4:1). The context in which this type was found in the north is somewhat different from that found in Yinxu.

Northern finds of the curved-back knife (table 4:2), while appearing in tombs of strictly weapon assemblages characteristic of the north, such as the cache at Chaodaogou, Qinglong, Hebei, and the tomb at Yanghe, Xingcheng, Liaoning, finds which also contained mainly curved-back knives, socketed *fu*, and curved-daggers,

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<sup>46</sup> The straight-grip pommel-less wavy-back knives have been found in the following excavations: KGXB 1957.1, p.59, Pl.5:8.; Beijing 1981a, Pl.97; WW 1983.3, p.74, fig.23:4.; According to Li Weiming an example of a straight-grip ring-pommel wavy-back knife was found at Xinzheng Wangjinglou, (see the section on Shang knives *Zhongyuan Wenwu*, 1981, no.6, p.556.) The report is rather brief, and the piece is not discussed, but perhaps this type had already appeared by the early Shang period, although it was probably not very common. Further research is necessary before more can be said.

<sup>47</sup> Lin Yun, 1987, pp.129-155.

<sup>48</sup> Li Chi in his pictorial description of the the development of the knives from Houjiazhuang at Xiaotun, assumes the animal-pommel curved-back knife to have developed out of the Yinxu knife forms. In arriving at these conclusions, he takes mainly into consideration Anyang alone, this is another opinion. Li Chi, op.cit., p.397.

do include objects which carry a distinct Central Plains style. This phenomenon is particularly found in northern Shaanxi and the northwestern part of Shanxi, where the curved-back knife is often found together with the Central Plains *ge* or *mao* spearhead and not with the socketed *fu*-axe. Examples include a *ge* from Houlanjiagou, Shilou, three *ge* from Chujiayu, Shilou, Shanxi, a single *ge* from the cache at Suide Yantoucun Shaanxi, and twelve *ge* and nineteen *mao* from tomb 2, Jingjie, Lingshi, Shaanxi. Although the cache at Suide Yantoucun, Shaanxi included *fu-yue*, these were not of the socketed form, but instead the YinXu style tanged axe. These examples also include with them finds of ritual vessels. Five vessels were excavated from Houlanjiagou, one piece from Chujiayu, seven vessels from Suide Yantoucun, and as many as eighteen vessels from tomb no. 2 at Jingjiecun, Lingshi. Many of the vessels have inscriptions. The *nei* on the socketed *ge* from Chujiayu was inscribed with the character  $\psi$ . This character also appears on 70 socketed *ge* from Xibeigang no. 1004 tomb.<sup>49</sup> The two *ding*, the *gui*, and the *lei* from Jingjiecun, Lingshi are inscribed with the character  $\psi$ . This clan appears to be intimately related to the Shang, perhaps a *fang* state allied with the Shang.<sup>50</sup> Of the four areas, three are in northern Shanxi, and include finds of the bow-shaped implement. Whether or not the bow-shaped implement is of northern character is an interesting subject for discussion, which this paper will touch on below.

*Alise*

#### 4.1.4. The problem of the bow-shaped implement (map 4.6)

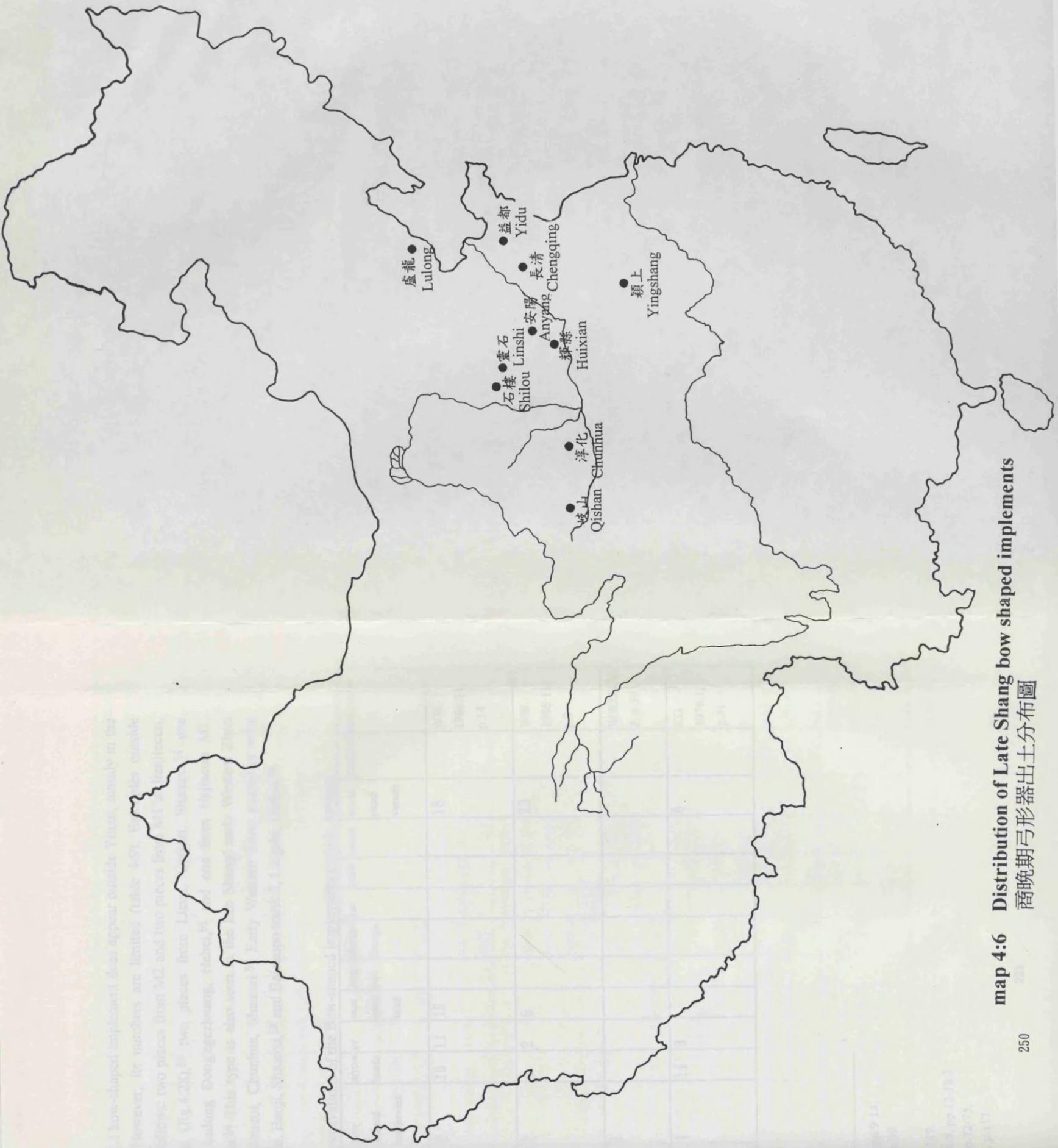
Among other bronze weapon types which definitely belong to the Northern Complex, it is more difficult to ascertain whether the bow-shaped implement is purely Northern Complex. Regarding the question of its origin, scholars have taken opposing sides. The Soviet archaeologist C.B. Kislev in 1960 pointed out that among those tombs of the Karasuk culture, bronze knives and bronze bow-shaped implements are found at the waist of the skeleton, and stated that "its style is similar to that of Anyang", and is the result of influence of the Shang culture.<sup>51</sup> In 1987, Lin Yun re-examined this theory of "YinXu influence" and regarded the rattle-like ends of the bow-shaped implements to be uncharacteristic of the Shang style reflecting a northern bronze style.<sup>52</sup> The origin of the bow-shaped implement and its association to a particular culture can be analyzed by examining two types of the bow-shaped implement, as well as referring to accumulated archaeological data.

<sup>49</sup> Gao Quxun 1967b, pp.355-381; Gao Quxun 1970, pl.136.

<sup>50</sup> Li Boqian, 1988, p.24.

<sup>51</sup> C.B. Kislev, KG 1960.2, p.53.

<sup>52</sup> Lin Yun., 1987, p.144-146.



map 4:6 Distribution of Late Shang bow shaped implements  
商晚期弓形器出土分布圖

The Type I bow-shaped implement does appear outside Yinxi, mainly in the northern area. However, its numbers are limited (table 4:9). Examples outside Anyang are as follows: two pieces from M2 and two pieces from M1 at Jianjiacun, Lingshi, Shanxi (fig.4:28),<sup>53</sup> two pieces from Licun, Qishan, Shaanxi,<sup>54</sup> one example from Lulong Dong'egezhuang, Hebei,<sup>55</sup> and one from Hejiacun M1, Qishan, Shaanxi.<sup>56</sup> This type is also seen in the late Shang/ early Western Zhou tomb 2 at Heidoucu, Chunhua, Shaanxi.<sup>57</sup> Early Western Zhou examples were found at Yuquan, Baoji, Shaanxi,<sup>58</sup> and Baicaopo tomb 2, Lingshi, Gansu.<sup>59</sup>

Table 4:9: The excavations of the Bow-shaped implements outside Anyang

Location	length	bow shaped implement	arrow heads	ge	mao spear head	ling bell	chariot fittings	yue	knife	sword	no. of ritual vessels	position	reference
Jingjiacun M2 Lingshi, Shanxi	34.1	2	16	11	19						18		WW 1986:11, p.14
Jingjiacun M1, Lingshi, Shanxi	34.8	2	4	2	6						23		WW 1986:11, p.9
Licun Qishan, Shanxi	35	1											WWZLCK 2, p.39
Hejiacun M1, Qishan, Shanxi	34	1	11	3							6		KG 1976:1, p.31

<sup>53</sup> WW 1986. 11, pp.9-14.

<sup>54</sup> WWZLCK 2, p.39.

<sup>55</sup> KG, 1977, p.2.

<sup>56</sup> KG, 1976.4, p.117.

<sup>57</sup> KGYWW 1986.5, pp.12-18.2.

<sup>58</sup> WW 1975.3, pp.72-75.

<sup>59</sup> KGXB 1977.2, p.117.

Location	length	bow shaped implement	arrow heads	ge	mao spear head	ling bell	chariot fittings	yue	knife	sword	no. of ritual vessels	position	reference
Yuquan, Baoji, Shanxi	33.3	1		61			✓	1			4		WW 1975:3, p.72-5
Heidouzui M2, Chunhua, Shanxi	33.5	1					✓	1			1		KGYYW 1986:5, p.12-8
Yuguo M7, Baoji, Shanxi	36.5			3		9	✓	1			9		Beijing 1988a, p.
same as above							there are clear traces of the binding on both ends					Beijing 1988a	
same as above							the bow-shape implement is placed at the head of the occupant between the inner and outer coffin					Beijing 1988a	
Beilu M52, Fufeng, Shanxi	36.5						there are clear traces of the binding on both ends				feet of the skeleton	KGYYW 1985:1 p.99	
Baifu M2, Changping, Beijing	37.5			16	1		✓		2	2	2		KG 1976:4, p.117
Baifu M3, Changping, Beijing	36			9	2		✓	2		5	2	tools	Beijing 1988a
Lulong Dongyu gezhuang, Hebei	34.5	1									1		Beijing 1980a

Baicaopo M2 Lingtai, Gansu	1	97	21			✓			2	4		KGXB 1977:2, p.117
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A comparison of Shaanxi and Shanxi bow-shaped implements with those found at Anyang shows them to be of the same basic form. Those from both areas are dated to the late Shang period, but in terms of numbers this form is much more common at Anyang. In both regions the bow-shaped implement is found in grave sites accompanied by Anyang-style bronze ritual vessels. In terms of decoration, the bow-shaped implements are embellished on the ends with either rattles or with animal heads. The presence of animal- and rattle-pommel curved daggers and knives in the north indicates that these characteristics are those of the northern bronze weapons. However, from quantity and period, there is a lack of persuasiveness in the argument to say that the origin of the bow-shaped implement lies in the Shaanxi, Shanxi region. Yinxu's overpowering influence cannot be ignored. In other words, from present material, the origin of the bow-shaped implement is unclear, while it is present in both the Anyang and Shaanxi/Shanxi regions. Using the bow-shaped implement as an example, distinguishing the Yinxu area as separate from the Shaanxi/Shanxi regions is less effective than to group them together as a single area, which contrasts to the more distant southern Siberian region, for the southern Siberian region form of bow-shaped implement is quite distinct from that of the Shaanxi/Shanxi and the Anyang region.<sup>60</sup> From the distinction in form and context, it is likely that the bow-shaped implement served a different purpose in this region.

In the north, there are examples where the type I bow-shaped implement is found together with arrows or horse and chariot fittings, but the examples are few. Among the four sites where late Shang bow-shaped implements have been found, namely, Dong'egezhuang, Lulong, Hebei, and Licun, Qishan, there are no detailed reports on tombs which contained bow-shaped implements. According to the archaeological report, from the 27 tombs excavated at Licun no arrowheads were excavated, while horse and chariot fittings were occasionally found. It is impossible to say in certain whether or not the bow-shaped implement was excavated together with the horse and chariot fittings. The bow-shaped implements found at Jianjiecun tomb 2, Lingshi, Shanxi and Hejiacun tomb 1, Qishan were accompanied respectively by 16 and 11 arrowheads. The bow-shaped implements found in the

<sup>60</sup> Beijing 1980a, p.36, fig. 80.

late Shang/early Western Zhou tomb M2 at Heidoucui, Chunhua, and the early Western Zhou tomb at Yuzhuan, Baoji were both accompanied by horse and chariot fittings. In the tomb M2 at Baicaopo, Lingtai, Gansu, the bow-shaped implement was found together with arrowheads. Those bow-shaped implements found only with horse and chariot fittings are always accompanied by other weapons. In other words, by analysis of the accompanying objects at Yinxu and elsewhere, it is very probable that the bow-shaped implement is a weapon related to the bow, and a smaller portion of evidence points to its relationship to horse tack or chariot fittings. Although Shi Zhangru and Tang Lan have differing opinions in regards to the bow-shaped implement and corresponding literary evidence, both agree that this object is connected with the bow.<sup>61</sup> The general characteristics of the bow-shaped implement and the burial context in which it is found, verify this theory. There are a few scholars who are of the opinion that the bow-shaped implement is related to the horse tack and chariot fittings. The bow shaped implement has been supposed to serve for handling the rope on the horse rather than bow.<sup>62</sup> The most persuasive evidence is the fact that the bow-shaped implement has been found at the waist of the skeleton of the tomb occupant in M20 of Xiaotun. However, from examples at Yinxu, this is not necessarily the case. (see table 3:21).

The characteristics of the second type of the bow-shaped implement, as found in Siberia mark its distinction from the first type. The body is flat, differing from the bow-shaped form of the first type which could be bound to the bow. This flat body, as verified in the studies done by S.V. Kiselev and Lin Yun, is the characteristic form of the bow-shaped implement found in the Minussink Basin in southern Siberia. This type of bow-shaped implement, as seen on the engraved, is found at the waist of the human remains,<sup>63</sup> and was also placed by the waist of the skeleton in the Siberian tombs.<sup>64</sup> Several of the flat forms have two small semi-circular loops on the underside. These loops perhaps allowed them to be easily carried by the northern nomadic people. Lin Yun has proposed that these implements were used as guides for reins. Further evidence is need to determine whether the southern Siberian bow-shaped implement also carries the small loops. Nevertheless, the bow-shaped implements that have been found within China differ basically in form from this second type. These two types of the bow-shaped implement appear to differ in certain details of form, and possibly to indicate two different functions of the bow-shaped implement.

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<sup>61</sup> Tang Lan KG 1972.3, pp.178-184.

<sup>62</sup> Sun Ji, 1993, pp.62-68.

<sup>63</sup> S.V. Kiselev 1960.2, p.53.

<sup>64</sup> Lin Yun 1987, p.144.

#### 4.1.5. Uniqueness of the burial assemblage

The content and context of the bronze weapons in the north are of a very different character from those of Anyang. The tombs at Chengguan, Jixian<sup>65</sup>, and Gaohong, Liulin, in Shanxi can serve as paradigms for this type of tomb.<sup>66</sup>

A tomb at Shangdongcun, Chengguan, Jixian is oriented north to south, length 1.08 m and width 0.51 m.(fig.4:29) The tomb is small. The southern part of the tomb has been destroyed by erosion, but the northern section remains intact. A Type II socketed *fu*-axe was placed on the right side of the body with the blade facing outward. A rattle-pommel knife was found near the head of the body with the blade turned towards the feet. It is a common occurrence to find weapons placed near the body of the tomb occupant in the tombs of the Anyang area, but most are *ge* or *mao*-spearheads. This tomb contained neither *ge* nor *mao*. Likewise, socketed *fu*-axes and rattle-pommel knives occur only rarely in the Anyang area. This burial custom of carrying a rattle-pommel knife in the left hand and a socketed *fu*-axe in the right is unique.

The tomb at Gaohong, Liulin, Shanxi was found accidentally by farmers, and there was no systematic excavation of the tomb. According to local accounts the find included a single skeleton and was most likely a tomb. Most of the contents were bronze weapons, but these differed from the weapons typically found in the Anyang tombs, in which both *ge* and *mao* were placed at the side of the tomb occupant. This tomb contained instead a single rattle-pommel knife, two socketed *yue*-axes, a spearhead, and three small knives, as well as a bronze helmet and a bronze scabbard. By local report, the helmet was found by the head of the body. This was very likely the tomb of a warrior, but the assemblage of weapons differed considerably from those found at Anyang.

Other examples are the Type IId long socketed *fu*-axe and Type III rattle-pommel curved dagger which appeared together in a find at Xiaodaohe, Yanchuan, Shaanxi.<sup>67</sup> The tomb at Caojiahuan, Shilou, in Shanxi also yielded a Type IId long socketed *fu*-axe and a Type III rattle-pommel curved dagger.<sup>68</sup> These are examples of northern weapons excavated in northern China which are not seen at Anyang.

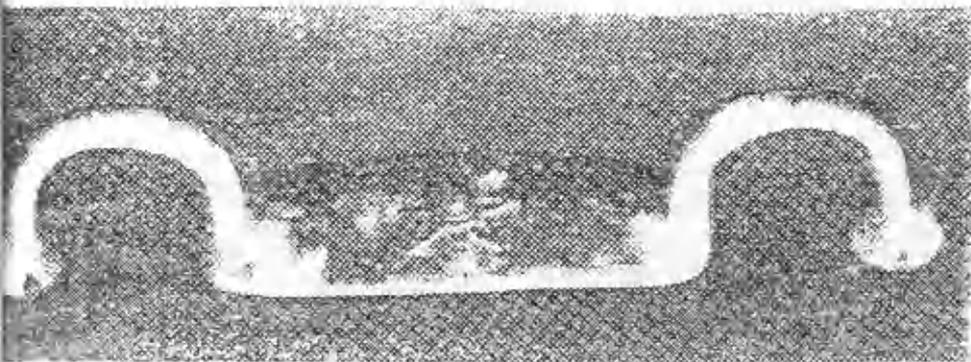
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<sup>65</sup> KG 1985.9, p.849.

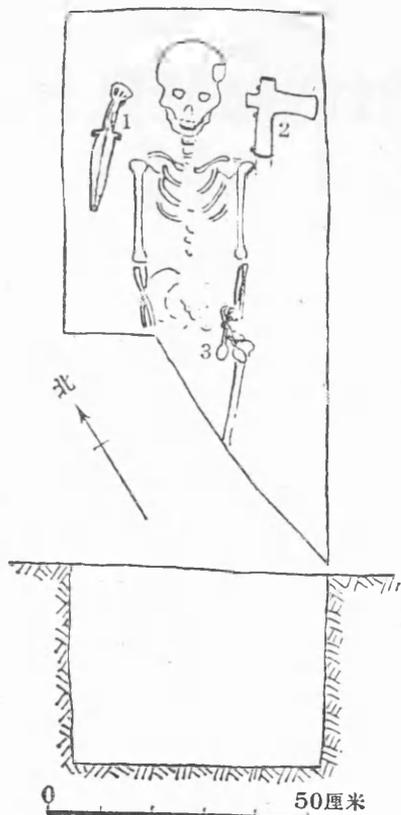
<sup>66</sup> KG 1981.3, pp.211-212.

<sup>67</sup> KGYWW 1988.4, p.103.

<sup>68</sup> WW 1981.8, p.50.



8 Bow shaped implement, M2 Jingjiacun Lingshi Shanxi, length 34.1 cm. WW 1986.11, p.15, fig.37.



图二 上东村墓葬平、剖面图

1. 剑 2 斧 3. 勾

9 Shangdongcun Jixian Chengguan, length 1.08 m, width 0.51 m. KG1985.9, p.848, fig.2.

## 4.2. South: bronze weapons from the Xin'gan tomb

Late Shang bronze weapons were distributed over southern China including the present provinces of Jiangxi,<sup>69</sup>(map 4:7) Jiangsu,<sup>70</sup> Anhui,<sup>71</sup> Hunan, and Guangxi.<sup>72</sup> However, most of the excavations in south China were on a small scale except for the one at Xin'gan in Jiangxi. The complexity of Late Shang bronze weapons in the South has been mainly revealed by the excavations at this site. Therefore, the discussion of the Late Shang bronze weapons in the South will focus on this archaeological site.

In 1989, as the result of a chance find, 273 bronze weapons along with 59 bronze vessels as well as other burial objects were excavated at Xin'gan in Jiangxi.

The tomb lay beneath a sandy mound on the east side of the Gan River. Although the wood of tomb chamber and coffin had decayed away, traces of a lacquered tomb chamber and coffin could be detected. It was a rectangular pit with the tomb chamber 3.6 metres wide, 8.22 metres long, oriented at 271°. The coffin is rectangular: 0.85 metres wide, 2.34 metres long, oriented at 275°.

Presently, the Xin'gan tomb with its great amount of bronze weapons and vessels, jades, and pottery, as well as the large size of tomb, stands unique among the southern burials. In the south, no other tomb can compete with the wealth found in the Xin'gan tomb. Before the Xin'gan excavations, most of the southern burials were small deposits of only one or a few items.

Among Shang burials, the inventory of the Xin'gan tomb is second only to that of the Fu Hao tomb.<sup>73</sup> However, it is worth noting that at the Xin'gan tomb, the large amount of the bronze weapons, a total of 273 pieces, greatly surpassed that of the bronze vessels, only 59 pieces. The inventory of bronze weapons at Xin'gan are as listed below:

<i>ge</i>	<i>mao</i>	<i>yue</i>	Knife	Sword	<i>ji</i>	Arrow-heads	Helmet	Ferrule
(II) 24	(V) 7	(I) 2	(I) 13	(I) 2	(II) 3	134		
(III) 4	(II) 28	(III) 4	(II) 2				1	19
(IV) 3								

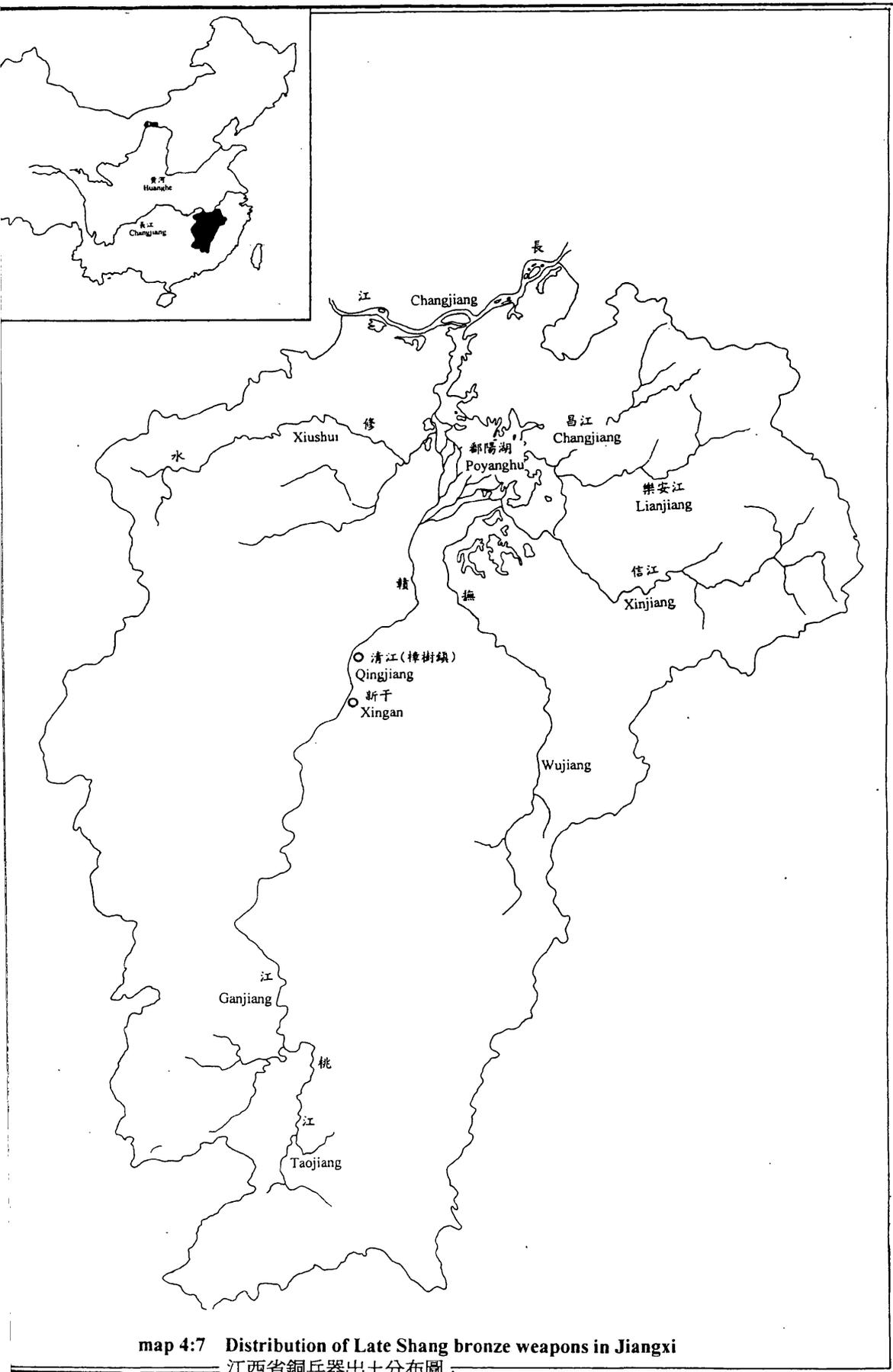
<sup>69</sup> WW 1975.7, pp.51-57; Beijing 1979a, pp.240-251; WW1991.10, pp1-26.

<sup>70</sup> KG1972.3, pp.71-79; K&YWW 1985.5, pp.90-101.

<sup>71</sup> KG1977.3, pp166-168; 1984.12, pp1132-1133; WW 1985.10, pp.36-41.

<sup>72</sup> Beijing 1979a, p.341.

<sup>73</sup> Robert W. Bagley, the international colloquium on Chinese art history. Antiquities, part 1 1992,p219; Zou Heng, 1990; Peng Shifan, 1992; Zhu Aiqing, 1991.



map 4:7 Distribution of Late Shang bronze weapons in Jiangxi

江西省銅兵器出土分布圖

#### 4.2.1. Analysis of styles

The wealth of bronze weapons at the Xin'gan tomb reveals a strong indigenous style with either particular kinds or shapes of bronze weapons in the burial system, or indigenous motifs and forms. However in this burial system the principal kinds and forms of bronze weapons parallel those of the Anyang area. Moreover, a few styles of bronze weapons parallel those from Chenggu. The style of the bronze weapons from the Xin'gan tomb will be analyzed from these three aspects as follows:

The bronze weapons from the Xin'gan tomb reveal a strong indigenous style in the following two ways: assemblage and forms, and decoration.

#### 4.2.2. Assemblage and forms

The assemblage of bronze weapons in the Xin'gan tomb includes not only the various types of the bronze weapons found in the Anyang area, with the exception of the bow-shaped implement, but also some types which were rare at Anyang area such as the hooked *ji*, sword and socketed *yue*. These three weapons, together with *mao* and *ge* will be discussed here.

The weapons of the Xin'gan tomb display their indigenous style in three areas: Firstly, from the Xin'gan tomb it is apparent that not only was the *ge*, the principal weapon of the Anyang tombs, important in this tomb but its function was embellished upon with the development of the hooked *ji*. The hooked *ji* (fig. 4:30) found at the Xin'gan tomb is presently unknown among weapons from the Anyang area. Counterpoised to the suspended *hu* of the Type IV *ge*, a backward curved part was added to the top of the *hu* for hooking. The Xin'gan hooked *ji* with its cross-like form resembles the *ji* of the Western Zhou Period. They all consisted of the *ge* with suspended *hu* of Type IV and *mao*-spearhead. However, there are several differences between them. The spearhead on the Xin'gan *ji* was hooked and was thus named "the hooked *ji*".<sup>74</sup> It possibly developed from the Type IV *ge*. The hooked *ji* may have evolved as an experiment for the expansion of the function of the Type IV *ge*. Only one hooked *ji* was excavated from the Xin'gan tomb.<sup>75</sup> However, since it was put inside the coffin of this tomb, it must have been considered important.

Secondly, not only was the sword an important bronze weapon in the Xin'gan tomb, but a new form of sword was developed here. Very few swords of the Late Shang period have been excavated at Anyang. In contrast, three swords were

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<sup>74</sup> WW 1991:10, p.11.

<sup>75</sup> WW 1991:10, p.30.

excavated at the Xin'gan tomb, indicating the importance of the sword among the bronze weapons in this tomb. The forms of the three swords (fig. 4:31-1; fig. 4:31-2) found in the Xin'gan tomb are unique. They have a flat grip without a pommel. They are different from both the sword with a hollow cylindrical grip from the Anyang area (fig. 2:33-1) and from the sword with the pommeled flat grip of the North (fig. 4:4). It seems that there were three different sword forms from the three different regions. At the Xin'gan tomb, two forms of the sword reveal some experimentation with the length and profile of the sword. It appeared either as short as 14.3cm or as long as 35.7cm. The shorter sword (fig. 4:31-1) has a slender profile like a willow leaf. The longer one (fig. 4:31-2) has an arc profile. The sunken grooves on the body of the longer sword were specifically made to allow the blood to flow along them, hence the name blood grooves 血槽.

Thirdly, the importance of the Xin'gan *yue* within the tomb and its indigenous form are manifestations of regional character. Six *yue* were found at the Xin'gan tomb, thus revealing the importance of this weapon, contrasting to its role in the Anyang area, where it is normal for one or two *yue* to be found in a single tomb except for the royal tombs where the number of *yue* buried is not known. Even the Fu Hao tomb, the tomb of a member of the royal family, contained only four *yue*. The six *yue* at the Xin'gan tomb may indicate two possibilities. First, that the *yue* was of great importance in the South. Second, as a military officer, the occupant of the Xin'gan tomb was of comparatively high rank.

In addition to the relatively high number of *yue*, the various forms of the *yue* from the Xin'gan tomb indicate a new method of using the *yue*. There are two types of *yue* at the Xin'gan tomb, types I and III. Type I with its flat *nei* (fig. 4:32-1) was common in the Anyang area. The type III with *qiongkou* socket (fig. 4:32-2) is not seen in the Anyang area. This Type III *yue*, instead of a flat *nei*, has a cylindrical socket parallel to the blade edge. While the shaft itself was possibly parallel to the blade, at the point where it was hafted the blade and shaft are perpendicular. This manner of hafting the *yue* is not found with the *yue* with a flat *nei*.

The decor on the *yue* is composed of an intaglio design forming a very stylized zoomorphic mask. This form of embellishing the *yue* is not found in the Anyang area where zoomorphic masks are distinguished by the protruding or distinct eyes, nose and horns.

From the tomb sketch this piece was centrally placed within the tomb. According to Peng Shifan, "All weapons were placed outside the coffin, while this

revolutionary Type II *yue* was placed inside the coffin."<sup>76</sup> "It displayed a brilliant black lustre"<sup>77</sup>. It may have been a special weapon for the Xin'gan tomb.

This *qiongkou* form of the *yue* is unique, not found either in the Central Plains or in the North. However, following the Spring and Autumn period the *qiongkou yue* became the standard form of *yue* in Southwestern China.<sup>78</sup> Perhaps this form was suitable for the particular environment of the South.

As for the *mao*-spearhead, in the Xin'gan tomb this weapon is found in greater numbers than the *ge*, whereas in the Anyang area, the number of *ge* in a single tomb was normally greater than that of *mao*.<sup>79</sup> Moreover, the cross section of the hollow socket of several of the Xin'gan *mao* (fig. 4:34-1) is hexagonal. This feature is rare among the *mao* from Anyang. On some of the Xin'gan spearheads (fig. 4:34-2) there are two small rings which are not directly attached to the socket. Such rings are rare among the *mao* from Anyang. Other modifications of the spearhead will be discussed below under the discussion on decoration.

In addition to the above four kinds of weapons, some further indigenous characteristics are found in the Xin'gan tomb as compared to the vocabulary of the Anyang style. The Anyang style was transformed in the Xin'gan style as regards shape. For instance, the Type II *ge* with elongated *yuan* in flat profile was common in the Anyang area but was subtly transformed in concave profile on the Xin'gan *ge* (fig. 4:33) Modifications of the Anyang style of decoration as found at Xin'gan will be discussed below.

#### 4.2.3. Decoration

The decoration on some examples found at the Xin'gan tomb are alien to those of the Anyang tombs. The design of two human heads on Type II *ge* (no. 118) (fig. 4:33) and tiger head with opening mouth and teeth (fig. 4:35) on the Type III curved-*tang ge* (no.127) are alien to the Anyang *ge* which were commonly decorated with a bird design. The tiger motif was a particularly common motif on the bronze vessels from the Xin'gan tomb (fig. 4:36-1, 4:36-2, 4:36-3, 4:36-4). Although only four Type III *ge* decorated with tiger heads and only one Type II *ge* decorated with two human heads were found among the 31 *ge* at Xin'gan, the indigenous designs are clearly demonstrated by these few examples.

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<sup>76</sup> Thanks to the archaeologist Mr. Peng Shifan who provided this information to me. This information was omitted in the simplified archaeological report (WW 1977:10, p.14).

<sup>77</sup> WW 1977.10, p.14.

<sup>78</sup> Fan Yong, 1989, pp.162-171.

<sup>79</sup> Except for Xibeigang tomb 1004, where 72 *ge* and 731 *mao* were excavated.

The Type I spearhead which was common to the Anyang area also appeared at the Xin'gan tomb but with a shortened socket which was decorated with a swallow-tail design in openwork (fig. 4:34-2). Both the design of the motif and the openwork technique are alien to the Anyang area.

The indigenous design of the bronze weapons from the Xin'gan tomb can be related to the design of the contemporary bronze vessels from the same tomb. The swallow-tail design found on the spearhead (097) (fig. 4:34-2) and bordering the rectangular mouth centered on the *yue*-axe blade(333) (fig.4:32-1) frequently embellishes the bronze vessels from the same tomb. (fig. 4:36-4) .

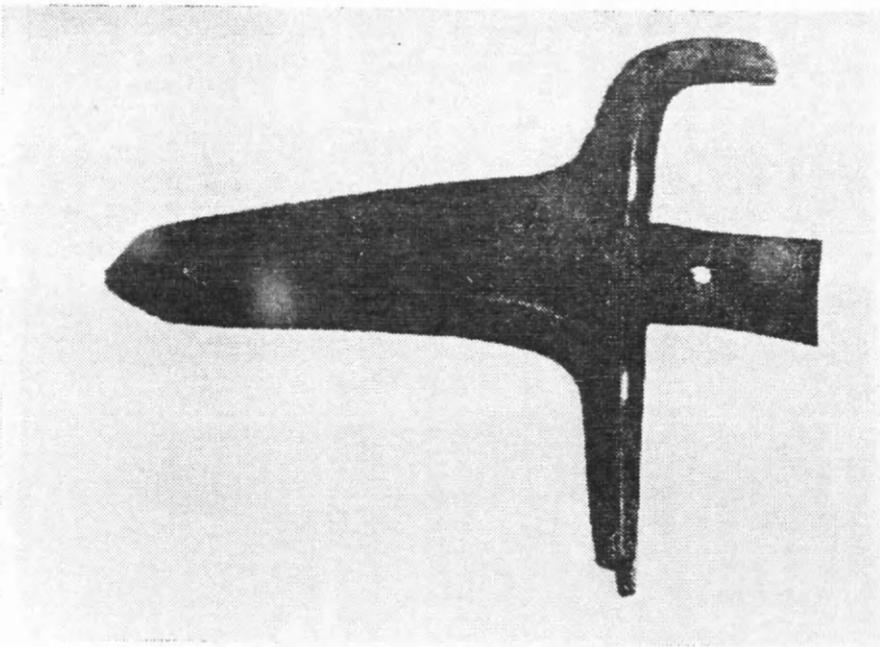
Moreover, the animal mask design on the Type III *yue* (fig. 4:32) at the Xin'gan tomb reveals another transformation of that on the *yue* at the Anyang area, as the teeth and mouth of the animal mask were omitted on this type of *yue* at the Xin'gan tomb. The horn, eyes and nose were depicted with *leiwen* in low relief. This form of animal mask in low relief is closer to the Erligang tradition than to the Anyang tradition.

#### 4.2.4. Stylistic parallels between Xin'gan and other areas

The bronze weapons at the Xin'gan tomb reveal strong indigenous styles but also offer stylistic parallels to other areas including Anyang and Chenggu.

##### 4.2.4.1. Xin'gan and Anyang

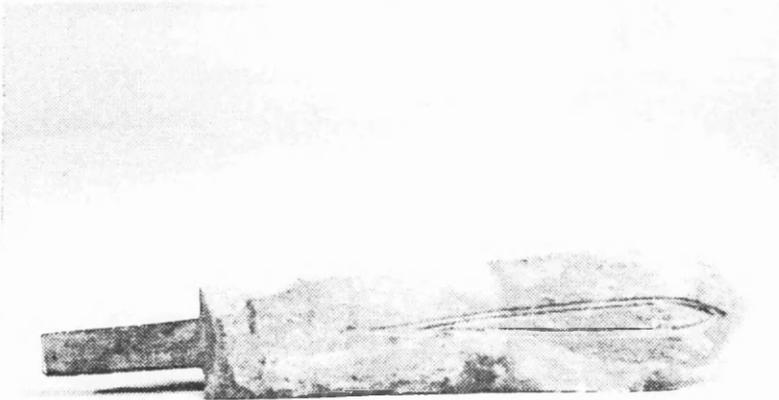
The bronze weapons at the Xin'gan tomb are close to those of the Anyang area not only in their burial systems but also in certain shapes of bronze weapons. These are the Type II *ge* (fig.4:34) Type III *ge* (fig.4:35), and Type IV *ge* (fig.4:37), and the Type I *yue*-axe (fig.4:32-1). In particular the Type II and III *ge* from the two areas are almost identical to each other. In order to determine whether these two shapes of *ge* at the Xin'gan tomb developed from the Erligang tradition at Panlongcheng which is close to the Xin'gan, or from the contemporary tradition at Anyang, one may notice that Types I and III were the most common forms of the *ge* found in the Xin'gan tomb, and that these types were the core of the bronze weapons at the Anyang area. In other words, the Anyang tradition of Type II and III *ge* plays an important part in the bronze weapons at the Xin'gan tomb. They are the vehicle which connects the Xin'gan tomb with the Anyang tombs. Moreover, the Type I knife (fig. 4:38) from the Xin'gan tomb resembles the Type I knife from the Fu Hao tomb in shape, revealing a close relationship between the Xin'gan tomb and the Anyang tombs.



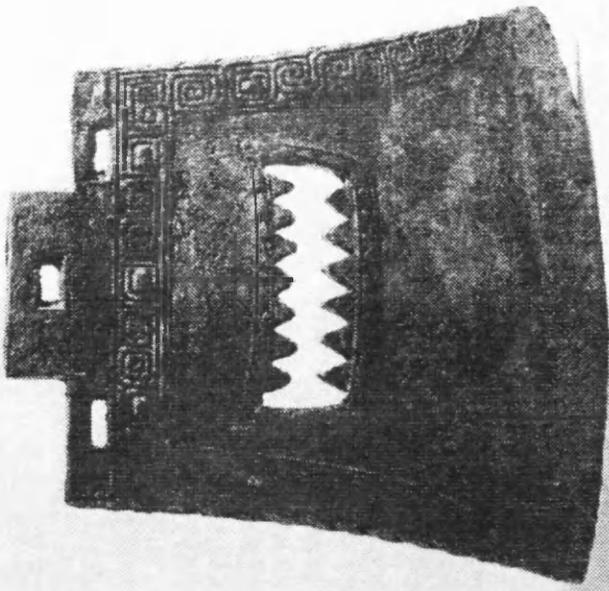
0 Hooked *ji*, Dayangzhou tomb, Xin'gan Jiangxi, length 27.4 cm. Hong Kong 1994, pl.43.



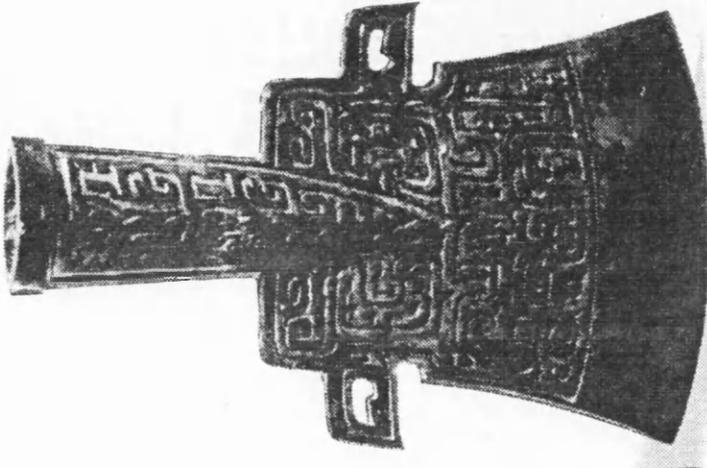
-1 Sword from Dayangzhou tomb, Xin'gan Jiangxi, length 14.3 cm. Hong Kong 1994, pl.69.



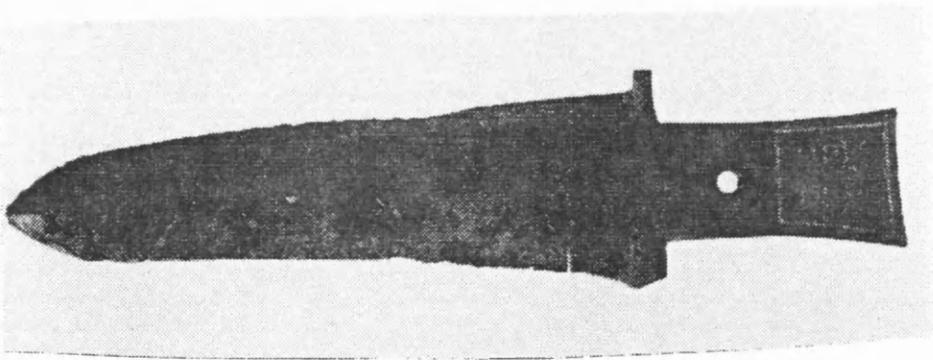
-2 Sword from Dayangzhou tomb, Xin'gan Jiangxi, length 35.7 cm. WW 1991.10, p.10, fig.11.



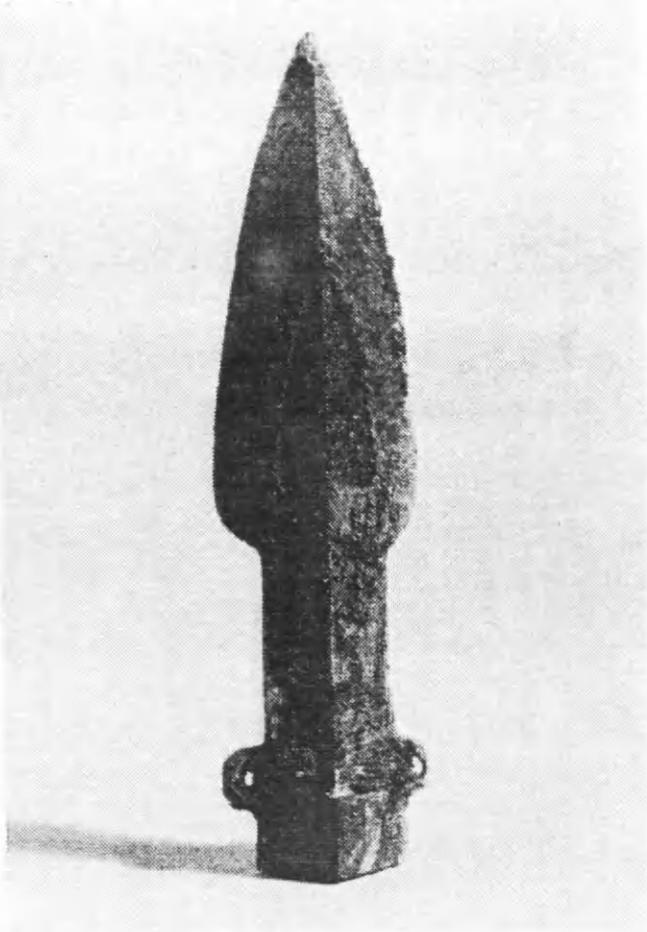
-1 Type I *yue*-axe, Dayangzhou tomb, Xin'gan Jiangxi, length 35.2 cm. Hong Kong 1994, pl.52.



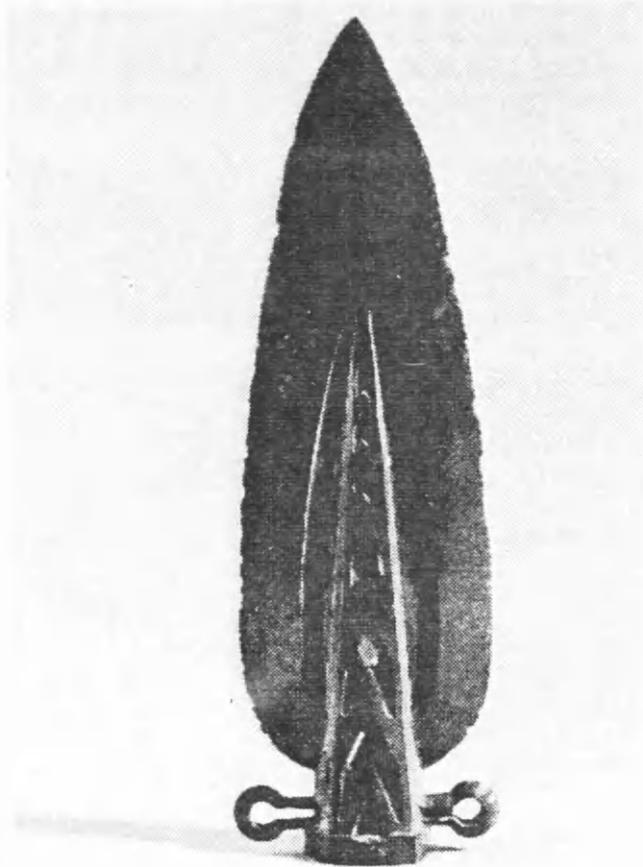
-2 Type III *yue*-axe, Dayangzhou tomb, Xin gan Jiangxi, length 14.2 cm. Hong Kong 1994, pl.53.



Type II *ge*, two-human-heads design *ge*, Dayangzhou tomb, Xin'gan Jiangx, length 26.1 cm. Hong Kong 1994, pl.41.



1 *Mao*, Dayangzhou tomb, Xin'gan Jiangxi, length 19 cm. Hong Kong 1994, pl.47.



2 *Mao*, Dayangzhou tomb, Xin'gan Jiangxi, length 14.3 cm. Hong Kong 1994, pl.45.



Type IV ge, Dayangzhou tomb, Xin'gan Jiangxi, length 25 cm. Hong Kong 1994, pl.39.



fig. 4:36-1 The tiger motif on the bronze vessels from the Xin'gan tomb. Hong Kong 1994, pl.34.

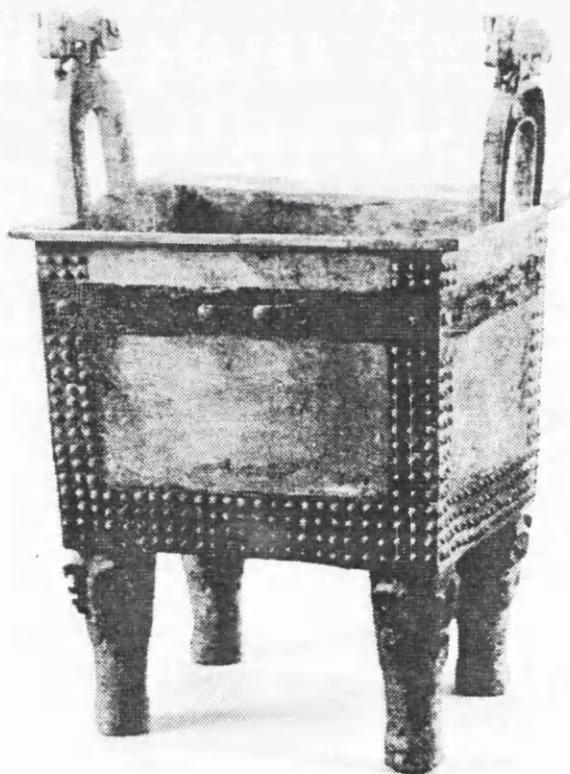
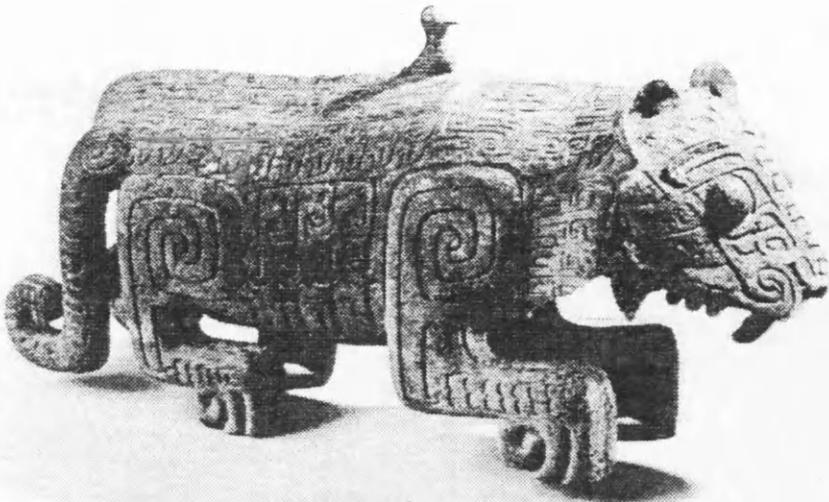
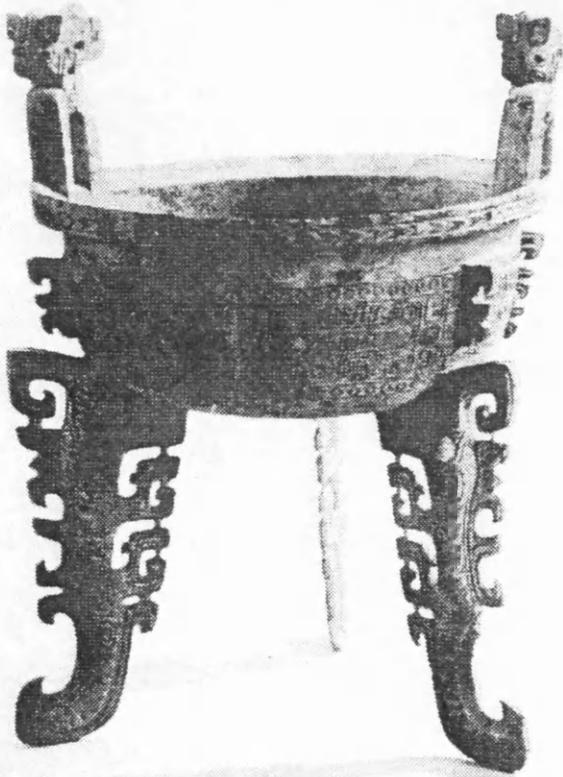


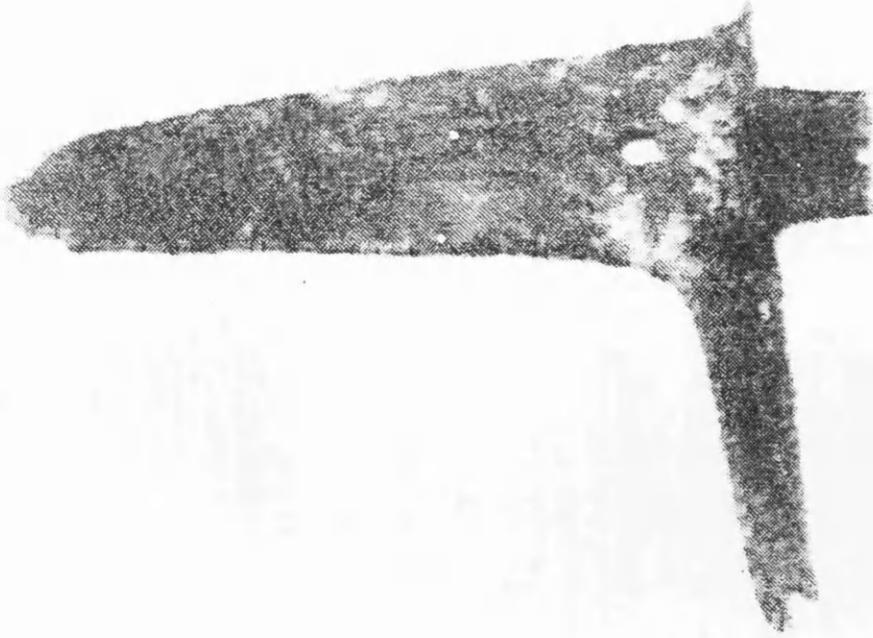
fig. 4:36-2 The tiger motif on the bronze vessels from the Xin'gan tomb. Hong Kong 1994, pl.35.



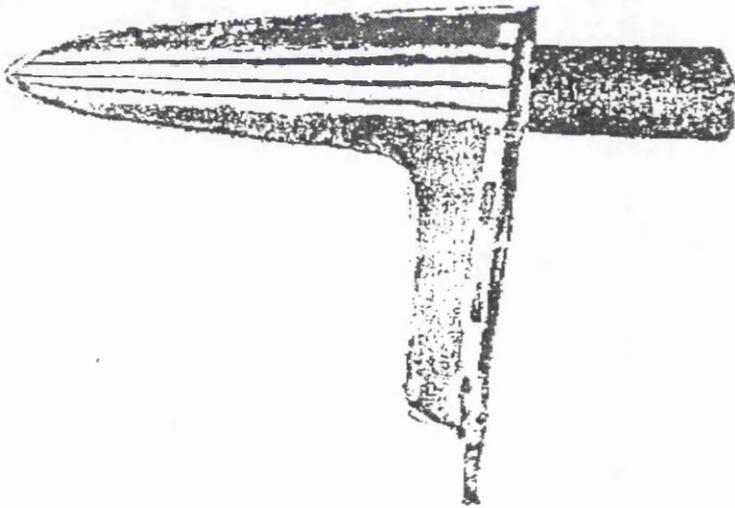
6-3 The tiger motif on the bronze vessels from the Xin'gan tomb. Hong Kong 1994, pl.38.



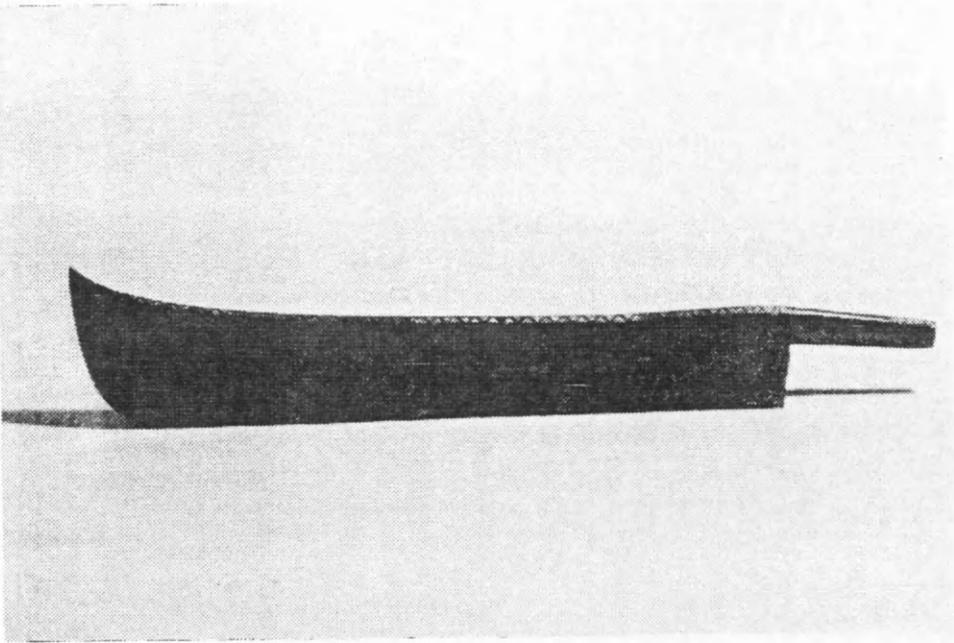
6-4 The tiger motif on the bronze vessels from the Xin'gan tomb. Hong Kong 1994, pl.9.



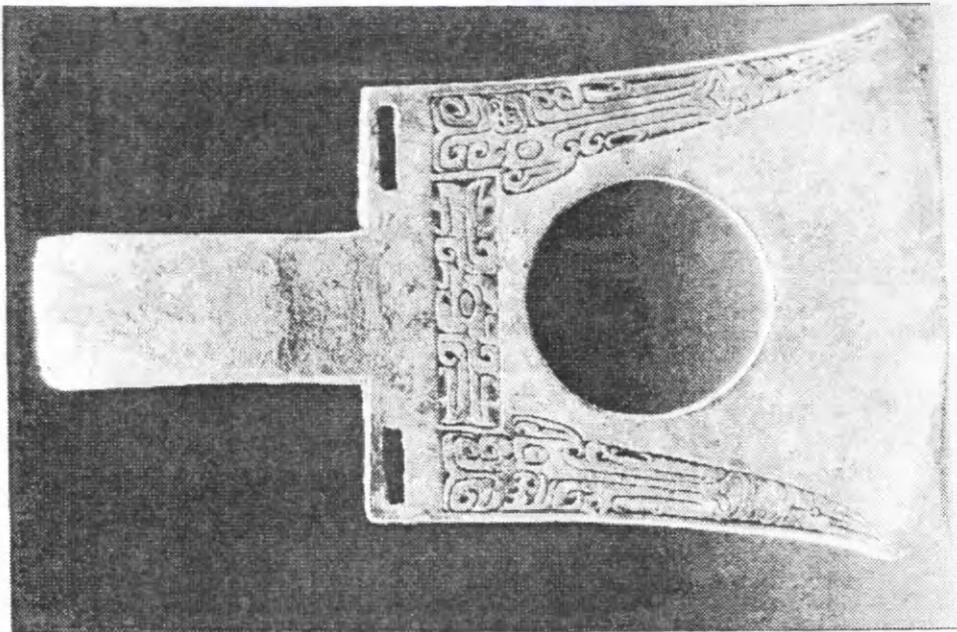
7-1 Type IV *ge*, Dayangzhou tomb, Xin'gan Jiangxi, length 18 cm. WW 1991.10, pl.3:6.



7-2 Type IV *ge*, Chenggu Shanxi, length 15.5 cm. KG 1980.3, p.213, fig.3:2.



Type I knife, Dayangzhou tomb, Xin'gan Jiangxi, length 37.2 cm. Hong Kong 1994, pl.54.



Yue, Panlongcheng Huangpi Hubei, length 40.8 cm. Beijing 1985d, pl.22.

#### 4.2.4.2. Xin'gan and Chenggu

Type IV *ge* in the Xin'gan tomb (fig.4:37-1), in which the *hu* is almost perpendicular to the *yuan*, is not found among Type IV *ge* in the Anyang area, while on the other hand, it resembles those at Chenggu (fig.4:37-2).<sup>80</sup>

#### 4.2.5. Investigation of the burial system of the bronze weapons and status of the occupant at the Xin'gan tomb-through comparison with those of the Anyang area

According to the classification of tombs based on the burial system of bronze weapons established for the Anyang area, the Xin'gan tomb can be classified as Type Ia where the number of bronze weapons surpasses the number of bronze vessels rather than as Type Iib where the number of bronze vessels surpasses the number of bronze weapons, as in the Fu Hao tomb.

However, bronze vessels still played an important role in Type Ia tombs. The scale of both bronze weapons and bronze vessels at the Xin'gan tomb matches that found at Guojiazhuang M160 at Anyang, and tomb 1713 of western sector of Yinxu, both Type Ia tombs.

For instance, in the Xin'gan tomb, 139 bronze weapons (and an additional 134 arrowheads) were found with 59 bronze vessels. In comparison over 200 bronze weapons (and an additional 902 arrowheads) together with 40 bronze vessels were recovered from Guojiazhuang tomb 160, and 65 bronze weapons (with no arrowheads) and 17 bronze vessels were found in tomb 1713 of the western sector of Yinxu.

In addition, the above three tombs share other common characteristics such as the size of the coffin and tomb chamber, and the tomb shelf was probably intended for sacrificial victims.<sup>81</sup> The main kinds of bronze weapons found in Guojiazhuang tomb 160 are also found in the Xin'gan tomb. *Ge* and *mao* are the most important kinds of weapons in both tombs and match each other in quantity. 35 *mao* and 28 *ge* in the Xin'gan tomb compare with 95 *mao* and 118 *ge* from Guojiazhuang tomb 160 or with 30 *mao* and 30 *ge* from tomb 1713 of the western section of Yinxu. On the basis of these facts, the Xin'gan tomb can be seen in the context of tombs of Type Ia at Anyang.

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<sup>80</sup> Tang Jinyu, 1980, p.213.

<sup>81</sup> Four human victims and 3 dogs were buried in Guojiazhuang tomb 160. As to the human victims in the Xin'gan tomb, the case is less certain because only 24 teeth remained in the tomb. According to scientific examination, the 24 teeth probably belonged to three persons: one was about 1 to 1.5 years old. Another was 10 to 11 years old. The third person was about twenty to thirty years old. As they were not found inside the coffin, they are assumed to be the human victims rather than the tomb occupant. (Han Kangjin, 1991, pp.24-26)

If the status of the occupant can be judged mainly on the basis of the number of *ge* and *mao* as well as by the number of bronze vessels and the scale of their decoration, the occupant of the Xin'gan tomb could be a noble with considerable military and political powers. His status might be close to or slightly higher than that of the occupant of tomb 1713 of the Western sector of Yinxi if we consider the close similarities in the number of *ge* and *mao*. The total number of bronze weapons and bronze vessels in the Xin'gan tomb<sup>63</sup> is just greater than in tomb 1713.<sup>60</sup>

#### 4.2.6. Dating and period style of the Xin'gan bronze weapons

Scholars have different opinions about the dating of the Xin'gan tomb. One group of scholars including Peng Shifan,<sup>82</sup> Li Xueqin<sup>83</sup> and Zou Heng<sup>84</sup> date the Xin'gan tomb to the Late Shang Period. Another group including Ma Chengyuan<sup>85</sup> and Hayashi Minao<sup>86</sup> date the Xin'gan tomb as later than the Late Shang period.

The disparity in the dating of the Xin'gan tomb reveals the difficulties encountered when dating tombs outside the Central Plains. This is mainly because of the lack of a chronological sequence for the regions outside the Central Plains. The chronological sequence of the centre, on the other hand, has been clearly demonstrated. This is possibly because more archaeological digging has been done in the Central Plain. Another possible reason is that bronze artefacts were used continuously in the Central Plains and produced in large quantities, whereas in the regions outside the Central Plains it may be that the casting and use of bronze artefacts was intermittent.

Establishing a basic chronological sequence for the regions outside the Central Plains is made possible by the fact that they often stylistically manifest a relationship to the Central Plain. The Xin'gan tomb is one example of this. However, the styles of the Xin'gan bronze weapons can not be fully analyzed according to the chronological sequence of the Central Plains. Based on the related and non-related stylistic elements between the Xin'gan and Anyang bronze weapons, various explanations and datings have been derived by scholars. Peng Shifan, Li Xueqin and Zou Heng have maintained that the stylistic relationship between the Central Plains and the regions outside this area was contemporary. On the other hand, other scholars propose that the Central Plains influenced the regions

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<sup>82</sup> Peng Shifan (1991, p.31) dated the Xin'gan tomb to the early to middle stages of the Late Shang period.

<sup>83</sup> Li Xueqin (1991, p.33) dated the Xin'gan tomb to the early stage of the Late Shang period.

<sup>84</sup> Zou Heng (1990) dated the Xin'gan tomb to no later than the Late Shang period.

<sup>85</sup> Ma Chengyuan (1992, pp.19-21) dated the Xin'gan tomb to be later than the Late Shang period.

<sup>86</sup> Hayashi Minao (1994, pp.3-56) dated the Xin'gan tomb to the Western Zhou.

surrounding it. Therefore, the stylistic elements of the Central Plains were retained much later in the regions outside the Central Plains. Ma Chengyuan and Hayashi Minao are representative of scholars who hold the latter view.

Scholars who have doubted the possibility of creativity from the areas outside the Central Plains and who prefer to date the cultural remains from these regional areas later after the Central Plains had already developed similar forms, may have done so because of the lack of a chronological sequence for the regions outside Central Plains, or because they were unconsciously influenced by the "nuclear Central Plains" theory.

If we now re-examine the dating of the Xin'gan tomb on the basis of stylistic analysis of the bronze weapons found there, these weapons can be dated to a period no later than the Late Shang periods III or IV. This discussion will focus on two aspects: the indigenous style of the bronze weapons from the Xin'gan tomb and stylistic parallels between the Xin'gan area and the Central Plains.

#### 4.2.6.1. Indigenous style

##### 4.2.6.1.1. The development and ritual significance of the bronze *yue* in the south - from stone axe to stone *yue* to jade *yue* and finally to bronze *yue*

Owing to the extensive archaeological excavations in the Central Plains, the creativity of other areas and the possibility that the Central Plains may have been influenced by such areas has often been doubted. The bronze weapons at the Xin'gan tomb are possible examples of such influence.

Although archeological excavations in the South area have been scattered, it is still possible to trace the chronological sequence of some examples such as *yue* and *mao* spearhead.

The importance of the *yue* in both quantity and quality is one of the indigenous characteristics of the bronze weapons at the Xin'gan tomb. This characteristic is difficult to explain in the context of the development of the *yue* in the Anyang area. For instance, Xiaotun M331, M232, M338, M333, M188 which are all undisturbed founds<sup>87</sup> have been dated to the first stage of Late Shang period<sup>88</sup>. No *yue* were excavated from the above tombs. Although one *yue* was excavated from M1 at Sanjiazhuang, it was plain without decoration.<sup>89</sup> During the

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<sup>87</sup> Shi Zhangru, 1980; 1972.

<sup>88</sup> Zou Heng, 1964, p70; Hayashi Minao, 1972, pp18-9; Zhang Chengshou, 1979, p279; Beijing, 1980f, pp221-2; Chen Fangmei, 1991, pp181-232.

<sup>89</sup> KG 1983.2, p.128.

later stages of the Late Shang period, the *yue* became important in some particular tombs.

The insignificance of the bronze *yue* of the first stage of the Late Shang period in the Central Plain is a characteristic which can be traced back to the Erligang period. Most of the tombs of the Erligang period excavated at Zhengzhou were without *yue* except for one *yue* with a damaged *nei* without decoration.<sup>90</sup>

In contrast, the significance of bronze *yue* and characteristics of its shape and decoration at the Xin'gan tomb can be traced earlier at other sites in the South. At Panlongcheng, Huangpi, Hubei, three *yue* were excavated from two out of eleven tombs. Two *yue* were excavated from M2 at Lijiaju. One of the two is quite large, extending to 41cm in length (fig. 4:39).<sup>91</sup> Of the two large *yue* (333,334) from the Xin'gan tomb, one is 35.2cm in length, and the other is 36.5cm. The Panlongcheng *yue* and Xin'gan *yue* are comparatively large in size indicating a formal relationship between them, and comparable presentation, marking their important role.

The design on the Type I *yue*-axe at the Xin'gan tomb reveals a close connection to the Panlongcheng tradition rather than to the contemporary Anyang design. Instead of the *taotie* mask with gaping mouth and teeth facing the blade like those of the Anyang area, the body of the Xin'gan *yue*-axe are decorated with *leiwen* along the three unsharpened edges. A large perforation surrounded by a swallow-tail-like design is centered on the blade body (fig.4:32-1). On the Xin'gan *yue*-axe, it is obvious and noteworthy that the openwork teeth were designed to face the blade as seen on the Anyang *yue*-axe. However, on the Xin'gan *yue*-axe, the connection between the *leiwen* and the openwork teeth is ambiguous. In other words, since there is no *taotie* mask, it is not clear to whom the teeth belonged. The *leiwen* design rendered along the three non-bladed sides of the Xin'gan *yue*-axe represents a scheme of arrangement that can be traced back to the Panlongcheng *yue*-axe of the Erligang period.<sup>92</sup> *Kui long*-dragons were designed along the three non-bladed edges on one of the Panlongcheng *yue*-axes (fig. 4:39), which has a large perforation in the centre. This large hole can be traced back to Neolithic jade or stone *yue*-axes. This point will be discussed below.

Therefore, the Xin'gan *yue*-axe was possibly more influenced by the Panlongcheng tradition than by any other tradition. However, it tried to alter the Neolithic tradition into the motif of a gaping mouth and teeth to face the blade. This idea may in part have been adopted from the Anyang tradition of *taotie*.

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<sup>90</sup> Liao Yongmin, WW, 1957.6, pp.73-74.

<sup>91</sup> WW 1976.2, p.33.

<sup>92</sup> WW 1976.2, p.678; p.33.

However the total design of the Xin'gan *yue*-axe is unique as it combines the southern and Anyang traditions.

Moreover, the animal mask design of the Type I *yue* (fig.4:32-1) from the Xin'gan tomb reveals another transformation of that on the *yue* from the Anyang area. In this Type IV *yue* from Xin'gan, the teeth and mouth of the animal mask were omitted and the horn, eyes and nose are depicted in low relief *leiwen*. The animal mask in the low-*leiwen* line more closely parallels the Erligang tradition than the Anyang tradition.

The large perforation on the body of the Panlongcheng *yue* particularly reveals the relationship between bronze *yue* and southern jade and stone *yue*. In other words, the development from jade and stone *yue* to bronze *yue* in the south not only explains the significance of the bronze *yue* at the Xin'gan tomb but also explains the significance of the *yue* in the Anyang area after the earliest stage of the Anyang period.

From the Neolithic to the Erligang period, the stone *yue*, stone axe, jade *yue* and bronze *yue* share one basic shape—a rectangular body with a single blade and a rectangular *nei* for hafting. During the Neolithic period, the heavy stone axe was widespread throughout China in the Northeast: Liaoning<sup>93</sup>, in Jilin<sup>94</sup>; the Northwest: Inner Mongolia<sup>95</sup>, Gansu<sup>96</sup>; in the Southwest: Sichuan<sup>97</sup>; and in the South: Fujian<sup>98</sup>. For some of the stone axes without perforation, the stone axe could be inserted into a slotted shaft and then bound. Some have small perforations which facilitated attaching the thongs. The earliest form of stone *fu*-axe was thick and heavy and bears markings showing that it had been used. It was considered to be a tool for production widely distributed throughout China during the Neolithic period.

Another special transformed type of stone *fu*-axe is referred to as the "stone *yue*-axe". Others even more unusual are referred to as "jade *qi*-axe".<sup>99</sup> The characteristic shapes and burial context of the stone *yue* and jade *qi* are related to those of the bronze *yue* of the Late Shang period. This particular type of stone *yue* is flat, has a slender body without any traces of having been used. It has been considered as a ritual weapon and named as "stone *yue*"<sup>100</sup> to distinguish it from the "stone axe". The "stone axe" was considered to be a production tool. Stone *yue* and stone axes were all hafted with the pole parallel to the edge of the blade. However,

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<sup>93</sup> KG 1991.8, p.305; 1992.5, p.394.

<sup>94</sup> KG 1991.4, p.305; 1992.8, pp.678-679.

<sup>95</sup> KG 1992.12, pp.1065-1081; 1991.9, pp.774-780.

<sup>96</sup> KG 1991.12, pp.1057-1058.

<sup>97</sup> KG 1991.9, pp.774-777.

<sup>98</sup> KG 1991.7, p.592.

<sup>99</sup> Zhang Minghua, KG 1989.7, pp.624-635.

<sup>100</sup> Fu Xianguo, 1985, pp.820-822.

methods for hafting the shaft to the axe vary. According to the picture on the jar at Yanchun Linru, Henan (fig.4:40)<sup>101</sup>, the stone *fu*-axe was inserted in a slot on the shaft and then bound with thongs. In contrast, the *yue*-axe, being perforated, was attached to the shaft by inserting the shaft through the perforation.

The stone *yue* was widely distributed, and according to Fu Xianguo's compilation they have been found in the South at Shixia, Qiujiang of Guangdong<sup>102</sup>; in the North including Shandong,<sup>103</sup> Hebei; in to the East including Shandong,<sup>104</sup> and in the West including Gansu and Qinghai<sup>105</sup>. This area includes the Yangshao culture and Longshan culture of Central Plain; Dawenkou culture of Shandong, Majiayao culture of Qijia culture of Gansu and Qinghai; Daxi culture and Qiujialing culture of the middle region of the Changjiang. However, it was particularly densely spread over the South including Jiangsu, Zhejiang, and Anhui. It can be traced back from the Hemudu culture<sup>106</sup> to the Majiabin, Songze, and Liangzhu cultures. The development of the stone *yue* and its transformation from a stone *fu*-axe, a tool for production, to the *yue*-axe, a ritual weapon can be more clearly traced in the South.

The process of development of the ritual character of the *yue* was much obviously revealed in the Liangzhu culture where the jade *yue*-axe was distinguished from the stone *yue*.<sup>107</sup> The jade *yue* is nephrite belonging to the tremolite - actinolite group of stones. The jade *yue* was distinguished from stone *yue* in its elaboration, distinguishing the status of the occupant of the tomb. The jade *yue* seemed to be buried with higher-ranking officials as exemplified by the tombs at Fanshan Yuhang in Zhejiang.

Jade *yue* were excavated from five of eleven tombs at Fanshan Yuhang. They are tombs M12, 14, 16, 17, 20. In M20 and 24 stone *yue* and jade *bi* were placed near the legs of the occupant of the tomb, and one jade *yue* was placed near the left side of the occupant with a finial ornament belonging to it found at top of the jade *yue*. The shaft of the jade *yue* was possibly grasped in the hand by the tomb occupant. Among the tombs at Fanshan Yuhang, tomb 20 was lavishly furnished, and was one of the more complete tombs. In the tomb there were 170 jade groups (511 pieces), 24 stone objects, 9 ivory objects, a shark's tooth and two pieces of pottery (fig. 4:41).<sup>108</sup>

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<sup>101</sup> ZYWW 1981.1, p.33.

<sup>102</sup> WW 1978.7, p.3.

<sup>103</sup> KG 1983.1, p.8.

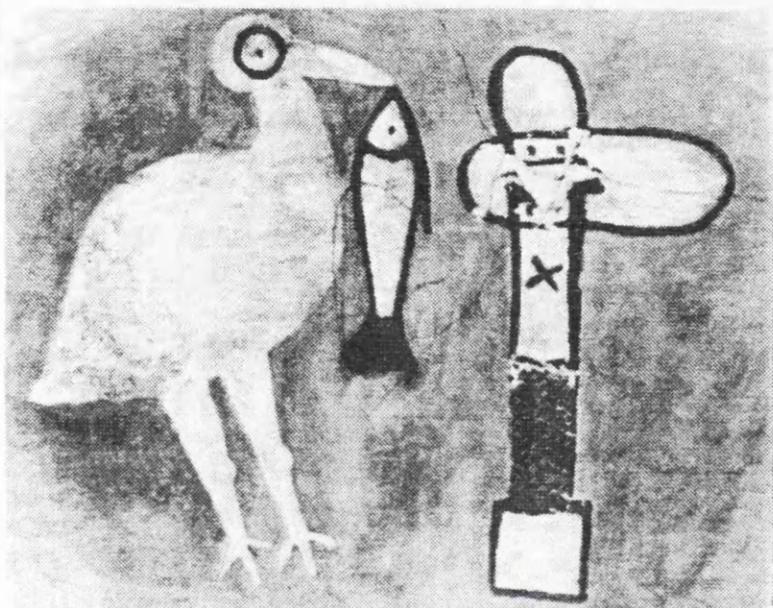
<sup>104</sup> Dawenkou ,p.36-37; KG1975. 1, p.16, fig .8:11.

<sup>105</sup> Qinghai Liuan ,p.87,fig.67.7; p.194,fig.117.3.5.

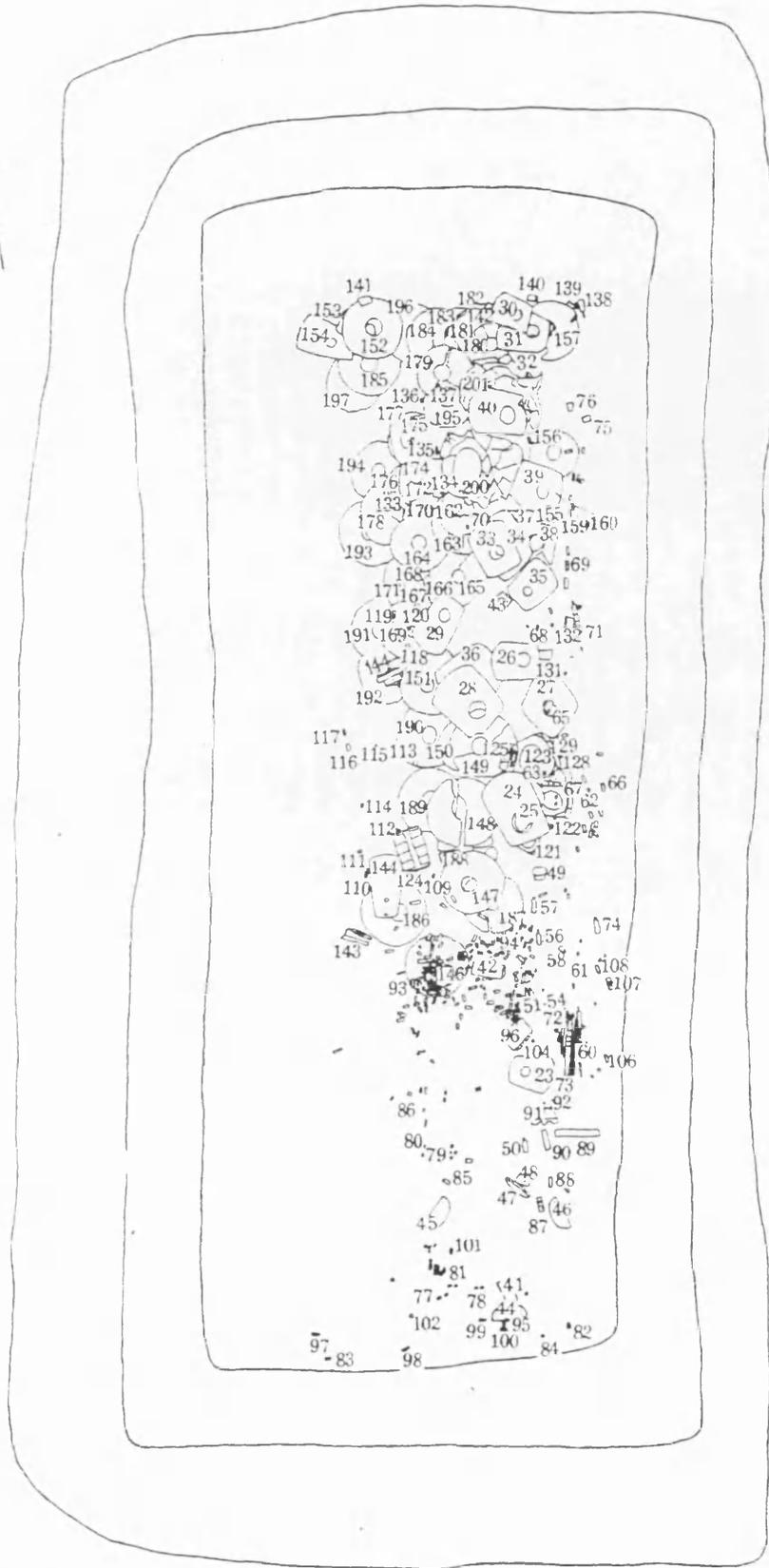
<sup>106</sup> KGXB 1978.1, p.86, fig. 37:8.

<sup>107</sup> Zhang Minghua, 1989, pp.624-635.

<sup>108</sup> WW 1988.1, p.27.



Jar from Yanchun Linru Henam. ZYWW 1987.1, pl.1.



图六 M20平面图  
 1-3, 41-43, 59,  
 89, 127-129, 158,  
 铁带 4, 146-  
 152, 155-157,  
 162-165, 168-  
 172, 176-197, 璧  
 5, 22, 6-12, 60-  
 66, 68-70, 78-88,  
 90, 92-95, 97-  
 115, 118-120, 126,  
 137, 135-137, 139,  
 142, 145, 161, 198,  
 199, 201, 204-206,  
 挂饰和零散骨、珠  
 13-16, 18-22, 骨  
 牙器 17, 鲨鱼齿  
 23-40, 153, 154,  
 166, 167, 174, 175,  
 石铍 44-47, 半  
 圆形冠饰 48-58,  
 74-77, 134,  
 138, 140, 141,  
 173, 柄端饰 67,  
 71-73, 锥形饰  
 91, 三叉形冠饰  
 96, 冠状饰 117, 璧  
 饰 121-124, 珠  
 125, 带钩 130-  
 132, 159, 160,  
 203, 镶嵌端饰  
 143, 144, 铍及端饰  
 200, 陶罐 201, 陶  
 鼎(未注明质料者  
 均为玉器, 1-22为  
 铜盖器物, 已取  
 出, 此图未标)

0 50米\*

1988年

1 Plan of M20, Fanshan Yuhang. WW 1988.1, p.4, fig.6.

One jade *yue* with animal mask and bird design (fig.4:42) and six jade *zong* were buried in M12 at Fanshan. Although the total number of the burial objects of M12 was unknown because of robbery, the abundance of burial objects can be guessed from eight jade *zong* within the tomb.<sup>109</sup>

The jade *yue* in the five tombs of the Fanshan tomb group differ from the stone *yue* in material. The former are nephrite and the latter are stone. The use of different materials reveals that the status of the occupant in each of the five tombs might have been higher than in the case of the other tombs at Fanshan<sup>110</sup>. The shift from stone to jade *yue* is the culmination of a long process from the culture of Hemudu (c.5005±130-3380±30 B.C) through cultures of Majiabing and Songze (c.4300-3200 B.C) to the culture of Liangzhu (c.3300-2200 B.C).<sup>111</sup> The ritual meaning was emphasized in the development from the stone axe through stone *yue* to jade *yue*. The jade *yue* along with jade *zong* and jade *bi* are important elements to judge the status of the tomb occupant. The animal mask on the jade *yue* of tomb 12 at Fanshan resembles that on the jade *zong* of the same tomb. Jade *bi* and *yue* were placed at the bottom of tomb of M3 at Sidun, Wujin, Jiangsu, where a jade *bi* and three jade *yue* with traces of being burned were surrounded with jade *zong*.<sup>112</sup>

It is obvious that during the late stage of the Liangzhu culture the jade *yue* is distinguished from the stone *yue* within the tomb. The jade *yue* from tombs T27M2, T22M5, T15M3, T4M6 at Fuquanshan have been dated to the late stage of the Liangzhu culture. A jade *yue* was excavated from tomb 3 at Sidun which was C14 dated and dendrochronologically calibrated as 2790±230 B.C.<sup>113</sup> The importance of bronze *yue* during the Late Shang period can be traced back to the importance of the jade *yue* in the late Liangzhu culture.

From present archaeological evidence, the transformation of the *yue* from jade to bronze, and its important role in the burial system are most obvious in the upper Erligang period in the south.

The *yue* from tomb 2 of Lijiazui, Huangpi, Hubei were cast in bronze. The majority of furnishings in this tomb are bronze objects (63 pieces) compared with only a few jade pieces. The number of bronze weapons was greater than the number of bronze vessels (40 bronze weapons and tools, 24 bronze vessels). Three human victims were buried along with the bronze vessels and bronze weapons. The

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<sup>109</sup> WW 1988.1, p.35.

<sup>110</sup> WW 1988.1, pp.52-55.

<sup>111</sup> Zheng Shaozong (1983, p.28) believes that the bronze socketed *yue*-axe may have influenced the development from the circular bladed stone axe to the socketed stone axe with a vertical blade.

<sup>112</sup> KG 1984.2, p.114.

<sup>113</sup> WW 1986.10, p.8.

significance of bronze *yue* within this burial system foreshadows its importance in the South during the Late Shang period.

Not only the importance of the bronze *yue* in the burial system but also the shape of the bronze *yue* can be traced back to the jade *yue* and stone *yue* of the Neolithic period from the South. For instance, a stone axe from M 28 at Qingdong, Heian of Jiangsu (fig. 4:43) carries shoulders on the upper portion distinguishing the body and the *nei*.<sup>114</sup> This differs from the typical stone axe with a rectangular body without shoulders. The origin of the bronze *yue* form can be traced back to the shouldered stone axe.

#### 4.2.7. The tradition of bronze *mao*-spearhead in the South

The significance of bronze spearhead within the Xin'gan tomb is marked by the quantity and the various indigenous shapes, found in the Wucheng area<sup>115</sup> whereas it can hardly be found at the Anyang area during the Period I of the Late Shang period. For example, no spearhead was excavated from among the four bronze weapon Period I tombs at Xiaotun such as tomb 338, 333, 232, 188. A spearhead in the simplest shape was excavated at M3 of Sanjiazhuang. The spearhead was also rarely used for burial in Central Plains tombs of the Erligang period.

In contrast, the spearhead was more developed in the South during the Erligang period. Spearheads were excavated from M 3 (fig.4:44) and M 2 (fig.4:45) of Lijiazhuang, Panlongcheng, Huangpi, Hubei.<sup>116</sup> The socket of the Lijiazhuang spearhead is square with rings which were attached to the shaft by a short connection. This characteristic paved the way to the development of the spearhead as seen in the Xin'gan tomb.

From the examples of *yue* and spearhead, the characteristics of the bronze weapons at the Xin'gan tomb can be traced back to those appearing in the South during the Erligang period. This phenomenon can be applied to the complete assemblage of bronze objects, including both bronze weapons and bronze vessels.<sup>117</sup> The same condition can also be applied to the five tombs of Xiaotun<sup>118</sup> and the tomb groups of Chenggu, Shanxi.<sup>119</sup> During the early stage of the Late Shang period, many areas faced the same problem: how to create new elements based on

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<sup>114</sup> KGXB 1983.2, p.162. fig. 22:7.

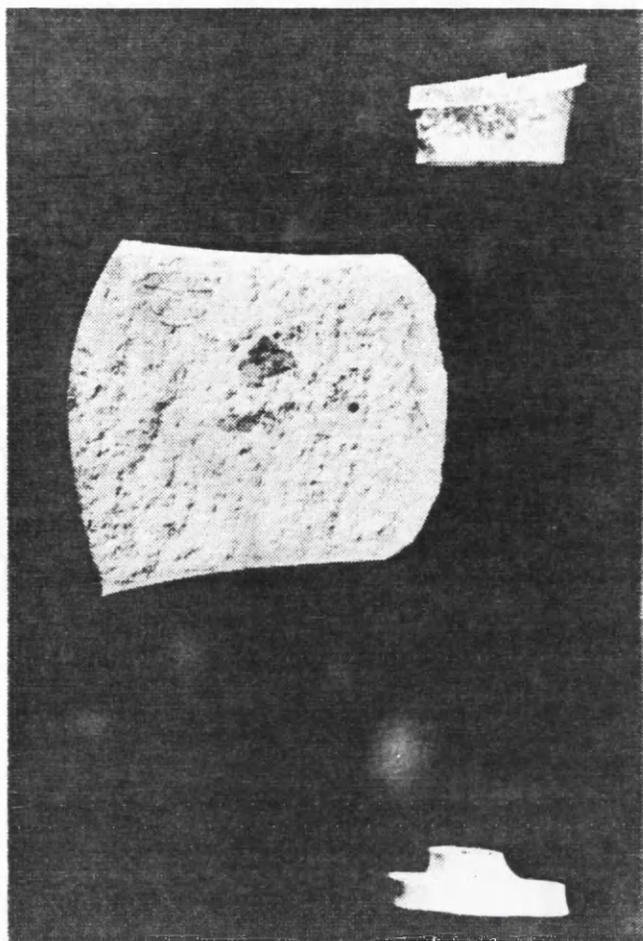
<sup>115</sup> WW 1980.8, p.2, fig.4-25.

<sup>116</sup> WW 1976.2, p.26. fig. 32.6; p56. fig 24.7.

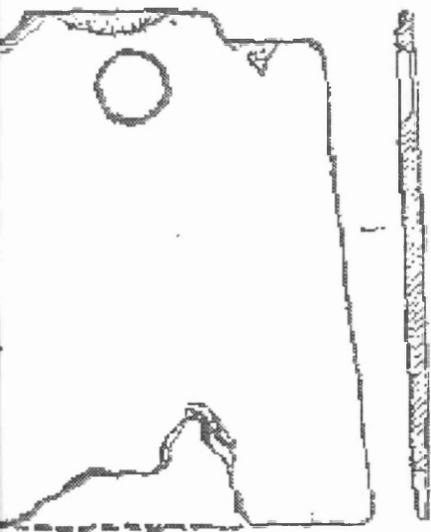
<sup>117</sup> Peng Shifan, 1991, p.27.

<sup>118</sup> Chen Fangmei, 1991, pp.181-232.

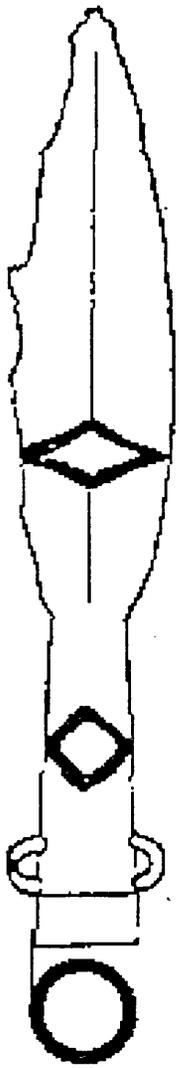
<sup>119</sup> Chen Peifen, 1992, pp.108-149.



Jade *yue* with animal mask and bird design, M20 Fanshan Yuhang, length 17.9 cm. Hong Kong 1989, pl.238.



Stone axe, M28 Qingdong Heian Jiangsu. KGXB 1983.2, p.167, fig.22.7.



4 Spearhead, M3 Lijiazhuang  
Panlongcheng Huangpi Hubei. WW 1976.2,  
fig.24:7.

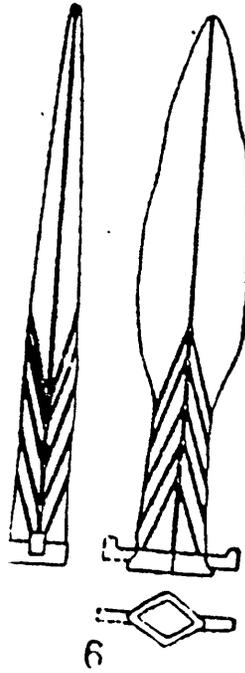


fig. 4:45 Spearhead from M2 Lijiazhuang  
Panlongcheng Huangpi Hubei. WW 1976.2, p.26,

the traditions of the Erligang period. Most of the bronze weapons from the Xin'gan tomb reflect this trend. On the one hand, they continued some features of the Erligang tradition seen at both Panlongcheng and in the Central Plains such as the *ge* with the elongated blade. On the other hand, they developed indigenous styles of the *yue* and the spearhead on the basis of local traditions. The creativity is also exemplified in the *ge* which are intimately related to those of the Central Plains. The creativity manifested in the bronze weapons from the Xin'gan tomb was possibly strong enough to initiate new types of weapons such as *qiongkou yue*, sword, hooked *ji*, and long-*hu ge*.

The *qiongkou* (fig.4:32-2)*yue* is distinguished by the perpendicular positioning of the socket in relation to the blade edge. Similar forms of the *yue* hafted in the same manner are seen widely distributed over the South and Southwest during the fifth to third centuries B.C. This indicates that the *qiongkou yue* and its method of use were possibly particularly evolved in those areas. However, the body of the Xin'gan *qiongkou yue* is square with a concave profile of the blade side. The decoration of the Xin'gan *qiongkou yue* was designed with the animal mask in low relief. It resembles the Type I *yue* of the Erligang period and differs from the much later later *qiongkou yue* of the fifth to third centuries B.C. in the body profile and the decoration.

Swords were well developed at the South during the fifth to third centuries B.C. indicating the need for the sword in the South. However, the Xin'gan sword without a guard or pommel differs from these later southern swords. The Xin'gan sword is possibly related to the sword without a guard and pommel of the eleventh to tenth centuries B.C., but with some differences. With respect to the creativity displayed in the weapons of the Xin'gan tomb, the Xin'gan sword is possibly one of the earliest types in the South.

The hooked *ji* (fig.4:30) and the long-*hu ge* will both be discussed in the context of the *ge*.

The indigenous style of the bronze weapons of the Xin'gan tomb is difficult to discuss with respect to the context and chronological sequence of the Anyang area. However, from the intermittent chronological sequence of the bronze weapons in the South it appears the style of the Xin'gan bronze weapons was developed during a particular stage, evolving from the strong Erligang tradition to the new phase of the Late Shang period. The styles of the bronze vessels from the five tombs at Xiaotun as well as those from the Chenggu finds evolved according to a similar development. How long did it take to transfer the tradition of the Erligang into the new phase of the Late Shang? The style of the bronze weapons at the

Xin'gan tomb in parallel with that at the Anyang area will provide more information for discussion.

#### 4.2.8. The style of the bronze weapons from the Xin'gan tomb paralleled to those from the Anyang area—with regard to the *ge*

In terms of styles similar to those of Anyang, the *ge* is a significant form for providing clues for dating for several reasons. The *ge* is a primary form among the bronze weapons at Anyang. There is an ample number of examples, and there is a clear development for this type of weapon. The *ge* is also a major weapon within the Xin'gan tomb. The number of *ge* in the Xin'gan tomb is secondary only to the number of spearheads, with a total of 28 examples. There are 24 *ge* with rectangular *nei*, four *ge* with curved *nei*, and three *ge* with *hu*. The *ge* with rectangular *nei* accounts for the majority of the *ge* types, while it is worth noting that among the 28 *ge*, there are no examples of socketed *ge*.

Three major utilitarian forms of the Central Plains *ge* are the *ge* with rectangular *nei*, the socketed *ge*, and the *ge* with *hu*. In the 273 years of the Anyang period, the comparatively few finds of the Type III *ge* with rectangular *nei* and suspended *hu* mark Late Shang period III and IV as the initial period for this type, while the *ge* with rectangular *nei* and the socketed *ge* are the most common types of utilitarian weapons. In the development of the *ge*, there is a transformation from the popularity of the *ge* with rectangular *nei* to the socketed *ge*. This shift occurs between periods II and III of the Late Shang. With the popularity of the socketed *ge* following periods II and III, the *ge* with rectangular *nei* becomes less common. Between periods III and IV the utilitarian *ge* with suspended *hu* appears in a small number of tombs. The more ritualized form of the *ge*, the *ge* with curved *nei*, is retained through period IV. The decor on this type of *ge* is traditionally designed within the arched form. Beginning late in period I, the decor beyond the arched form forms the shape of a sculptured bird.

The *ge* with rectangular *nei* accounts for the majority of *ge* in the Xin'gan tomb. Among these *ge* those straight-*nei* *ge* with a long blade are similar to Erligang examples. Other *ge* with rectangular *nei* assume a style very similar to Anyang examples dating to period I and II of the Late Shang. There are also forms found within the Xin'gan tomb that have not appeared at Anyang.

The three examples of *ge* with curved *nei* from Xin'gan, in comparison to the development of the *ge* at Anyang, approximate the forms of the Yinxu period I, but surpass the traditional form of the *ge* with curved-*nei*, replacing it with a distinctly regional style realistic-like tiger or *kui long* decor.

In comparison of the styles and forms of *ge* from Anyang, the *ge* from the Xin'gan tomb manifest a strong indigenous style, not typical of other regions. It should be noted that the Erligang tradition of *ge*, with rectangular and curved-*nei* antecedents to the Anyang *ge*, are also seen in the south at Panlongcheng, Huangpi, Hubei. Is it possible that the south was similar to Anyang, both developing from a very similar tradition. While not denying the possibility for mutual interaction, they appear to be independent developments from one original tradition. The forms of *ge* from the Xin'gan tomb are not limited to the Anyang forms, but represent a parallel development, and as with the other indigenous elements described above, these forms represent a large degree of independent initiative within this tomb.

Based on the dynamic creativity as seen in the bronze weapons from Xin'gan, the *ge* with *hu* and the hooked *ji* from the Xin'gan tomb represent new forms with a close affinity to the *ge* form. Can their origin be accounted for by an innate creativity and not be explained proceeding from developments made at Anyang? Taking the development in the Central Plains as a standard, the *ge* with *hu* appears at Anyang in period III or IV. The hooked *ji* doesn't appear until early in the Western Zhou. The blade and the *hu* of the *ge* with *hu* from Xin'gan are placed almost perpendicular to each other, similar to the *ge* with *hu* from Chenggu in Shaanxi, and contrasting to the *ge* with *hu* from Anyang, raising the possibility for parallel developments in the two former regions. The 90 degree angle implies an awkward relationship between the *hu* and blade and possibly represents an earlier form.<sup>120</sup> The backward arching hook is particularly long on the Xin'gan hooked *ji*, parallel to the body of the *ji*, and perpendicular to to the suspended *hu*. The sharp and stiff 90-degree angle between the hooked portion and the blade and *hu* differs from the early Western Zhou hooked *ji* as exemplified by those found at Xincun, Xunxian, Shaanxi, and they are not necessarily close in date.

"The potteries from the Xin'gan tomb are comparable to the potteries and proto-porcelains excavated from period II of the Wucheng site."<sup>121</sup> The potteries marked with *ge* 戈 and *ge* 革 are also seen in the period II strata at Wucheng.<sup>122</sup>

In conclusion, the bronze weapons from the Xin'gan tomb exemplified a common trend of early Late Shang, absorbing and transforming the Erligang tradition to create the unique Late Shang style. As the Erligang tradition did not only strictly originate from the central plains culture but also from the south it can be linked to an indigenous southern tradition as far back as the neolithic period. These weapons are imbued with clearly recognizable regional characteristics. Both

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<sup>120</sup> Li Xueqin, 1991, p.36.

<sup>121</sup> WW 1975.7, pp.51-60; WWZLCK 2(1978), pp.1-8; WW 1991.10, p.23.

<sup>122</sup> Li Xueqin, 1991, p.33.

the *yue* and the *mao*-spearhead serve as evidence of this phenomenon. Hence the Xin'gan bronze weapons and co-eval bronze weapons from Anyang probably represent two parallel developments. On the other hand, the bronze weapons from the Xin'gan tomb reveal interaction with the Central plains. The *ge* serves as evidence of this phenomenon. In addition, the interactions are not only restricted to those with the central plains, but also extend to the Chenggu region in southern Shaanxi. The long-hu *ge* serves as evidence of this phenomenon. Moreover, the type III knives, the long large knives of Xin'gan tomb have been found in both the north and the central plains.

However, the rectangular perforations of the Xin'gan type III knives differ from those of the Central plains and possibly represent a direct influence from the North or were mediated through the Central plains. Present materials make it difficult to give conclusive answers to this question.<sup>123</sup>

The dynamic interaction of the Xin'gan bronze weapons with the regional bronze weapons outside Anyang make their indigenous style more obvious. It is also possible to suggest that the bronze weapons from Xin'gan initiated the Western Zhou development, as some of the elements within the development of the Western Zhou can not be explained as succeeding from the Late Shang Central plains culture.<sup>124</sup>

#### 4.3. South-western Area

The Southwest is defined by finds of triangular-blade *ge*, the type I *ge*, encompassing an area including Sichuan and the Han River basin in southern Shaanxi, while also including the Wei and Jing River basin area. The defining role of this weapon has elevated the importance of the triangular-blade *ge* in the development of late Shang bronze weapons. The defining limits of this area are based on style, while considering only sites where relatively high numbers of the triangular-blade *ge* have been found.

In general most previous studies on triangular-blade *ge* have focused on the origin of the Type I triangular-blade *ge* in order to *determine* its regional distribution.(see chapter I pp.40-42)

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<sup>123</sup> Li Xueqin (1991a, p.36) is of the opinion that Type III Knives of Xin'gan similar to that of the north in style. It is possible that there existed contact between the north and Xin'gan. Owing to no clear picture of type III knife from Xin'gan having been published yet, this conclusion requires further discussion.

<sup>124</sup> Gao Xisheng had the different dating of the bronze weapons of the Xin'gan tomb. He dated them to the period from the late Shang to the early Western Zhou on the basis of their styles close to those of Early Western Zhou, Gao Xisheng, 1994, pp.28-37)

The present article will focus on the triangular-blade *ge* in the southwest. Here the triangular-blade *ge*, as seen from the development of late Shang *ge* from Anyang, manifests a distinct regional character. Although not limited to the southwest the triangular-blade *ge* is most suitably discussed under the Southwest, by its comparative importance, concentration, and post-Shang development in this area.

The importance of the triangular-blade *ge* is seen in its distinctive form, and apparent unique usage. The *ge* consists of only a blade and *nei*, and there are no *lan* where the blade and *nei* join, neither does the blade carry a *hu*. The blade is hafted to the shaft by the perforations on the blade and *nei*, differing from typical Anyang blades which experimented with altering the form of the *ge* blade itself to insure the *ge* was more securely affixed to the shaft. This manner of hafting the blade aided only by thongs threaded through the perforations, implies perhaps that the shaft for the triangular-blade *ge* could not have been too long. This type of *ge* appears within the coffins of the Yu State tombs at Baoji, giving further evidence that this type of *ge* was hafted to a fairly short shaft.<sup>125</sup>

Secondly, this type of weapon was perhaps suitable for use in particular types of terrain. In the early and middle Western Zhou, it is frequently present in the tombs of the Yu State cemetery in Shaanxi. In the Warring States period, it was concentrated in Sichuan, where it accounts for the principal form. As the triangular *ge* appears as a distinct regional type following the late Shang, determining its regional distribution and its significance in the late Shang is an important question in understanding the development of late Shang bronze weapons.

The triangular-blade *ge* of the Late Shang period has mainly appeared in three regions: the Han River basin in southern Shaanxi; in Sichuan; and in the Wei river basin. In Shaanxi at Chenggu (fig.4:46) there were 96 triangular-blade *ge*, accounting for 84% of the weapons.<sup>126</sup> This is to date one of the largest caches of triangular-blade *ge*. Despite the fact that the cache was not recovered under good archaeological conditions, other bronzes in the cache indicate that the finds should not date later than the Late Shang period.

The second region is Sichuan. Another two caches of triangular-bladed *ge* were discovered in 1959 and 1980 at Zhuwajie, Pengxian in Sichuan.(fig.4:47)<sup>127</sup> The 1959 find was uncovered accidentally and the site was severely disturbed. The second was determined to be a cache. These two finds included bronze weapons, the primary weapon type being the triangular-bladed *ge*. The 1959 find included eight weapons of which six were triangular-bladed *ge*, the 1980 find included ten

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<sup>125</sup> Beijing 1988, p.434.

<sup>126</sup> KG 1980.3, pp.211-218.

<sup>127</sup> WW 1961. 11, pp.28-30; KG 1981.6, p.497.

weapons of which seven were triangular-bladed *ge*. The triangular-bladed *ge* has also been found at Shuiguanyin, Xinfan, in Sichuan.<sup>128</sup> These finds can possibly be dated to the late Shang period.

The third region is the river basin area of the Wei and Jing where many scattered finds of triangular-blade *ge* have been reported. Examples include Huanggou and Huizhenfang at Lantian.<sup>129</sup> They have also been found at Zhengjiacun, Chuhuan,<sup>130</sup> as well as at Hejiacun, Qishan (fig.4:48),<sup>131</sup> and Xiaofayi, Meixian.<sup>132</sup> There have also been scattered finds of the Type I triangular-bladed *ge* such as blades from Jingjiacun, Lingshi, Shanxi<sup>133</sup> and Taixi, Gaocheng, Hebei.<sup>134</sup>

While the triangular-bladed *ge* from the three regions show slight differences in style, they also share common characteristics which differ from Anyang weapons and which serve as the basis for grouping them together under a single region -- the Southwest. In terms of form, there are two perforations on the blade where it adjoins the *nei*, similar to *ge* from Anyang. Conversely there are several characteristics shared by the blades from these three regions which are not found on *ge* from Anyang. First there are paired large perforations on the blade and on the *nei* close to where they join. The perforations on the blade are generally circular while those on the *nei* are large almond-shaped or circular. These perforations are not mere decoration, and perhaps were especially effective for binding the blade to the shaft. This characteristic is still seen as late as the Warring States period on the triangular *ge* from the Sichuan region.<sup>135</sup> The second characteristic is the blades typically are formed with bloodgrooves, which may have increased the effectiveness of the blade. Thirdly, the decorative motifs and their placement on the triangular-bladed *ge* differ from those found on other variations of the *ge* found at Anyang (fig.3:22). Typical *ge* motifs such as the *kui long*-dragon, birds, and zoomorphic masks which are common on *ge* from Anyang are not found on the triangular-blade *ge* of the southwest. The placement of the decor, the general handling, and motifs can be divided into three variations. In the first variation, the decoration is placed on the base of the blade and *nei*. The blade decor typically centers around the large perforation of semi-circular shape exemplified by the *ge* from Zhuwajie, Pengxian,

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<sup>128</sup> KG 1959.8, pp.404-410; KG 1958.8, p.7-31.

<sup>129</sup> WWZLCK 1980, p.25, fig.2; p.26. fig.3:2.

<sup>130</sup> KKYWW 1986.5, p.13. fig.1:10.

<sup>131</sup> KG 1976.1, p.35, fig 8.4; Beijing, 1979b, pl.34.

<sup>132</sup> KGYWW 1981.1, pp.5-7.

<sup>133</sup> WW 1986.11, pp.1-18.

<sup>134</sup> Beijing 1977b, p.133.

<sup>135</sup> WW 1976.3, p.46. pl.1:3,6,7.

Sichuan (fig.4:47).<sup>136</sup> This type of *ge* does not appear in the Anyang area, while the triangular-blade *ge* found in the Western Sector tomb 279 (fig.4:49) at Yinxi belongs to the same tradition as the Zhuwajie *ge*, differing from the other *ge* traditions. This triangular-bladed *ge* from Anyang gives further evidence that the triangular bladed *ge* is possibly a foreign import. In the second type, the decoration is added only to the blade: for example the double-headed snake decorating the blade of a *ge* from Wulangmiao, Chenggu, Shaanxi (fig.4:50).<sup>137</sup> In the third variation, the decor on the blade is bisected to form an unusual geometric form of zoomorphic motif. Examples of such decor are seen on the *ge* from Lantian Huanggou,<sup>138</sup> Hejiacun, from Qishan in Shaanxi,<sup>139</sup> and from the tomb at Jingjie, Lingshi, Shanxi.<sup>140</sup> The decor on the blade is divided into two sections bordered by a nubble pattern. The decor on the upper third of the blade is centered around the large perforation and the eyes of the zoomorphic figure are arranged symmetrically on both sides and inset with turquoise. The body is embellished with cloud pattern. The lower part of the blade can perhaps be interpreted as the body of the zoomorphic figure. Both sides of the blade's spine are embellished with pennant decor. As a whole the decor appears to be a geometric and dismembered zoomorphic figure. The refined nubble pattern applied as bordering and the inlay gives evidence to the particular care taken in the decor of these weapons. More complex techniques such as openwork on the Huanggou *ge* imply that the triangular-bladed *ge* held a particular significance among the weapons of this area. Further evidence for its importance is gained by observing the context in which these blades are found.

From burials and their assemblages, some of the triangular-bladed *ge*, especially those which are decorated, come from amply-furnished tombs such as the tomb from Hejiacun, Qishan which included among the finds seven bronze ritual vessels.<sup>141</sup> The tomb at Jingjiecun, Lingshi contained twenty-three ritual vessels. Other triangular-bladed *ge* have come from caches such as the hoard at Zhuwajie, Pengxian, or from sites such as Huanggou, Lantian, or from less certain finds such as the hoards from Chenggu. From the tomb assemblages and the decoration on the triangular-bladed *ge*, it appears that this type was important in Southern Shaanxi.

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<sup>136</sup> WW 1961.11, p.29.

<sup>137</sup> KG 1980.3, p.211-218.

<sup>138</sup> Beijing 1979b, Pl. 34.

<sup>139</sup> Beijing 1979b, Pl. 56.

<sup>140</sup> WW 1986.11, p.1-18.

<sup>141</sup> KG 1976.1, p.31-38.

In the Warring States period the triangular-bladed *ge* became a distinct local weapon type in the Sichuan region, and scholars have traced the possible origin of this type of *ge* to the areas of Chenggu or the Jing and Wei river basin area. Scholars such as Huo Wei who advocate a Jing and Wei origin have based their arguments on the existence of a continuity in decoration.<sup>142</sup> The pennant decor and pentagonal zoomorphic face on the blades connect the triangular-bladed *ge* from Zhuwajie, Pengxian, with those from Hejiacun, Qishan and Huanggou, Lantian.

A number of triangular-bladed *ge* found in the tombs at Zhuyuangou, Baoji also serve as a western Zhou link between the Late Shang *ge* of the Jing and Wei region and the Warring States *ge* from Sichuan.

On the other hand, Chenggu as a possible origin should not be overlooked, especially since 82 bronze triangular-bladed *ge* were uncovered in Chenggu, the largest number of triangular-bladed *ge* excavated from a single area. As only about ten of these *ge* have been published it is difficult to discuss the relationship of their form and decor. However, the Sichuan triangular-bladed *ge* of the Warring States and those of from Chenggu have the similar characteristic of the large perforations on the blade and *nei*.<sup>143</sup> This characteristic is also seen on the blades from the Jing and Wei region. In discussing the triangular-bladed *ge* of the late Shang period, it may be pointless to divide the Jing and Wei region from the Chenggu region. Instead these two regions may have been intimately related in regard to the development of the triangular-bladed *ge* of the late Shang. These two areas perhaps both served as the creators of the later development of the triangular-bladed *ge*.

Type VI, the single serrated *ge* found in the Sanxingdui pit at Guanghan, (fig.4:51)<sup>144</sup> is unique, not found in any other site from the same period, nor have similar *ge* been found in later sites. This *ge* represents a unique regional weapon.

The type I *yue*-axe from the Chenggu area with an openwork dragon set in the large circular perforation on the blade represents a regional style not seen in other areas. The manner of handling the openwork is also applied to the *nei* of a triangular-bladed *ge* from Hejiacun, Shaanxi.

#### 4.4. Eastern Area

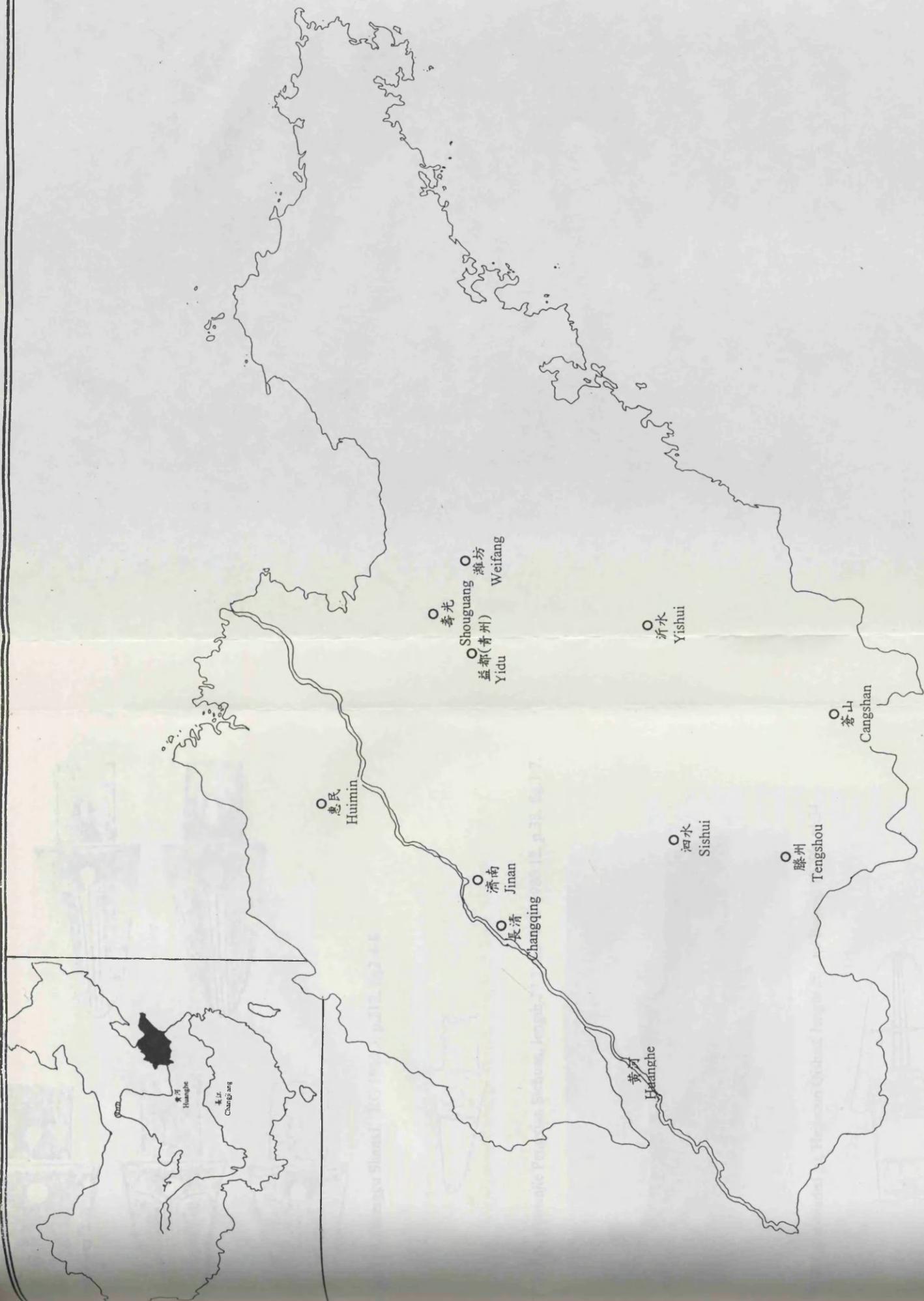
Shandong (map 4:8) is representative of the eastern area during the Late Shang period. Late Shang bronze weapons have been excavated from sites including Yidu,

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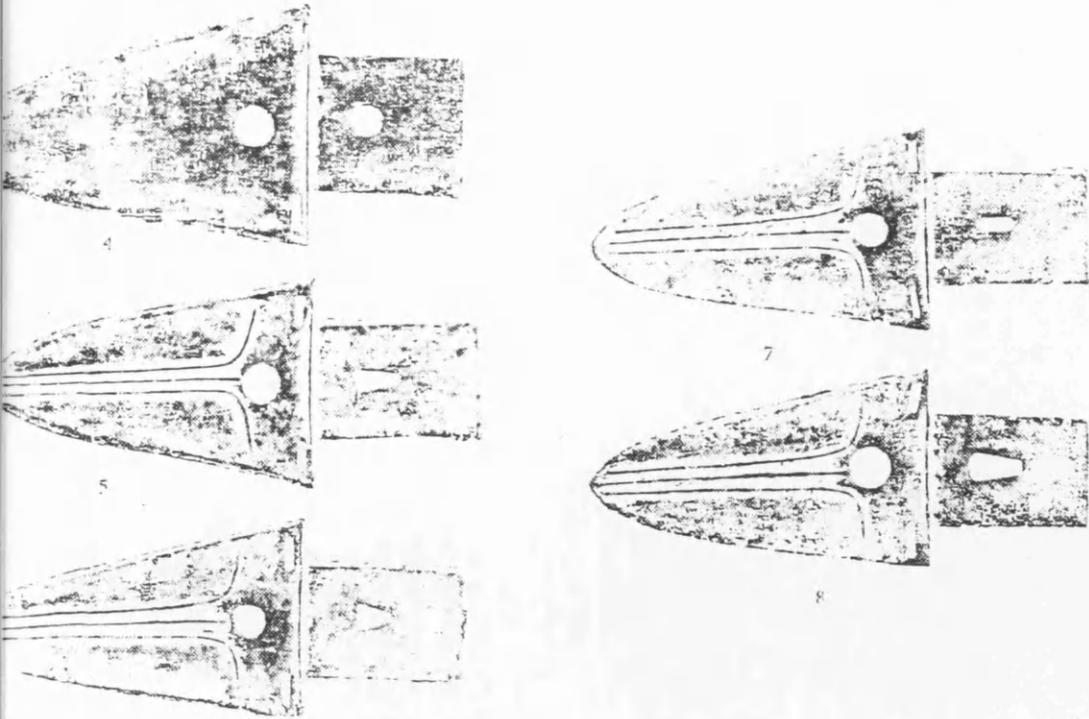
<sup>142</sup> Huo Wei, 1989, pp.251-259.

<sup>143</sup> WW 1982.8, p.51, fig.3.; *Wenwu* 1982.1, p.28, fig.4:1-4.

<sup>144</sup> WW 1989.5, p.12-3.



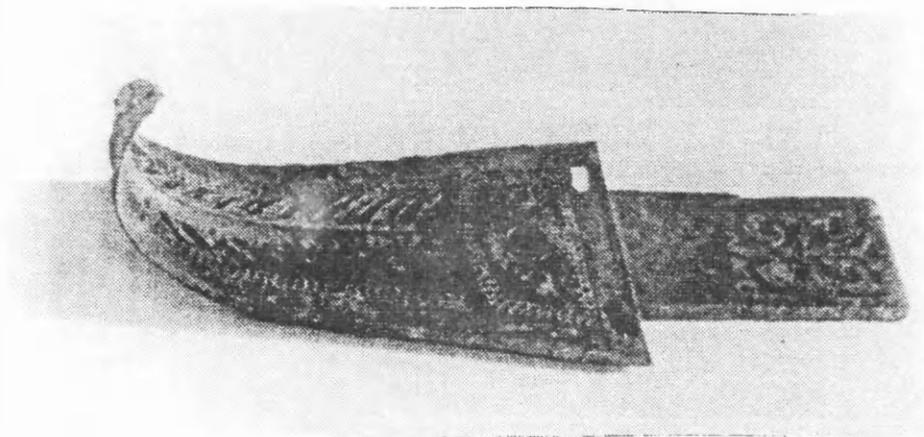
map 4:8 Distribution of Late Shang bronze weapons in Shandong  
山東省銅兵器出土分布圖



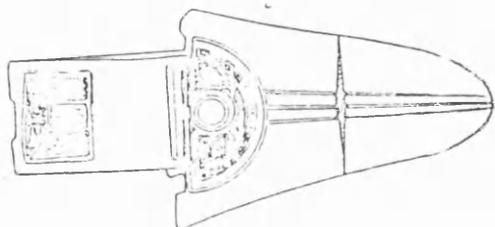
6 Type I *ge*, Chenggu Shanxi. KG 1980.3, p.212, fig2:4-8.



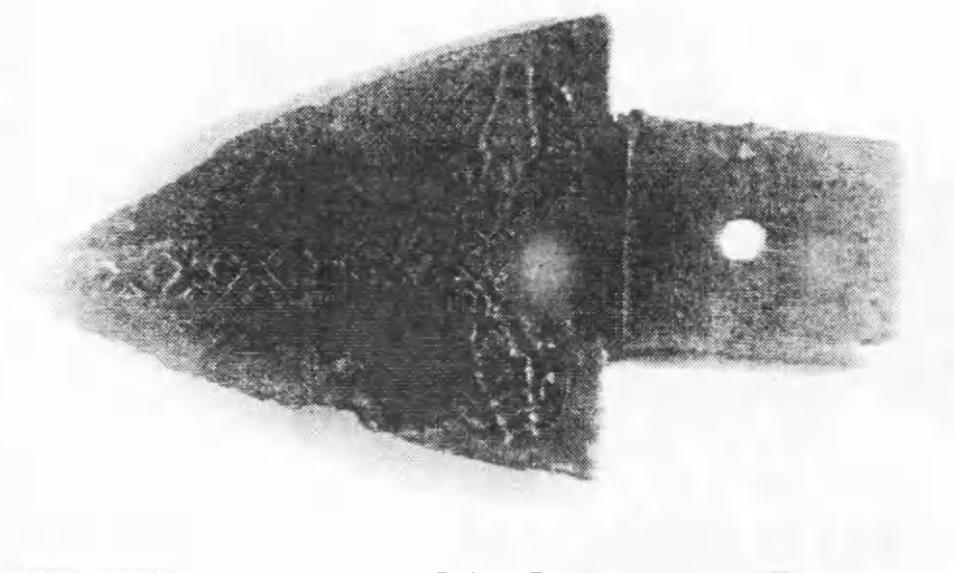
7 Type I *ge*, Zhuwajie Pengxian Sichuan, length 27.3 cm. WW 1980.12, p.38, fig.1:7.



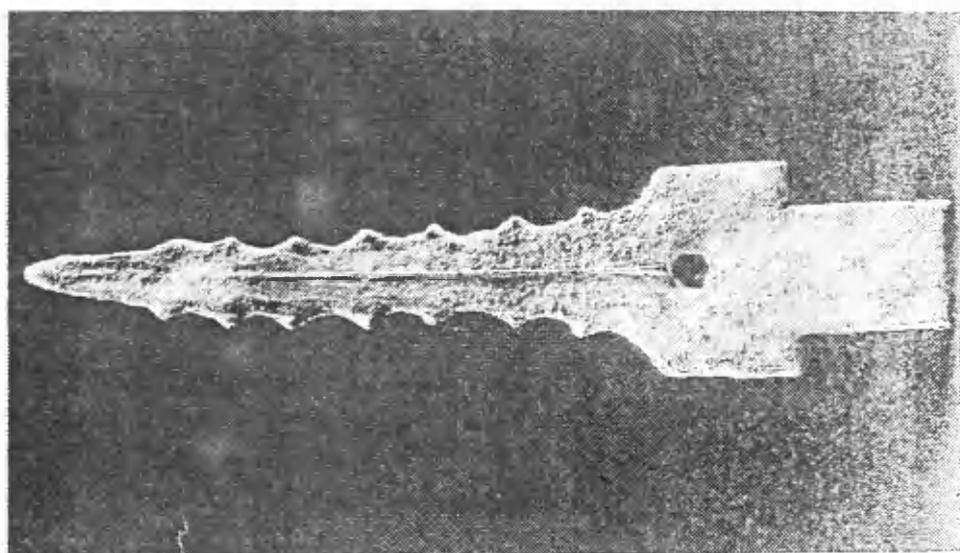
8 A triangular-bladed *ge*, Hejiacun Qishan, length 20 cm. Beijing 1979b, pl.34.



9 Type I *ge*, M279 western sector of Yinxu, length 21.4 cm. KGXB 1979.1, p.88, fig.64:2.



0 Type II *ge*, Wulangmiao Chenggu Shanxi. length 22.2 cm. KG1980.3, pl.4:2.



1 A single serrated *ge*, Sanxingdui Guanghan Sichuan, length 19.7 cm. Beijing1994b, pl.126.

Yishui<sup>145</sup>, Cangshan<sup>146</sup>, Sishui<sup>147</sup>, Huimin<sup>148</sup>, Changqing<sup>149</sup>, Jinan<sup>150</sup>, Tengzhou<sup>151</sup>, Weifang<sup>152</sup>, Shouguang.<sup>153</sup> They have been found mostly in the western part of Shandong, nearest to the Anyang area. Some of them, such as Huimin<sup>154</sup> and Sishui<sup>155</sup> were excavated by accident and the original conditions were disturbed. The artefacts from Weifang appear to be from a cultural site rather than from tombs.<sup>156</sup> What is most interesting is the context in which the bronze weapons from tomb 1 and tomb 8 of Sufutun were found, which provides information which cannot be found from other regions.

Both the style and assemblage of bronzes observed in these two tombs indicates that an intimate relationship existed between Anyang and the Shandong area which was occupied by the late Shang throughout the whole of the late Shang. In terms of dating, bronze weapons dating to the Late Shang periods I and II have been found in Shandong.

#### 4.4.1. The *yue* and the ramped tombs

Two *yue* were excavated at M1 of Sufutun (fig.4:52). One is in 31.8cm in length 35.8cm in width (fig.4:53), the other is in 32.7cm in length 34.5 in width (fig.4:54). The latter was inscribed with the characters *Ya Chou*. They were decorated with a motif which appears to be a half - animal, half - human, face. The eyes, ears, and mouth are in openwork. In particular each individual tooth is isolated in a very striking manner. The gaping mouth above the blade gives the face a most alarming appearance. The method of decorating the *yue* with the animal mask as seen on the Sufutun tomb 1 example resembles those *yue* from the Anyang area. However, the form and the effect of the half-animal half-human face on the *yue* from Sufutun tomb 1 are rather distinctive.

The *ya*-shaped (𠄎) or cruciform-shaped tombs with four ramps, tombs with two ramps, and the rectangular pit tombs seen at Anyang all appear in the Shandong

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145 WW 1989.11.p.95-6.

146 WW 1965.7, p.27-30.

147 KG 1988.3, p.284.

148 KG 1974.3, p.208.

149 WW 1964.4, p.41-50.

150 WW 1972.5, p.3.

151 KGXB 1992.3, p.365-392.

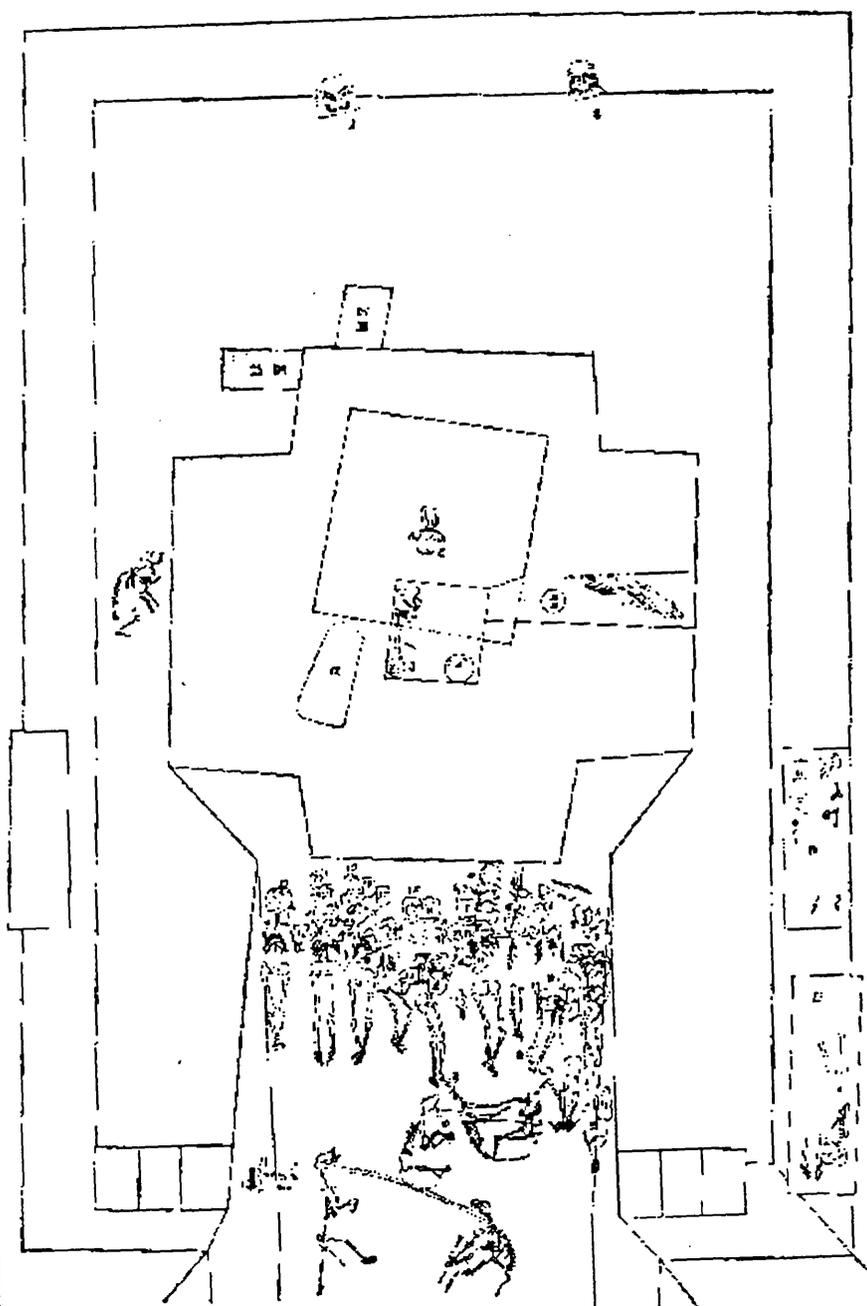
152 KG 1993.9, p.781-9.

153 WW 1985.3, p.1-11.

154 KG 1974.3, p.208.

155 KG 1988.3, p.284, p.284.

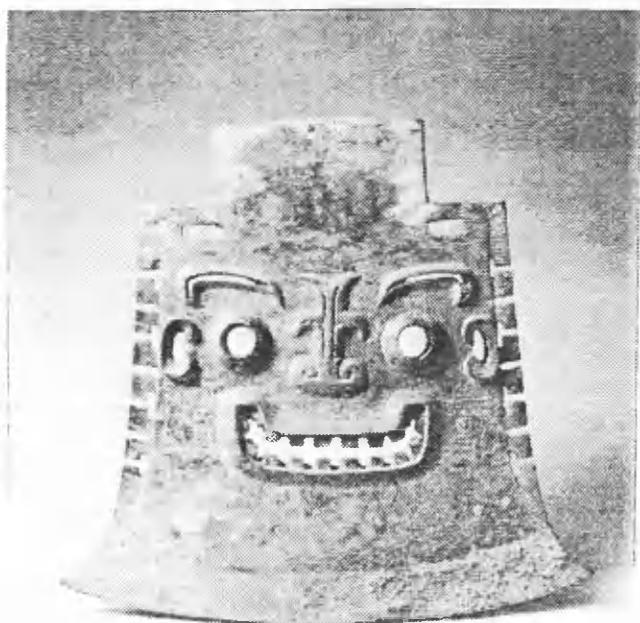
156 KG 1993.9, p.783, p.783.



Plan of M1 Sufutun Yidu Shandong. WW 1972.8, p.25, fig.10.



Yue from M1 Sufutun, length 31.8 cm, width 35.8 cm. *Shandongsheng Bowuguan cangpin xuan*, 1991, fig.13.



Yue from M1 Sufutun, length 32.7 cm, width 34.5 cm. *Shandongsheng Bowuguan cangpin xuan*, 1991, fig.39.

region. The largest *ya*-shaped tombs from Anyang are concentrated in the Xibeigang and Hougang area. There is a total of twelve *ya*-shaped tombs, unfortunately they all have been plundered, and not a single example remains intact. Most of the weapons they contained have been robbed and scattered. The single-ramp tombs concentrated in the Xibeigang and Western Sector of Yinxu have also been completely plundered. Hence, it is impossible to reconstruct the assemblages of weapons from the largest tombs at Anyang. While the *ya*-shaped tomb at Sufutun M1 has been robbed, the *yue* remained undisturbed in the tomb and the recently excavated M8 tomb was found perfectly intact. From this tomb it is possible to observe the arrangement of the weapons within the single-ramp tombs. It was from this find that the relationship between the *ya*-shaped tombs and the *yue* could also be observed.

The M1 tomb at Sufutun exemplifies the relationship among the bronze *yue*, and the status of the occupant in a tomb with four passages.<sup>157</sup> Tomb 1 occupies an area of about 150 square meters. The rectangular tomb has four ramps which are oriented north, south, east and west. 48 human victims and six dog sacrifices were found in the *ya*-shaped outer tomb chamber. During three robberies, holes were dug to the bottom of the outer tomb chamber and the contents were disturbed. Fortunately, the original condition of the tomb apart from the outer tomb chamber was preserved. Tomb 1 at Sufutun is the only example of the bronze *yue* within a four-ramp tomb.<sup>158</sup> Within the tomb, two bronze *yue* were placed at the northern side of the tomb chamber facing the southern passage. One was located on the right hand side of the passage, the other, on the left hand side. The animal mask on the *yue* faces the blade which faces the cruciform-shaped tomb chamber and the southern passage of the tomb. The southern passage with a length of 26.1 metres is the longest among the four passages of the tomb. It descends downward to the bottom of the tomb chamber. The three other passages, on the other hand, only reach the upper platform shelf. The western and northern passages are stepped, and the eastern passage is unfinished.

The bronze *yue* placed on either side of the northern passage facing inward as seen in the M1 tomb is not an isolated example. This arrangement is also seen in the M8 tomb with its single passage (fig.4:55).<sup>159</sup> The location of the bronze *yue* as seen at tombs M1 and M8 Sufutun may be the characteristic of the ramped tombs in the Shandong region differing from the rectangular tombs without ramps. We can not know whether the same arrangement was to be found in the tombs with passages

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<sup>157</sup> WW 1972.8, p.19.

<sup>158</sup> In the Anyang area, four-ramp tombs were excavated only at Xibeigang and Hougang. These 12 tombs have all been robbed. A single *yue* was excavated from a small grave, tomb 1311 at Xibeigang.

<sup>159</sup> *Haidai kaogu* 1989.1, p.262, fig.9.8.

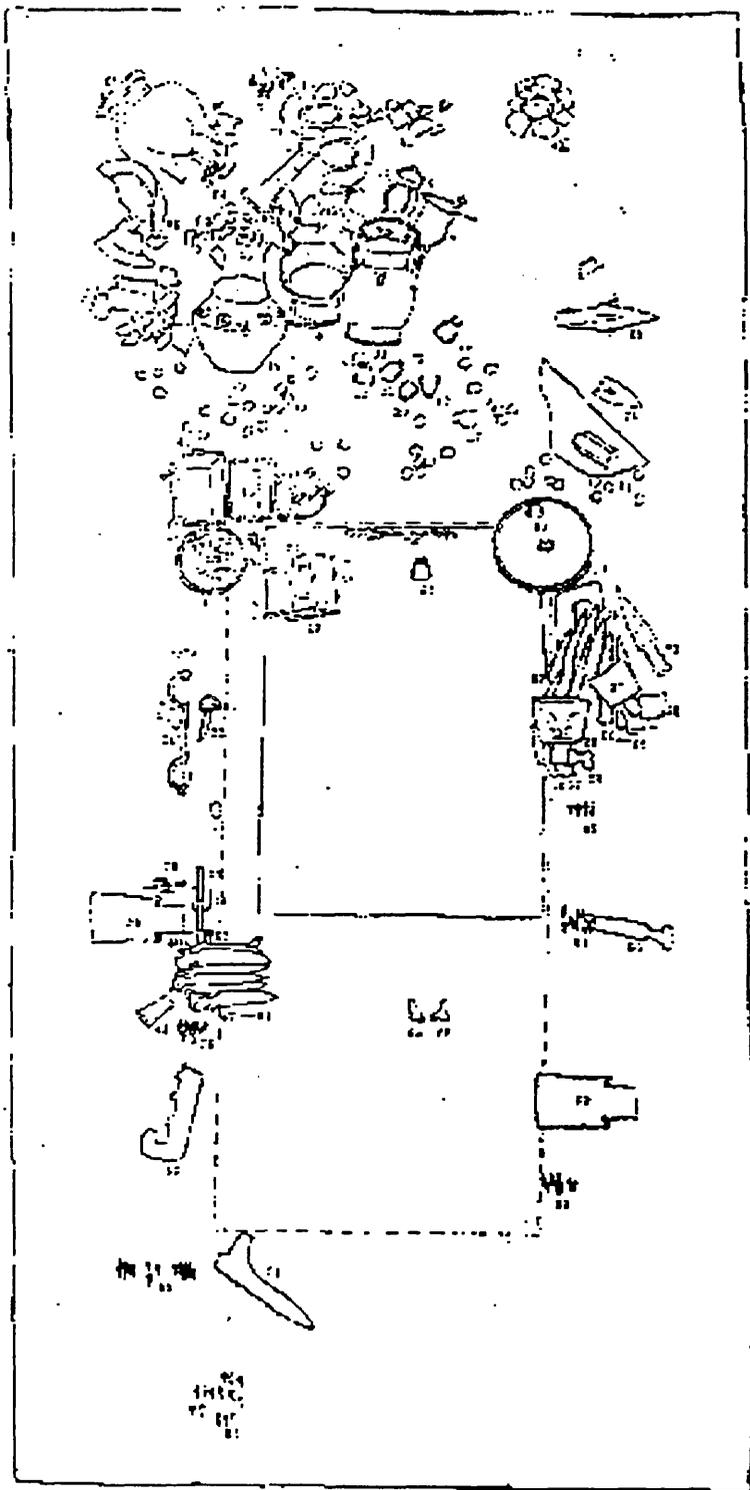


fig. 4:55 Plan of M8 Sufutun Shandong. HDKG 1989.9, p.262, fig. 98.

in the Anyang area or not. However, as human victims with bronze *ge* at the four corners of the tomb as seen at tomb 1001 of Xibeigang were also found at the tomb of Sufutun, the burial system for bronze weapons at Sufutun and Anyang may have been similar. It is therefore possible that the placing of bronze *yue* in the tomb passage at Sufutun reflects a similar arrangement at Anyang, lost through tomb robberies.

The *yue* inscribed with *Ya Chou* from M1 Sufutun may indicate the status of the user. In the Xibeigang area, tombs with four passages have been considered as royal tombs. M1 tomb with its four passages is smaller than the tombs of the Xibeigang area. The characters *Ya Chou* was inscribed not only on the bronze *yue* at M1 tomb but also on the fragmentary *jue* and *ben* from the same tomb. Bronzes inscribed with *Ya Chou* appear to be intimately related to the Sufutun area.<sup>160</sup> A *jue* and a *gu* both inscribed *Ya Chou* were excavated from Sufutun tomb 7. A *zhi* inscribed *Ya Chou* was also said to be excavated from the Sufutun area.<sup>161</sup> *Shandong Jinwen Jicun* records six spearheads inscribed with *Ya Chou* reported to have been found in Shandong (fig. 4:56).<sup>162</sup> It is reasonable to consider that the *Ya Chou* clan might have inhabited the area around Sufutun.<sup>163</sup> Scholars have estimated *Ya Chou* inscribed bronzes to total about 56 pieces.<sup>164</sup> The 1986 find of the *gu* and *jue* from tomb M7 at Sufutun brings the number to between 58 and 60 inscribed *Ya Chou* bronzes decorated with Late Shang motifs. The *Ya Chou* clan was possibly a sizeable clan during the Late Shang period. In the case of Sufutun M1, *yue* inscribed *Ya Chou* were excavated from a cruciform tomb, a construction rarely seen outside the Anyang area. The occupant of the tomb must have held a fairly high social position to have been buried in such a manner. Some scholars have proposed that the tomb occupant was the leader of the Bogu clan which is mentioned in the *Zuozhuan* under the twenty-first year of Duke Zhao.<sup>165</sup> This clan was decimated during the reign of Cheng Wang for having risen in insurrection against the Zhou.<sup>166</sup> Others have proposed that the area belonged to the descendants of the Xia.<sup>167</sup> On the present evidence, we are unable to solve this problem. It is certain that the large *Ya Chou*-inscribed *yue* belonged to a great nobleman of this clan, buried in a four-ramp tomb, with the *yue* placed either side of the passage

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<sup>160</sup> HDKG 1989.1, pp.257-8.

<sup>161</sup> Qi Yanpei, 1947, p.178. pl.2.10.

<sup>162</sup> Zeng Yigong, 1940, p.13.

<sup>163</sup> Yen Zhiyi, 1977, p.32.

<sup>164</sup> Yin Zhiyi, 1977, pp.24-28.

<sup>165</sup> *Zuozhuan*, Twenty-first year of Duke Zhao

<sup>166</sup> *Hanshu "dilizhi"* and also  *fang Ding*; Chen Mengjia 1955.9, pp.168-9; Yin Zhiyi 1977, p.32.

<sup>167</sup> Du Zaizong, 1955, p.256.



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"Ya Chou亞醜" mao-spearhead, reported to be from Shandong. Zeng Yigong, 1940, p.13.

facing the longest southern passage. It is possible to surmise that the *yue* indicates that the tomb occupant held a very high social position or was a local leader.

As Sufutun tomb M8 was undisturbed, further analysis is possible regarding the placement of the *yue* and other weapons within the tomb, which is a single-ramp tomb. The tomb chamber is rectangular, and the entrance to the tomb is wider than the width of the chamber. The tomb is 7.5 m in length, 6.5 m in width, and about 4.46 meters deep. The sloping ramp is located on the south side of the tomb. There were two outer coffins and one inner coffin. The tomb contained no immolated humans, only animal sacrifices. The weapons are placed along both sides of the inner coffin facing the southern corridor. A bow-shaped implement was placed on the right side. (fig. 4:55) Ten Type III *mao*-spearheads were placed on the left side, and 15 Type IV *ge* were placed on the right side. A pair of *yue* and a pair of large knives were placed on opposing sides facing the southern corridor. The *ge* were placed on the right and the spearheads were placed on the left, viewed from the south.

The clan emblems found in the tomb help establish the relationship between the status of the tomb occupant and the bronze weapons. There were eight types of weapon among the total of 235 bronze weapons found in M8. Eighteen ritual vessels were also recovered from the tomb. Among these, thirteen pieces were inscribed with 𠄎, and two pieces had 冊𠄎 cast in the interiors. (fig. 4:57) . This clan emblem has been interpreted as the character *rong* 融.<sup>168</sup>

If *ce* 冊 can be interpreted as *zuo ce guan* 作冊官 or Official Scribe and *rong* 融 as the Rong clan, then the Official Scribe of the Rong clan was granted 50 square metres for a cemetery plot, and was allowed to be buried in a ramped tomb, indicating that this person was high in status. Even though there were no immolated victims, numerous weapons were placed on both sides of the tomb corridor. The plethora of weapons among the tomb furnishings for this *zuo ce guan* has no comparable example at Anyang. The archaeological report for this tomb suggests that "these weapons functioned as a protective talisman for the warrior tomb occupant. Likewise, the tombs at Anyang which have large numbers of weapons in the tomb chambers or tomb corridors carry the same meaning."<sup>169</sup> Another possible

<sup>168</sup> The character '𠄎' can be divided into two parts: 𠄎 and 𠄎. 𠄎 is the pictorial form of 融. Luo Zhenyu interpreted this character as the pictorial form of a worm with the big head and curved body. The character 虫 consisting of one worm, 𧈧 consisting of two worms and 𧈨 consisting of 𧈧 three worms are the same character, according to the *Erya* explanation: 𧈨 is equivalent to 虫. Therefore 𠄎 can be interpreted as 融. According to *Shuowen*, 融 is of 𧈨 group with the pronunciation of 虫.

<sup>169</sup> HDKG 1989.1, p.272.

explanation for the large quantity of weapons could have been that the local civil officials regarded weapons as important.

It is these two aspects that makes the burial in weapons of the Shandong region unique and meaningful. Nevertheless, the bronze weapons of Shandong are very similar in style and method of burial to their Anyang counterparts. Similarities are seen not only in their forms, but also their assemblage within the tomb.

1. In terms of the types and assemblage, the five types of weapons found at Anyang: the *ge*, *mao*-spearhead, *yue*, knife, and bow-shaped implement are all found in the Shandong tombs. The *ge* is the principal weapon found in the tombs at Anyang, and the *mao* is the second most important weapon. Both are intimately related to the proportion of the *gu* and *jue* which appear in the tomb. In the larger tombs from Shandong such as Sufutun M8 the bronzes are as follows: a set of 15 *ge* are matched with 10 *mao*; the ritual vessels include a set of two *gu* and a set of four *jue*. Sufutun M7 has a set of five *ge* and several more *ge* which do not belong to a set as well as two sets of *gu* and *jue* (with an additional *jue* which does not belong to a set).<sup>170</sup> The Guangshou tomb in Shandong contained ten *ge* and four *mao* which do not belong to a set, as well as a set of three *gu* and a set of five *jue*. Likewise, at Anyang the large knives and bow-shaped implements appear in tombs with a large amount of weapons. It is in this same context that these weapons appear in M8 at Sufutun.

2. In terms of style, apart from the *yue* found in tomb 1 at Sufutun, the style of other bronze weapons found in Shandong is very similar to those found at Anyang. It is therefore possible to use the Anyang weapons as a touchstone for dating those in Shandong, and it appears that they range from the early to the late YinXu period.

A *ge* from Xuanyuanzhuang, Tengzhou, Shandong (fig.4:58) belongs to the type II *ge*. It carries upper and lower *lan*. The *yuan* is long, characteristic of the blades from the Erligang period to the early YinXu period as seen in the *ge* from Xiaotun M331 and M333 which are dated to the early part of the late Shang period. This period style can also be seen in the artefacts from Shandong. The *yue*, large knife, and *mao* from Sufutun M8 (fig.4:59) and comparable examples from Qijiazhuang M269 are very similar in form. The latter tomb is dated to YinXu period III.<sup>171</sup> The large knife and *yue* from M8 are also similar to those from the Western Sector tomb at YinXu M1713 dated to YinXu stage IV.<sup>172</sup> A *ge* with curved

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<sup>170</sup> HDKG 1989.1, p.256-8.

<sup>171</sup> KGXB 1991.3, pl.3.

<sup>172</sup> KG 1986.8, p.709.

*nei* was recovered from Shouguang which is very similar in form and style to the *ge* from Qijiazhuang.<sup>173</sup>

In conclusion, it appears from the general character of the assemblage of weapons in the tomb and their style that those of the Shandong region and those from Anyang display a very intimate relationship. Both Sufutun tombs M1 and M8 provide clues to the manner in which bronze weapons were buried in cruciform-shape tombs and single-ramp tombs which cannot be completely reconstructed from the same type of tombs at Anyang. It is difficult to say whether this represents a local tradition or whether the weapons from the tombs plundered at Anyang originally occurred within a similar context. From what appears to be a very intimate relationship between Anyang and the Shandong region we can perhaps group them together. However, the tombs at Anyang represent the tombs of kings, ranking much higher than those at Sufutun, and associations drawn between these tombs have their limitations.

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<sup>173</sup> WW1985.3, p.3, fig.8:3.



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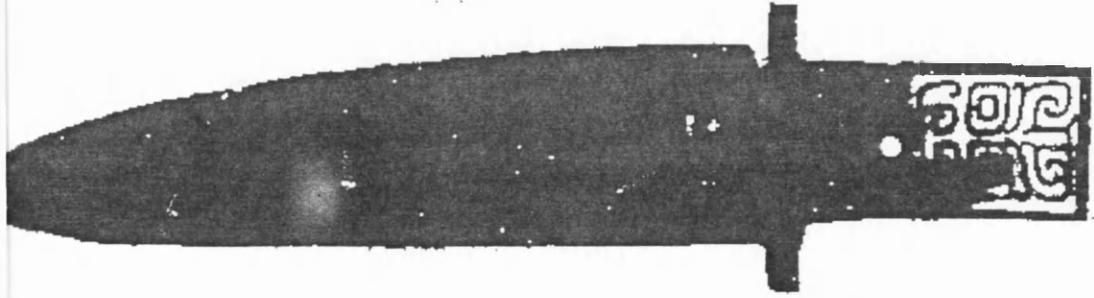


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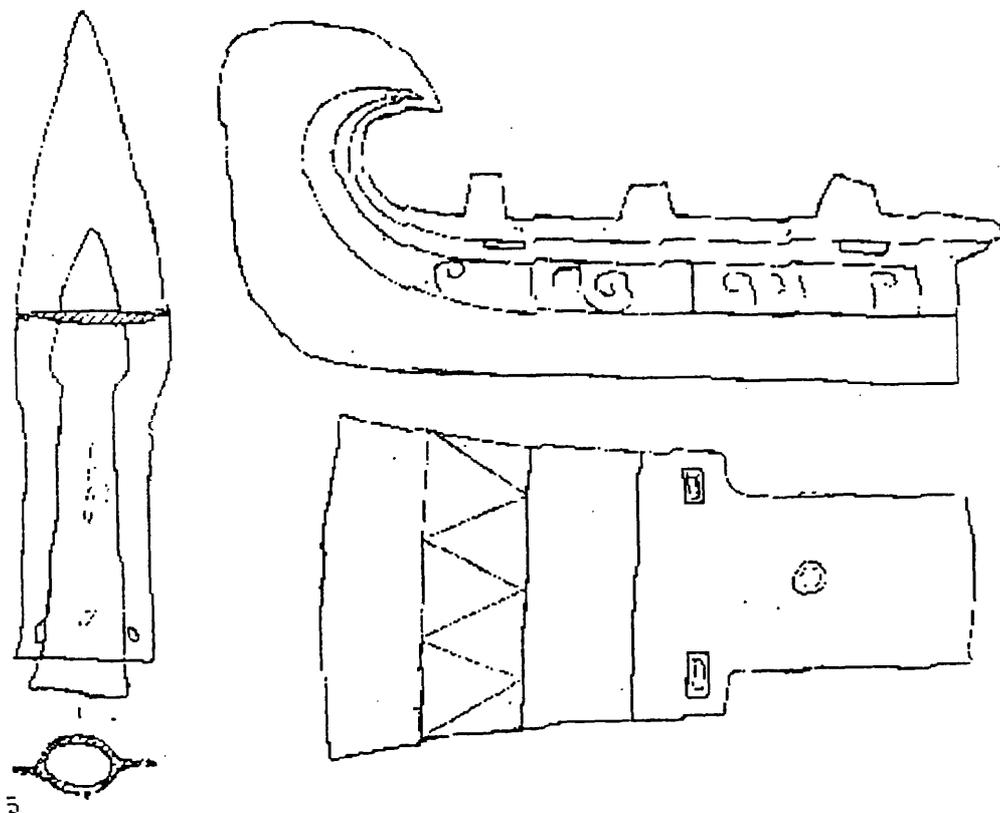


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册 inscriptions. HDKG 1989.9, p.264, fig. 10.



Ge, Xuanyuanzhuang Tengzhuo Shandong, length 28 cm. WW 1993.5, p.96, fig.5.



9 A yue, large knife, and mao-spearhead from M8 Sufutun. HDKG1989.9, p.268, fig.13.

## Chapter 5: The cultural significance of the bronze weapons of Late Shang

On the basis of the archaeological excavations, the Late Shang period was a turning point in bronze weaponry. Clear changes occurred in their quantity, quality and regional distribution. The bronze weapons became a common element among the tomb furnishings. They were widely and relatively densely spread over China, and there was an increase in the diversity of their types and forms. A complex system of designs on the bronze weapons was formed and regional styles of the bronze weapon became obvious. A new phase in casting techniques was achieved. The cultural significance of the Late Shang bronze weapons as manifestations of artistic, political, social phenomena can be summarized in following five points:

### 5.1. Political and social changes associated with the burial of weaponry in tombs

Bronze weapons were not commonly buried in tombs until the Late Shang period. This reflects parallels between the development of weapons and political and social changes. The latter provide a historical background for this phenomenon.

During the Late Shang period, bronze weapons were commonly buried in the tombs. A transformation occurred in the role of the bronze weapons within the weapon assemblage and within the assemblage of bronze objects. Although the Bronze Age had evolved no later than the Erlitou period yet, prior to the Late Shang period, jade weapons were still comparatively more common than bronze weapons in the context of the tomb. Bronze vessels were more frequently buried in the tomb than bronze weapons. This phenomenon may relate to both the focus of this new material —bronze —and the focus of burial furnishings, as well as reflecting political and social changes.

The general significance of Late Shang bronze weapons in the context of the tomb can be discussed in relation to how the material was changed when weapons evolved from tools. According to archaeological excavations, weapons had been included among tomb furnishings since the Neolithic period. In the tomb M316 at Dadunzi, Peixian, Jiangsu (about 5600 B.P.), the skeleton was determined to be a middle-aged male. A bone dagger was excavated near the right hand of the skeleton, and a stone axe was found near the left leg. One bone arrowhead was embedded in the left leg bone.<sup>1</sup> This indicates that weapons had already become differentiated from tools. (fig. 5:1)

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<sup>1</sup> KGXJK 1981,1,pp.42-3.  
Chengdong, 1990. pp.7-8.

The history of weapons seems to reflect the development of the use and understanding of materials. As weapons are used to protect human life, newly applied or discovered materials were readily fashioned into weapons. Bone, stone, shell and jade weapons developed during the Neolithic period. With the onset of the Bronze Age, bronze weapons were added to this repertoire.

During the Neolithic period, bone, stone and shell weapons took the forms of spears, axes, knives and arrowheads. From excavated objects, they appear to be utilitarian weapons. Jade weapons were differentiated from bone, stone and shell weapons, commonly assuming the forms of *fu* and *yue*-axes and multiple-perforation knives. It is obvious that these jade weapons carried a particular ritual and social significance within the burial system. Jade weapons were added to the assemblage but did not replace bone, shell and stone weapons within the tomb. The jade weapons however indicated a relatively higher degree of social status for the tomb occupant, implying that there was a differentiation of status among burials.

In China, bronze was first used to produce tools rather than weapons. The origin of metallurgy in China can be traced to about 5000 B.C. A fragment of metal from tomb no. 29 Jiangzhai, Lintong was determined to be brass containing copper (65%), zinc (25%) and minimal amounts of tin, lead, sulphur, and iron. The tomb was Carbon-14-dated to  $4020 \pm 100$  B.C., dendrochronological calibration revised the date to  $4675 \pm 135$  B.C.<sup>2</sup> A few metal objects were excavated from the Longshan culture in Henan, Shandong and the Machang culture.<sup>3</sup> Although some broken metal knives were excavated from the above cultural remains, tools were the first objects to be cast of metal in the Yellow River regions, west from Gansu, east to Hebei and Shandong.<sup>4</sup> These small tools indicate that copper as well as both tin and lead bronze alloys coexisted during this period.

It is no later than the third stages of the Erlitou period, around 1700B.C., that tin was intentionally added to the copper forming bronze.<sup>5</sup> It was not until the Bronze Age, however, that true bronze weapons became distinguished from the small bronze tools.

The earliest bronze *ge*, a *yue*-like *qi* and arrowheads were excavated from the tomb dated to the third stage of the Erlitou period.<sup>6</sup> The *nei* of the *ge* was designed

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<sup>2</sup> Gong Qiming, 1981:4. Li Boqian, 1990, p.82.

<sup>3</sup> The Majiayao site at Dongxiang Linjia, in Gansu uncovered a knife, according to spectrographic analysis it is a tin-copper alloy, and is dated to the late Yangshao period; A portion of a copper knife was found at a Machang site from Yongdeng Jiangjiaping in Gansu. KGXB 1981:3, p.272.

<sup>4</sup> Sun Shuyi, Han Rubin, KGXB 1981.3, pp.287-290; Tong Zhuchen 1983, pp.1-13.

<sup>5</sup> An Zhimin, 1981, p.281; Yan Wenming, 1984 p.36-44; Zhang Zongpei, 1990, pp.231-9; An Zhimin, 1993, pp.1110-19.

<sup>6</sup> KG, 1975.5, pp.302-9, 1983.3, pp.199-205.

with deep sunken grooves. Symmetrical shards of turquoise were found in the tomb near the *ge*, and one may assume that the turquoise was originally inlaid into the sunken grooves. This bronze weapon was delicately cast, and placed together with the bronze vessels in the tomb. Hence, this new material, bronze, a copper-tin alloy, was used to cast objects used in the context of both ritual and war. The appearance of assemblages of bronze weapons, like the bronze vessels, is saturated with ritual significance. In comparison, the small bronze tools were cast relatively crudely. Historians have concluded therefore, that "The nation focused on sacrifices and military concerns, revealing an interrelationship of worship, politics and military matters which can be traced back at least to the Erlitou period".<sup>7</sup> However, the types of bronze weapons found in the tombs of the third stage of the Erlitou period were limited to *ge*, *yue* and arrowheads. Bronze weapons did not appear in the tombs as frequently as jade weapons did. According to several calculations, at least eight Erlitou tombs contained jade weapons in contrast to only two tombs with bronze weapons.<sup>8</sup> The Neolithic tradition of burials including jade weapons was obviously

<sup>7</sup> Du Zhengsheng, 1992, p.206.

<sup>8</sup> Refer to Du Zhengsheng, 1992, p.212.

Table 5:1 Tombs containing bronzes and jades from Erlitou

Tomb no.	Period	Jade	Bronze	Pottery	Reference	Notes
80-81 IIIM5	II (early)			<i>dou, jue</i> , flat bottom <i>gui</i> , 2 <i>gu</i>	KG 1984:7, 584	80-81: 1980-81 excavation, III: III area of excavation.
81 VM5	II (late)			<i>ding</i> , 2 <i>gui</i> , <i>he</i> , <i>guan</i>	KG 1984:1,37	lacquer <i>gu</i>
80-81 IIIM3	II (late)			<i>guan, gui</i> , <i>dou</i> , high collar <i>guan</i>	KG 1984:7,584	
81 VM4	II (late)	column-shaped jade pendant	zoomorphic bronze plaque, inlaid with turquoise	2 shards, <i>he</i>	KG 1984:1,37	lacquer objects 4
82 IXM4	II (end)	column-shaped jade <i>yue</i>	<i>ling</i> bell		KG 1985:12,1094	disturbed
73 III Yao K1	III	knife, <i>zong, ge</i> , 3 jade pieces		6 shards	KG 1975:5,305-6	<i>jia</i> , knife, <i>zong</i> , possibly a tomb
75 VIK3	III	pendant, <i>ge</i> , <i>yue</i>	<i>qi, ge, jue</i> , 2 round disks	5 shards, <i>he</i>	KG 1976:4,259	cowrie, bone beads
75 VIK4	III	zoomorphic jade pendant	bronze plaque inlaid with turquoise		KG 1976:4,259	stone <i>qing</i>
75 VIK5	III	<i>yue</i>			KG 1976:4,259	
80 IIIM2	III	<i>jia, yue</i>	2 <i>jue</i> , 2 knives	<i>he, jue</i> , flat bottom <i>gui</i> , 4 shards	KG 1983:3,202	lacquered coffin, carved lacquer object

maintained during the Erlitou period. Moreover, in the Erlitou period bronze weapons were not as important as bronze vessels in the tombs as evidenced by the greater quantity and more common occurrence of the bronze vessels. Although, the technical difficulties encountered when casting bronze vessels must have been greater than when casting bronze weapons, the new material bronze was more commonly used to form vessels than weapons.<sup>9</sup> Therefore, at least in the context of the burial system of the Erlitou period, ritual was more important than warfare. Prior to this, during the Neolithic period, ritual objects took the form of pottery vessels, and weapons were fashioned of jade. When bronze was first used during the Erlitou period, bronze

80 VM3	III	yue, 2 zhang, jade pendant		jue, he, guan 2, gui, shard, single handle guan	KG 1983:3,201	lacquered coffin
82 IXM5	III	yue		he	KG 1985:12,1094	disturbed
82 IXM11	III	jade, stone fu		shards	KG 1985:12,1094	
75 Sijiaolou	III	7 hole jade knife, zhang, yue, pendant	jue	shards	KG 1978:4,270	possibly a tomb
73 IIIM214	IV			gui, guan	KG 1975:5,304	
84 VIM6	IV	pendant	jue	he, shards	KG 1986:4,319	
84 VIM9	IV	pendant	jue, jia	he 2, gui, large mouth zun, guan	KG 1986:4,319	lacquer gu
84 VIM11	IV	qi-bi, jia, knie, jade pendant	jue, inlaid bronze plaque, ling bell	he, jue	KG 1986:4,319	lacquer box
81 VM6	IV	jade, stone yue		large mouth zun, narrow mouth gang narrow mouth weng	KG 1984:1,38	disturbed
81 VM2	IV (perhaps later)				KG 1984:1,37	1 adult, 1 child
84 VIM3	post IV			guan, gui, dou, shards	KG 1986:4,318	

<sup>9</sup> There are at least eight examples of bronze *jue* from the third stage of the Erlitou period (Chen Fangmei, 1987, pp.51-3), and among the weapons there are only 2 *ge* and a single *yue-qi* dated to this period.

vessels were more important than bronze weapons. This phenomenon continued into the Erligang period.<sup>10</sup>

<sup>10</sup> In total there are 17 tombs dated to the Erligang period from Shang Cheng at Zhengzhou which contained bronze, but only two of them include bronze weapons, while four include jade weapons. (Du Zhengsheng, 1993, p. 213, table 2.)

Table 5:2 Tombs with jade and/or bronze from Shangcheng, at Erligang, Zhengzhou

Tomb no	period	jade	bronze	pottery	notes	reference
Huangyi 75 C8M32	Lower Erligang		<i>jue</i> with bowstring decor <i>jia</i> with bowstring decor	<i>li, jia</i> , cover, <i>gui</i>	Huanghe Hospital;excavated 1975	ZYWW 1981:2,1
Huangwei 75C8 M39	Lower Erligang	broken jade 2 <i>ge</i>	taotie <i>jia, ding</i>		Huangwei hui Kexue Yanjiusuo	ZYWW 1981:2,2
Zhongyi 71	Lower Erligang		<i>he, jue</i>		Zhongyi Yanjiusuo	ZYWW 1981:2,2
Bai55M 2	Erligang period I/II	pendant, 2 turquoise ornaments	<i>lei, ding, jia, jue, pan</i>	帶珠圓shards	Baijiazhuang ivory <i>gu</i> 1,	WW 1955:10,25
Bai55M 3	Erligang I/II	jade 2 <i>huang, jue</i>	<i>jue, 2 ding, 2 jia, 2gu, ding, lei, jue</i> spout	shards	1 ivory comb	WW 1955:10,25
Ming 56 M148	middle period	(2 jade ornaments)	<i>jue</i>	<i>dou, gui, gu</i>	Minggong Rd shell bone ornament	WW 1956:10,50
Ming 56 M146	middle period	jade	bronze			WW 1956:10,50
Er 1979	Upper Erligang	jade pendant	<i>jue, jia</i>		Erligang	ZYWW 1982:4,29
Zhang 1974	Upper Erligang		2 <i>fang ding, li</i>	large mouth <i>zun, dou, weng, guan, yan, hu, gui</i>	Zhangsainan, possibly a tomb, stone mortar and pestle, stone <i>fu</i>	WW 1975:6,64
Ren54 M25	Upper Erligang	jade ornament	<i>jue</i> , knife, arrowhead	glazed <i>zun, jia, gui</i>	Renmingongyuan	WW 1954:12,84-5
Ming 65 M2	Upper Erligang	<i>ge, huang</i> , 2 pendants	2 <i>jia, 2 jue, ding, gu</i> , knife, <i>ge</i>	glazed <i>zun, gui</i> , 2shards	cinnabar	KG 1965:10,500
Ming 65 M4	slightly later than M2	<i>huang</i> , jade ornament	<i>jue, gu</i>	shards		KG 1965:10,500
Bei 27; 1982M4	Upper Erligang	jade <i>ji</i>	<i>jue</i>	<i>jia</i> 2, <i>dou, jue, li</i>	Bei 27 Road, originally Minggong Road, tomb of a woman	KG 1986:4,322
Bei 27; 1982M1	Upper Erligang	3 jade <i>chan</i> , 3 jade <i>ge</i> , 3 jade pendant, jade <i>bi</i>	3 <i>jia, ding, jue, 2 gu</i> , bronze fragment, knife	3 shards		WW 1983:3,67-74
Bei 27 82M2	Upper Erligang	jade <i>ding</i> , 2 pendants	<i>jia</i> 2, <i>jue, gu</i> , knife	geometric hard body <i>zun</i> , 2 shards		WW 1983:3,74-76
Bei 27 82-83M4	Upper Erligang	jade <i>ji</i>	<i>jue</i>	2 <i>jia, dou, jue, li</i>	dog sacrifice in waist pit	KG 1986:4,332
Ren 53 M15	Late	<i>huang, ge</i>	<i>yue, ge</i> , bronze fragment			WW 1954:6,33

To sum up, bronze weapons emerged during the period from Erlitou to Erligang at this time, however, both bronze vessels and jade weapons were quantitatively more essential than bronze weapons. This phenomenon did not change until the Late Shang period.

A critical change occurred during the Late Shang period in regard to bronze weapons. Bronze weapons became much more significant in quantity and importance than jade weapons as evidenced by the tomb furnishings. *Fenghuizi* mentions that a jade weapons age preceded the age of bronze weapons. During the periods of Xuanyuan, Shennong and Hexyu, the weapon was made of stone.....During the period of Huangti, the weapon was made of jade.....During the period of Yu, the weapon was made of bronze. 軒轅神農赫胥之時,以石爲兵,.....至黃帝之時,以玉爲兵,.....,禹穴之時,以銅爲兵.<sup>11</sup> The popularity of jade weapons during the Neolithic period and the period from the Erlitou to Erligang, however, cannot compare with that of bronze weapons in the tombs during the Late Shang period.

According to the calculations by Chen Zhida, archaeologist on the Anyang archaeological team, by 1987 about 200 examples of jade weapons had been excavated from the Anyang area, including about 170 *ge*, 4 *mao* spearheads, and about 20 *yue*.<sup>12</sup> In contrast, about 2800 examples of bronze weapons had been excavated,<sup>13</sup> and about 830 examples of bronze vessels.<sup>14</sup> Bronze weapons were frequently buried in the tombs. Proportionately, the number of bronze weapons is about 14 times that of jade weapons and the number of bronze weapons is about three times that of bronze vessels.

The bronze weapons of the Late Shang period increased in quantity, and their role differed from that of the jade weapons of the Neolithic period. The transformation from the use of jade to the use of bronze for weapons, differs not only from the Erlitou to the Erligang period when the jade weapons continue to signify high rank. Some of the Late Shang bronze weapons were decorated and inlaid. Like the jade weapons, they may have been buried in the tombs of the higher ranking military officers to represent their status. Some of the bronze weapons could represent a facet not brought out by the jade weapons, for they did not necessarily signify high rank, but were also buried with lower ranking military officers or with ordinary soldiers. Jade weapons on the other hand were not found in smaller burials. Owing to this change in

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<sup>11</sup> *Yue Jue Shu* Chapter eleven.

<sup>12</sup> Beijing 1994, pp.331-7.

<sup>13</sup> Beijing 1994, p.308.

<sup>14</sup> Beijing 1994, p.268.

the role of bronze weapons, the utilitarian bronze *ge* 實用戈 has been differentiated from the *mingqi* bronze *ge* 明器戈 or surrogate *ge*. The transformation from a ritual *ge* to one made strictly for burial purposes only indicates that social and political changes were occurring. The popularity of the bronze weapons in the tombs during the Late Shang period could reflect the formation or increase of a certain class which required a burial to include bronze weapons and which for reasons of social or political status of this class received a degree of ritualized burial. At the same time, the high ranking members of the military had their own ritual code for burial, producing a situation where weapons and status were even more subtly differentiated.

Scholars therefore have concluded that there exists a correlation between the development of a nation and the emergence of a military class, whose primary function was to protect that nation.<sup>15</sup> This specialized warrior class, whose beginning can perhaps be observed during the third stage of the Erlitou period, had become firmly established by the Late Shang period.

The increase in the quantity of bronze weapons to the point where they become a common burial object accords with the battles recorded in the oracle bones. There are at least 2000 references to war among the oracle bones dated to the reign of Wu Ding.<sup>16</sup>

## 5.2. The expanding regional distribution of bronze weapons in Late Shang

Scholars have discussed the development of China's bronze culture and its regional distribution.<sup>17</sup> The emergence of bronze weapons can be traced back to the Erlitou period. The distribution of the Erlitou cultures has been categorized into four areas and six separate bronze cultures which include: the Erlitou culture,<sup>18</sup> the Zhanghe Huiwei-type proto-Shang culture,<sup>19</sup> Yueshi culture,<sup>20</sup> Xiajiadian culture,<sup>21</sup> Zhukaigou culture,<sup>22</sup> and Huoshaogou culture<sup>23</sup>. In addition to finds of complete II and III type *ge*, *yue*-type *qi*, type I knives, and arrowheads from the Erlitou culture, all other finds are small tools and fragments, and their distribution is scattered over a large region.

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<sup>15</sup> Du Zhengsheng, 1992, p.204.

<sup>16</sup> Fan Yizhou, 1991, pp.175-239.

<sup>17</sup> Li Boqian, 1990, pp.82-91.

<sup>18</sup> Li Boqian, 1981, pp.25-29; 1986, pp.41-47.

<sup>19</sup> Zou Heng, 1980, pp.95-182

<sup>20</sup> Yu Haiguang, 1982, p.79

<sup>21</sup> Li Boqian, 1990a, pp.150-170.

<sup>22</sup> Liu Guanmin, Xu Guangji, 1981; WW 1985.5, pp.77-8.

<sup>23</sup> Beijing 1979a, p.142. Beijing 1990b, pp.167-170.

The limited range of types and forms of bronze weapons continued throughout the Erligang period although their distribution was more widespread, including the cultural regions of the Central Plains,<sup>24</sup> the North,<sup>25</sup> the Ganqing, the Bashu,<sup>26</sup> and the middle<sup>27</sup> and lower basin of the Changjiang.<sup>28</sup> More complete forms and larger bronze weapons were the type II and III *ge*, type I *yue* and arrowheads which were excavated in concentrated areas such as Erligang, Zhengzhou in Henan, Panlongcheng, Huangpi in Hubei and Gaocheng, Taixi in Hebei.

These large-sized, mature forms of bronze weapons were widely distributed by the Late Shang period: north to Liaoning; east to Shandong; south to Guangdong; southwest to Sichuan and northwest to Ordos.

### **5.3. Imbalances in the distribution of Late Shang bronze weapons and Anyang as one of the largest centres**

The formation of the Anyang centre may consist of an inner and outer development. From the different styles of bronze weapon, the distribution of Late Shang bronze weapons can be divided into five regions: the Anyang area, the East, the West, the South and the North. The major concentration of Late Shang bronze weapons have been excavated from the Anyang area, making it the greatest centre for the burial of Late Shang bronze weapons in tombs, as stated above (chapter III, p.154-168). In contrast, the Late Shang bronze weapons from other regions number less than one hundred. The disproportionate distribution of the Late Shang bronze weapons reveals the existence of a close relationship between bronze weapons and the metropolitan centre. The workshops in the Anyang area for bronze weapons are another factor when considering this disproportionate distribution. Three bronze foundries in the Anyang area have been located: Miaopu<sup>29</sup>, Xuejiazhuang<sup>30</sup> and Xiaomingtun.<sup>31</sup>(map 3:1) At Xiaomingtun although moulds for bronze vessels have been excavated, the majority of moulds found were for casting tools and weapons.

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<sup>24</sup> Zhengzhou Erligang ( see table 5:2 ) 、 Taixi (Beijing 1977b), Panlongcheng (WW 1976.1,2), Beicun and Yijiabao types see Li Boqian,op.cit.,p.85.

<sup>25</sup> WW 1977.11.pp.1-8.

<sup>26</sup> Lin Chun, 1984; Yu Weichao, 1980, pp.1-12; KGXB 1987:2, pp.227-254; KG 1959:8. pp.404-410. Beijing 1990, p.254.

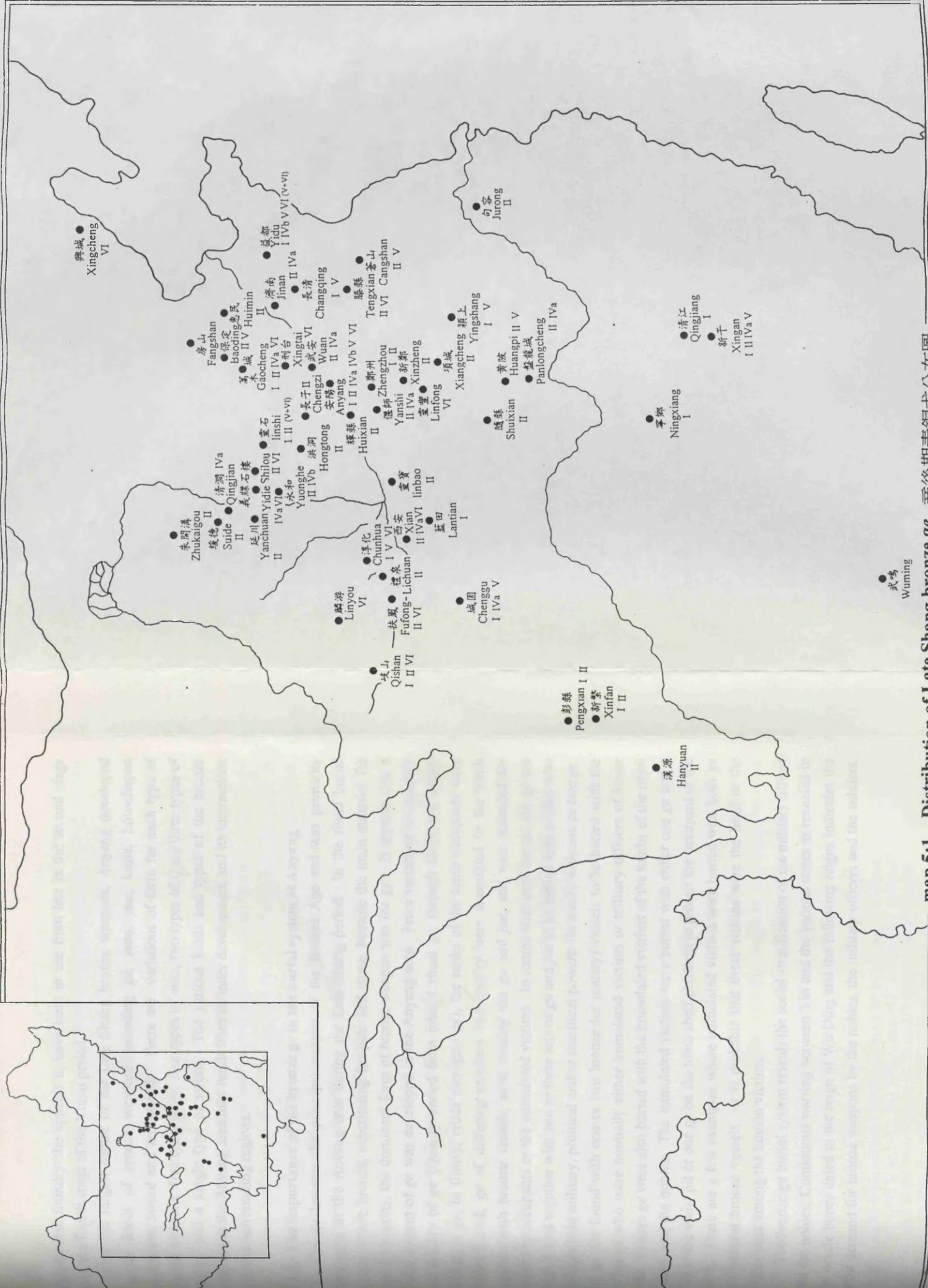
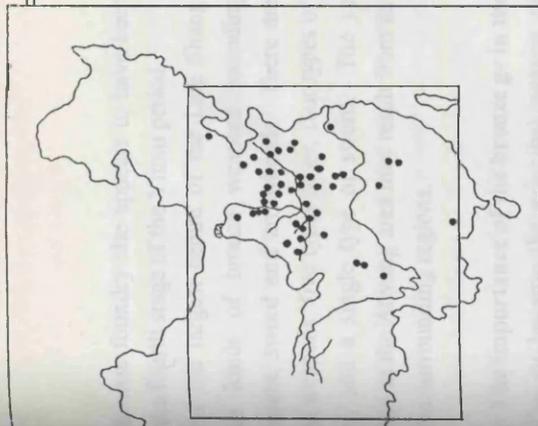
<sup>27</sup> Li Boqian, 1981b, pp.133-143; KG 1989.8a, pp.679-629; 1989.8b, pp.673-678; WW 1975.7, pp.51-71.

<sup>28</sup> KGXB 1958.1, pp.7-23; KG 1985. 4, pp.289-302, 335; KGXB 1978.1, pp.109-137. Beijing 1990b, pp.104-106.

<sup>29</sup> Beijing 1987, pp.11-60.

<sup>30</sup> Zhou Dao 、 Liu Yidong, 1963, pp.213-216.

<sup>31</sup> Beijing 1987, pp.66-69.



map 5:1 Distribution of Late Shang bronze weapons 商後期青銅戈分布圖

武鳴  
Wuming

This bronze foundry site appears to have been in use from late in the second stage until the fourth stage of the Yinxu period.

As the largest centre of the Late Shang bronze weapons, Anyang developed various kinds of bronze weapons including *ge*, *mao*, *yue*, knife, bow-shaped implement, sword and arrowheads. There are variations of form for each type of bronze weapons: five types of *ge*, four types of *mao*, two types of *yue*, three types of knives, and a single type of sword. The various kinds and types of the bronze weapons at the Anyang area may result from its inner development and its interactions with the surrounding regions.

### 5.3.1. The importance of the bronze *ge* in the burial system at Anyang

The *ge* became the principal weapon of the Bronze Age and was primarily developed in the Anyang area during the Late Shang period. In the ritual burial system where bronze, substituting for jade and stone, became the main material for burial weapons, the dominant form of bronze weapon was the *ge*. It appears that a burial system of *ge* was developed in the Anyang area. From variations of quantity and quality of *ge* (Quality varied from inlaid ritual *ge*, through thick and heavy utilitarian *ge*, to flimsy, crude surrogate *ge*), the ranks of the tomb occupants were differentiated, *ge* of differing numbers and quality were assembled in the tomb together with bronze vessels, most notably the *gu* and *jue*, and were intended for either the occupants or the immolated victims. In tombs with over ten *ge*, the *ge* are often found together with two or three sets of *gu* and *jue* to be buried with nobles who perhaps held military, political and/or sacrificial powers. In tombs with one or two *ge*, the *ge* are found with one or two bronze (or pottery) vessels to be buried with the occupant who were normally either immolated victims or military officers of lower rank. Bronze *ge* were also buried with the immolated victims of the tombs of the royal family and the nobles. The immolated victims were buried with either one *ge* and a dog in the waist pit or one *ge* on the tomb shelf platform to protect the occupant of the tomb. There are a few examples where immolated victims were buried with both *ge* and several bronze vessels. It is probable that these victims were the head or the higher rank among the human victims.

The bronze *ge* burial system reveals the social stratification of the military officer and the nobles. Continuous warring between Yin and the various states as revealed in the oracle bones dated to the reign of Wu Ding and the following reigns indicates the great demand for bronze weapons by the nobles, the military officers and the soldiers.

These groups patronized the development of the bronze weapons and are estimated to have accounted for one person in five out of the total population.<sup>32</sup>

In the tombs of nobles, of military officers and of immolated humans where the burial furnishings included bronze *ge*, the latter was not only a weapon but a finely crafted work of art. The inlay technique was applied to bronze weapons before it appeared on the bronze vessels. The type II and III *ge* were often designed and inlaid with birds or *kui* dragons. Not only were they finely cast, they often appeared in groups of two, five, ten or over ten pieces buried with high-ranking military officers. Therefore, the jade *ge*, which had been as important as the bronze *ge* during the periods from the Erlitou to the Erligang, became far less common than the bronze *ge* in Late Shang tombs, while the bronze *ge* became the most important burial weapon. The popularity of the bronze *ge* is revealed in the three principal forms of the weapon: the ritual *ge* with its delicate design; the utilitarian *ge* with a thick sharp blade-edge which was buried together with the occupant of the tomb or in an accompanying burial; and the crudely cast surrogate *ge*, found in tombs of lesser ranking officers. There is a clear distinction between the ritual *ge*, the utilitarian *ge*, and the surrogate *ge*, while persons of differing social status were allowed use of the *ge*. This resulted in the numbers of bronze *ge* far exceeding those of jade and stone *ge* so that the bronze *ge* became the most common weapon in the tombs of the Late Shang period. According to calculations by Chen Zhida up to 1987, a total of 710 bronze *ge* had been excavated from around the Anyang area in contrast to 170 jade *ge*. The development of the bronze *ge* in the Late Shang established the bronze *ge* as the principal weapon from the Western Zhou period to the end of the Bronze Age. The bronze *ge* as the main weapon of the Bronze Age differs from bronze cultures outside China in which either the bronze spear or the bronze axe accounts for the major weapon form. Among the bronze *ge*, the Type III *ge* with its rich turquoise inlay is the most ritualized of the *ge*. During Yinxu periods III and IV, the type III *ge* was commonly fashioned into coarser burial *ge* for burial with the lower class of military officers, probably the result of an internal development at Anyang. The ritual *ge* is the most conservative in its tradition. During Yinxu period I and II, the type III *ge* with the arched *nei* was often decorated with either *kui* dragon or bird design and was sometimes inlaid. It was contemporary with another form of the ritual *ge*, the type II *ge* which was also often decorated with *kui* dragon and was sometimes inlaid. These were often found together with bronze vessels within the tomb. These two types of

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<sup>32</sup> Among the 49 tombs excavated at Hougang during 1971-72, 11 tombs contained weapons ( KG 1972.3, pp.14-15; KG 1972.5, pp.8-19 ) ; of the 943 furnished tombs excavated in the Western sector of Yinxu, 174 tombs contained weapons, about 5.42:1 ratio. Song Zhenhao, 1994, p.109.

ritual *ge* succeeded those of the Erlitou and Erligang periods. However, the development of the bronze weapons at Anyang was not limited to internal developments. The great variations of forms and decoration were the result of active interaction with the surrounding regions particularly with the north, southwest, and the south. This is particularly apparent with the triangular-blade *ge*, the *mao* spearhead, the *yue*, the knife, sword, and the bow-shaped implement. The origin of the first three types appears to be related to the south and southwest, while the development of the latter four types is tied in with the north.

### 5.3.2. The relationship of Anyang and the North

The many forms and types of weapons at Anyang are the result of mutual interaction or mixing of northern elements with those from Anyang. The socketed *ge* serves as a good example of this relationship. The ritual *ge* within the Anyang bronze weapons system was very conservative, while the more utilitarian *ge*, important for the preservation of life, absorbed stimulation from the outside, transforming in a variation of forms. Late in Yinxu period I to period II a new form—Type IV *ge*—appeared, characterized by its socket, and was popularized between Yinxu period II to period III. The development of this form of the *ge* is possible due to the north's influence on Anyang, stimulating it to create this new form by Anyang itself.

The north had a penchant for socketed forms, frequently used on the *fu-yue* type, while at Yinxu the socket appears as a late variation on the common and indigenous forms of *ge*. Is it possible that the socketed *ge* is a result of northern influence? A look at the Yinxu bronze weapon system will help answer this question.

At Anyang, the socketed *ge* differs from the socketed *fu-yue*, for the socketed *ge* appears in a variety of forms and is quite common. The variations in the forms of the socketed *ge* match those of the *ge* with *nei*. They carry straight *nei* and curved *nei*,<sup>33</sup> and there are *ge* with *hu*,<sup>34</sup> while the most common form is a straight-*nei* socketed *ge*. The popularity of the socketed *ge* is best exemplified by those from the Xibeigang tomb M1004. There were 72 *ge* recovered from this tomb, while the majority, 70 in all are socketed *ge*.<sup>35</sup> A cast inscription of the character  $\psi$  is found on the *nei* of many of these *ge*. On many the inscription is unclear as the pieces are covered with a heavy patina. A socketed *ge* from Xibeigang tomb M1001 also carries the same inscription.<sup>36</sup> Li Boqian, believes that “ $\psi$ ” on the *ge* is identical to “ $\psi$  shih” on oracle bone by quoting the text from oracle bone “Yufeng gathered soliders to invade  $\psi$  shi”.

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<sup>33</sup> Li Chi, 1977, p.402, pl.27;57.

<sup>34</sup> Yang Xizhang 1979, p.91, fig 66.2.

<sup>35</sup> Liang Siyong and Gao Quxun, 1970, p.155.

<sup>36</sup> Liang Siyong and Gao Quxun, 1970, p.115.

Guo Moruo annotated “ $\psi$ ” on oracle bone as a place where the army stayed. Di Yi used to traverse  $\psi$  on his way to attack the Ren Fang. This place should be east of Anyang and west the “ $\psi$ ” army could be the royal army particularly related to the occupant of M1004 of Lingzi.<sup>37</sup> From the number of socketed *ge* inscribed with “ $\psi$ ” found at Anyang Xibeigang M1004. Another socketed *ge* with the same inscription was found at Chujiayu, Shilou in Shanxi.<sup>38</sup> The Shilou region is an important area for weapons of the northern complex so this find shows that this region have an intimate relationship with Anyang.

While the Type V *ge*, the socketed *ge* achieve a fair degree of popularity at Anyang, present materials from Yinxu would indicate that the socketed *ge* was unable to replace the more traditional form, that of the *ge* with *nei*, and could not compete in popularity with the latter. For example, the 1937 to 1948 excavations of Xiaotun uncovered nineteen tombs, and a few offal pits. Among the finds were 36 *ge* of which only six were socketed *ge*.<sup>39</sup> The 1969 to 1977 excavations of the western sector of Yinxu excavated 166 tombs containing bronze weapons with over 207 *ge*, of which only 26 were socketed *ge*.<sup>40</sup> M5 contained 91 *ge*. Only two of them were socketed *ge*.<sup>41</sup> Among the single tombs that contained *ge*, often there are no socketed *ge*, or at the most one or two examples (table 5:1). In other words, the find of a large number of socketed *ge* in the Xibeigang tomb M1004 remains an unusual exception. However, the recently excavated M160 at Guojiazhuang recovered a total of 118 bronze *ge*. Except for the few *ge* with *nei*, the majority of the *ge* are socketed.<sup>42</sup> The tomb perhaps belonged to a higher ranking member of the military elite. Perhaps in the Yinxu period III the socketed *ge* was utilized by some members of the military elite, while generally speaking it remained uncommon. In most tombs the principal form is that of the Type III *ge*, the *ge* with curved-*nei*. The socketed *ge* occurs only in the Late Shang and early Zhou. The socketed *ge* could not rival the *ge* with *nei* at Yinxu. From the Western Zhou to the Warring States period, the *ge* maintained its position as the principal weapon of the Central Plains. While there were many forms and variations of the *ge*, the socketed form was rarely used and eventually discarded, and the majority of developments are seen in the the *ge* with *nei*.<sup>43</sup>

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<sup>37</sup> Guo Moruo 1993, p.581.

<sup>38</sup> Yang Shaoshun, 1981b, p.49.

<sup>39</sup> Li Ji 1949b, p.336.

<sup>40</sup> Yang Xizhang, 1979, p.88.

<sup>41</sup> Beijing 1980f, pp.107-8.

<sup>42</sup> KG 1991.5a, fig.390.

<sup>43</sup> Hayashi Minao, 1972, pp.14-72; Ma Chengyuan 1988, pp.44-54.

In an overview of the weapon forms from Yinxu, it appears that the socket is more likely a foreign than an indigenous element.<sup>44</sup> While some Yinxu *ge* do carry sockets, these are not the most prevalent types, nor do they attain the same degree of popularity. The Yinxu *yue* seldom has a socket, distinguishing it from the socketed *yue* of the north, and giving further evidence that the socket is a foreign element in the Yinxu culture.

The *yue* retains its original character and the majority are hafted with a *nei*. What was Yinxu's attitude towards the north in the development of the *yue*-axe? Present material would indicate that there was a greater interest in the central plains tradition than in the northern tradition. While one socketed *yue* was excavated together with a *yue* with *nei* from Dasikong cun M539 (fig 5:2)<sup>45</sup> at Anyang, the majority of Yinxu *yue*-axes have a straight *nei*, bound to the shaft by cording and not the socketed form. This may indicate that the socketed *yue* from the north arrived at Anyang during the Late Shang period. There are a total of 30 *yue*-axes excavated from Yinxu.<sup>46</sup> All the *yue*-axes shafted by means of a *nei*.

Was Yinxu unaware that the north used socketed forms of the *yue*? This is not likely, for the Dasikong M24 at Anyang contained a socketed *ge* of northern type related to the *yue*-axe.(fig 5:3)<sup>47</sup> However, it is the only example of its type found at Anyang. The socket is as long as the blade width, typical of northern socketed-form weapons. However, the blade is similar to the double-bladed *ge* commonly found in the Central Plains, differing from the *yue*. Gao Quxun is of the opinion that the blade is an amalgamation of the long rectangular bladed socketed *fu* with a *ge* tip.<sup>48</sup> Lin Yun opines that since the tip and edges aren't bladed that it belongs among the socketed picks (盞內啄) of the eastern group of the northern complex.<sup>49</sup> Regardless, Yinxu was well aware of the socketed-form of weapons, but showed little interest in them.

Small socketed *fu*-axes were recovered from the knife and axe burials at Xibeigang. They are 5 and 10 cm in length, and 5 cm in height, with about a 3 cm socket length, accounting for about half the length of the blade width. The blades are embellished with raised thread-lines.<sup>50</sup> There are three similar blades in the Fujii Yurinkan Museum, Kyoto, which are supposed to be from Anyang.<sup>51</sup> There is

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44 Lin Yun has expressed a similar opinion. See Lin Yun, p.135.

45 KG 1992.6, p.513, fig 7.

46 Chen Fangmei, 1997.

47 Ma Dezhi, 1955, p.50.

48 Gao Quxun, 1958, p.716.

49 Lin Yun 1987, p.142.

50 Thanks to Gao Quxun for providing this material.

51 Umehara, pl.18:5-7

another example in the Werner Jannings Collection, as described by Max Loehr, however the piece is rather crude, and Loehr proposes the piece to pre-date Anyang.<sup>52</sup> It should be noted that among the finds from the Xibeigang knife and axe tombs, this type numbers around 719 pieces.<sup>53</sup> While Yinxu rarely uses a socketed-form of the *fu-yue*, they were not completely unfamiliar with the ring or socket forms. It must not be forgotten that these two separate hafting traditions were synchronic, that of the Yinxu *yue* with *nei* and the northern socketed *yue*. Is it possible that these beheaded and immolated victims were northerners? Hence they appeared at Yinxu in a more unusual manner, and although they have been recovered in great ~~in~~ number, they are concentrated in the *fu-yue* tombs in the royal cemetery at Xibeigang, and are not seen in other tombs. However, this small form of the *fu-yue* is not seen in the north, and it is difficult to explain it as a northern tradition brought to Yinxu. Only the small relief-lines on the blades are similar to a northern style. The appearance of these small *fu-yue* complicates finding an origin for the socketed *yue*, however present materials point to two separate traditions, one of the *nei* and one of the socket, and the socketed northern *yue* with rectangular *nei*, the type II *yue* were possibly influenced in form by the Yinxu *yue* with *nei*. This is perhaps due to the attributes of the *yue*. The *yue* symbolizes military authority. The intimate relationship between the *yue* and the military power to command perhaps had a stabilizing effect on the *yue* form, so it remained rather conservative when faced with outside influences such as the socketed form of hafting.

In contrast, the *ge* was a much more common form of weapon as well as being indigenous to the Central Plains, appearing in both large- and small-scale tombs. Boldly borrowing, experimenting, and absorbing the socket (a possible foreign element), the openness of the *ge* at Yinxu did, however, have its limitations, so that the socketed *ge* never completely replaced the *ge* with *nei*. In the two to three hundred years of the Late Shang and early Zhou, after much experimentation, it was probably found that a weapon hafted in this way could easily turn on the shaft, losing its effectiveness. Thus socketed method was eventually abandoned.

Exemplifying the relationship between Anyang and the north, most northern weapon forms, like the animal-pommel curved-back knife are additions to the original Anyang system, except for the socketed *ge* which was probably created under northern influence, but which was eventually discarded.

The curved-back knife appears in a different context at Yinxu from that in which it is found in the north, where it was used to invoke fear as a burial furnishing. Fu Hao's tomb included an exquisite animal-pommel knife, 32.7 cm in length, the longest

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<sup>52</sup> Loehr, 1956.

<sup>53</sup> Gao Quxun, 1967, p.355.

of all extant animal-pommel knives(fig.4:24).<sup>54</sup> Tomb 1713 a fairly large sized undisturbed tomb in the Western sector at Yinxu also included an animal-pommel knife(fig.4:25). This tomb included two sacrificial victims, and 17 ritual vessels. Many of the vessels were inscribed. There were also two *yue*-axes, two large knives, 30 *ge*, and 30 *mao*. From the appearance of the two *yue*-axes, archaeologists have conjectured that the tomb belonged to a high ranking military official.<sup>55</sup> The animal-pommel knife from the tomb has a length of 30.5 cm.<sup>56</sup> The knife was recovered from the upper ledge of the tomb, but archaeologists have proposed that it was originally placed on the coffin from where it slipped to the shelf. From these two examples, this type of weapon appears to have been important for a few high-ranking military officers. Some scholars have proposed differences in rank and status according to the length and quality of the blades.<sup>57</sup>

The animal-pommel curved-grip knife plays a unique role in the small tombs at Yinxu. Three examples (fig.4:18-20) came from M20 chariot burial at Xiaotun, forming an assemblage with other weapons, and perhaps these knives served as a personal defence weapons for the chariot captain, archer, and driver.<sup>58</sup> These knives are 32, 31.4, and 30.1 cm in length, respectively. In light of the finds at Yinxu, it is unusual for the charioteers to carry animal-pommel knives. There have been other chariot burials at Yinxu, such as Dasikong tomb 175,<sup>59</sup> and M43 in the western sector at Yinxu.<sup>60</sup> No animal-pommel knives were found in these tombs, hence it appears that it was not common practice to bury animal-pommel curved-grip knives in chariot burials. M20 is unique for its time: was it possible that this type of knife was an accoutrement of northern charioteers?

The three other examples of this type of knife were excavated from Xibeigang: tombs nos. 1537(fig.4:21), 1693(fig.4:22), and 1008(fig.4:23), all of which are examples of a special type of knife-and-axe pit.<sup>61</sup> There are about 80 pits of this type in the royal cemetery. The victims in them are headless, and the burial furnishings are limited to bronze knives, *fu*-axes, and *uhet*stones. Three of the pits each include an animal-pommel knife. The quality, length and weight of these three knives differ from those found in the large tombs. They are 18.2 cm, 19.4, and 17.8 cm in length respectively, and no piece weighs over 50 grams. They are comparatively crude in

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<sup>54</sup> Yan Yiping, pp.1-103.

<sup>55</sup> Yang Xizhang, Yang Baocheng, KG 1986.8, p.713.

<sup>56</sup> This knife belongs to Yinxu period IV, the form has changed to a straight back knife.

<sup>57</sup> Li Weiming, 1988, p.47.

<sup>58</sup> Shi Zhangru, 1950, pp.19-77.

<sup>59</sup> Ma Dezhi, 1955, pp.63-66.

<sup>60</sup> Yang Baocheng and Yang Xizhang, 1979, pp.57-61.

<sup>61</sup> Gao Quxun, 1967b, pp.369-372.

quality, perhaps indicating that they belonged to persons of particularly low rank? From Gao Quxun's analysis of the skeletons found at Xibeigang, it appears that they belong to different ethnic peoples.<sup>62</sup> How does one explain that of the six to seven hundred knives found in eighty pits only three are animal pommel knives?<sup>63</sup> More evidence is needed to provide an answer to these questions.

In conclusion if the appearance of the curved-back knife at Yinxu represents an imported type, then Yinxu can be considered to have maintained a degree of receptiveness towards outside influence, while maintaining a degree of selectiveness in which elements it absorbed. Yinxu appears to have held little interest in the sword forms (perhaps because the *ge* fulfilled the need for double-bladed weapons), while adding to its repertoire of the more commonly used knife forms, the primary form being the animal-pommel forms. Some are as exquisite as the example found in Fu Hao's tomb, while other very crude examples are found in the knife-and-axe pits with headless victims. Small alterations were made in these weapons, and by Yinxu period IV, the curved-back form of the knife was transformed into a straight-back knife. Nevertheless, the curved knife with a thickened back remains rare at Yinxu and did not replace the traditional form of the knife.

The bow-shaped implement also reflects a link between the north and the Central Plains, while the exact origin of this type of bronze remains unknown. A comparison of Shaanxi and Shanxi bow-shaped implements with those found at Anyang shows them to be of the same basic form, and are both dated to the late Shang period, while in terms of numbers this form to be much more common at Anyang. In both regions the bow-shaped implement is found in grave sites accompanied by Anyang style bronze ritual vessels. From present material, the origin of the bow-shaped implement is unclear, while it is present in both the Anyang and Shaanxi/Shanxi regions. Using the Type I bow-shaped implement as an example, distinguishing the Yinxu area as separate from the Shaanxi/Shanxi regions is less effective than to group them together as a single area, which contrasts to the Type II bow-shaped implement excavated in the more distant southern Siberian region.

### 5.3.3. The relationship between Anyang and the South and Southwest

The type III *ge* rarely appears following Yinxu stage III, being replaced by the type IV long-*hu ge*. The utilitarian *ge* appears to undergo a considerable change during this period, more so than other forms of weapons. There are already over ten examples of the long-*hu ge* at Anyang, including those found in M1713 and

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<sup>62</sup> Gao Quxun, *ibid.* p.359.

<sup>63</sup> See Yang Ximei, 1970.

Xibeigang M1003<sup>64</sup>, more than those found in other areas. On the other hand, scholars have already suggested that the long-*hu ge* which have been found in the Chenggu area and in the Xin'gan tomb and which are characterized by the blade and *hu* placed at right angles (fig.4:37-1) represents an even earlier form than those long-*hu ge* found at Anyang. These examples represent a transitional stage between the *ge* without a *hu* to one that has a *hu*.<sup>65</sup> The development of Anyang weapon forms such as the *yue* with *nei* and the spearhead appears to be linked to the south. This phenomenon will be discussed further below. The weapons at Xin'gan display an active degree of experimentation with the *ge* form as exemplified by the *gou ji* (fig. 4:30). It is possible then that development for the *hu ge* at Anyang was initiated by the south directly or via Chenggu. Since there are only single examples at both Chenggu and Xin'gan, the evidence is not yet strong enough to verify that these represent earlier examples than those from Anyang. Yet, the author is inclined to believe that in the mutual interaction between these areas, Anyang was influenced by the southern examples and out of them developed the type V *ge* establishing the major form of the *ge* for the Western Zhou and later.

In addition to the ritual *ge* and the practical *ge*, there is a third type of *ge*: type I *ge* with triangular-blade. This type represents a minor form of the *ge*, and indicates a receptiveness at Anyang perhaps to the influences of the Han River basin area in southern Shaanxi or perhaps farther to the Sichuan area.

From present archaeological materials, the triangular-blade *ge* appeared at Anyang no later than Dasikong period I as seen in the examples from Sanjiazhuang, Xiaotun (fig. 3:23),<sup>66</sup> and tomb 232 at Xiaotun (fig. 3:22).<sup>67</sup> Both of these two tombs have been dated to the early YinXu period,<sup>68</sup> and are no later in date than the examples that have been found outside Anyang, which are concentrated in three general regions. One of these regions is the area of the Jing and Wei including finds at Huaizhenfang, Lantian, Huanggou,<sup>69</sup> Hejiacun, Qishan,<sup>70</sup> Zhumazui, Liquan and Xiaofayi, Meixian.<sup>71</sup> The ritual vessels uncovered from these tombs are very similar to those at Anyang and are generally dated to the Late Shang period. The triangular-blade *ge* have also been found in the Hanzhong area, centered around Chenggu.

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64 Gao Quxun 1967a, pp.123-125

65 Li Xueqin, 1991, p.36.

66 Yang Xizhang, 1983, pp.126-32.

67 Shi Zhangru 1974, p.43.

68 Yang Xizhang, 1983, p.53.

69 Fan Weiqiu, 1980, p.25-27.

70 Dai Yingxin, 1976, p.53.

71 Wang Jiazhi, 1981, p.7, pl.2:5.

Several hoards of bronze vessels were found which included the triangular-blade *ge*.<sup>72</sup> The style of the bronze vessels is very similar to those from Yinxu, and they also have been dated to the Late Shang period, while they were exhumed in an uncontrolled excavation. A third region where the triangular-blade *ge* has been found is the Shu area, specifically Zhuwajie, Pengxian,<sup>73</sup> and Shuiguanyin, Xinfan.<sup>74</sup> However, there is a division of opinion among scholars regarding the dating of these finds. Some scholars of Shu culture such as Feng Hanji and Huo Wei have dated the finds to the mid or late Western Zhou, while others such as Tong Enzheng, Li Boqian, Yang Xizhang, and Lu Liancheng have dated the sites to the late Shang period. This polarization exemplifies the problem with dating the regional areas, as there is a great lack of archaeological evidence to support either view.<sup>75</sup>

Nevertheless, it is certain that the triangular-blade *ge* had appeared at Anyang as early as period I. Tong Enzheng's proposal for an Anyang origin is perhaps based on the fact that the triangular-blade *ge* from Anyang pre-dates its appearance in other regions.

However, in terms of the number of triangular-blade *ge* which have been found in the Anyang area, it is very possible that it is an imported form. On present calculation, there are approximately eleven examples of the triangular-blade *ge* in contrast to 700 to 800 other forms of the *ge* which have been recovered from Yinxu.(table 5:3)<sup>76</sup> The Type I, the triangular-blade *ge* represents a very insignificant type at Yinxu. Yang Xizhang has stated that if the triangular-blade *ge* was a form developed by the Shang, more examples should have been excavated from the Anyang area.

Table 5:3 Bronze weapons excavated from Yinxu

Site	<i>ge</i>	<i>yue</i>	<i>dao</i>	<i>mao</i>	bow shaped implement	D/I	reference
Gaolou zhuang M8	III 2		I 1			D	KG 1963:4, p.216
HOUJIA ZHUANG							
HPKM1004	II 2, V 70			II 731		D	Gao Quxun 1970
HPKM1001	II 10, IV 3, V 1					D	Gao Quxun 1962

<sup>72</sup> Tang Jinyu, 1980, p.212.

<sup>73</sup> Feng Hanji, 1980, p.28; Wang Jiazuo, 1961, pp.28-31.

<sup>74</sup> Zheng Boqing, 1959, p.408.

<sup>75</sup> The regional distribution of the triangular-blade *ge* has been discussed in articles by Yang Xizhang 1986, Li Boqian, 1983, and Huo Wei 1989, pp.254-5.

<sup>76</sup> Liang Siyong, Gao Quxun, p.316.

Site	<i>ge</i>	<i>yue</i>	<i>dao</i>	<i>mao</i>	bow shaped implement	D/I	reference
HPKM1003 pit	IV6, V1						Gao Quxun 1967a pp.123-125
HPKM1550	II 3, III 1, V 3						Gao Quxun 1970 pp.109-111
XIAOTUN							
M 18	II 2, III 7						KGXB 1981:4, p.493
M 164	III 1		III 1				Shi Zhangru 1972 p.12
M 20	III 2		III 3		2		Shi Zhangru 1970 pp.137-141
M 238	III 1		III 1				Shi Zhangru 1970 p.396
E16 pit	III 1, V 5		I 3				Li Chi 1949b
M 186			I 3				Shi Zhangru 1970 pp.59-60
M 101	II 1						Shi Zhangru 1976 pp.25-26
M 137	II 1						Shi Zhangru 1976 p.32
M 167	III 1						Shi Zhangru 1976 p.36
XIAOTUN							
M 232	I 1, III 5						Shi Zhangru 1973 p.43
M 270	I 1						Shi Zhangru 1976 p.156
M 331	II 5, III 1(jade blade)						Shi Zhangru 1980 p.151
M 388	II 5						Shi Zhangru 1980 p.250
M 333	II 1						Shi Zhangru 1980 p.174

Site	<i>ge</i>	<i>yue</i>	<i>dao</i>	<i>mao</i>	bow shaped implement	D/I	reference
WESTERN SECTOR OF YINXU **							
M 1713	IV30	I 2	II 1 III 2	IV30		I	KG 1986:8,p.712
M347	I 1						KGXB 1979:1, p.128
M355	I 1 III 2			2			KGXB 1979:1, p.145
M2793	I 1			1			KGXB 1979:1, p.145
M4	I 1						KGXB 1979:1, p.137
M372	I 1						KGXB 1979:1, p.137
M374	I 1, III 1		∨	1			KGXB 1979:1, p.137
DASIKONG NAN							
M25	III 6 V 1	I 1		1 jade <i>yeh</i> bronze <i>giao</i>	∨	D	KG 1989:7, p.592
M29	III 8					I	KG 1989:7, p.579
Miaopubeidi	∨						KG 1989:2, p.133
XUEJIA ZHUANG							
M3	II 1(Jade) III 3						KG 1989:2, p.133
M1	II 2						KG 1988:12, pp.1068-71
M6	III 3						KG 1988:12, pp.1068-71
GUOJIA ZHUANG							
M9	III 1, V 1						KG 1988:10, p.880
M1	II 1			1			KG 1968:8, p.715

Site	<i>ge</i>	<i>yue</i>	<i>dao</i>	<i>mao</i>	bow shaped implement	D/I	reference
Sanjiazhuang tomb 1	I 1	1					KG 1983:2, pp.127-8.
MANGZHANGLUOSHAN							
M1,	III 6, V 2						KG 1981:2, p.114
M6,	III 2						KG 1981:2, p.115
M5	II 8, III 40, V 2	4			6		Beijing 1980f pp.105-110
WUGUANDAMU							
E9	II 2, II 1				1		KGXB 1951:5, p.35
E13	II 2						KGXB 1951:5, p.36
E1	II 1						KGXB 1951:5, p.36
W8	II 1, IV 2						KGXB 1951:5, p.36
W1					6		KGXB 1951:5, p.37
W12	V 1				1	D	KGXB 1951:5, p.38
N4	II 1						KGXB 1951:5, p.38
waist pit	I 1						KGXB 1951:5, p.38
SPM3	III 1						KGXB 1951:5, p.39
SPM4	III 1						KGXB 1951:5, p.39
SPM8	II 1, III 1, V 1						KGXB 1951:5, p.51
59Wuguan M1	II 1, III 1, V 1						KG 1979:3, pp.224-5
MEIYUANZHUANGNANDI							
M85	III 1					D	KG 1991:2, p.139

Site	<i>ge</i>	<i>yue</i>	<i>dao</i>	<i>mao</i>	bow shaped implement	D/I	reference
M90	III 1					D	KG 1991:2, p.139
M93	III 1					D	KG 1991:2, p.139
M92	IV 1					D	KG 1991:2, p.139
M118	III 1		I 2				KG 1991:2, p.140
M128	II 1(ming qi)						KG 1991:2, p.140
Guojia zhuang M160	III 18(?) V 100(?)						KG 1991:5, pp.390-1
Qijiazhuang dong M269	III 30						KGXB 1991:3, pp.325-52
DASIKONG							
M25	III 6						KG 1989:7, pp.591-7
M29	III 6						KG 1989:7, pp.591-7

\*D: tomb previously disturbed      I: tomb intact when excavated

\*\* : for more information about the bronze weapons from western sector of Yinxu, please referred to Chpater III, pp.205-207, 210-211.

∨ : no picture in publication

The Type I *ge* has a wide, short blade, spreading outward where it joins the *hu*. The blade is hafted to the shaft by perforations on the blade and *nei*, differing from the four major types of Anyang *ge*: the curved-*nei ge*, the straight-*nei ge* with *lan*, the socketed *ge* and the long *hu ge*. These forms differ from the triangular-blade *ge* as they carry a longer blade, and rely on perforation in the *nei*, on the *lan*, the *hu*, or the socket to ensure the *ge* was securely fixed to the shaft. The triangular-blade *ge* relied instead only on the blade and *nei* alone to secure the *ge* to the shaft, while other types of *ge* alter their forms or add to them to help secure the blade to the shaft. It appears that the triangular-blade *ge* and the four other forms of *ge* belong to two separate systems.<sup>77</sup> This is very similar to the phenomenon described with the socketed-*yue* and *yue* with *nei*, where the two types appear to represent two separate traditions. Yinxu appears to treat foreign elements in a similar manner.

The decorative motifs and their placement on the Type I *ge* differ from those found on other varieties of the *ge* found at Anyang. The decoration on the socketed *ge*

<sup>77</sup> Yang Xizhang appears to hold similar opinions. See Yang Xizhang, 1986, p.66.

and straight-*nei ge* from Anyang is typically placed on the *nei*. The Anyang Type III curved-*nei ge* mainly strictly limits the decor to the *nei* (fig. 3:21-1,3:21-2). In contrast the triangular-blade *ge* excavated from tomb 279 in the Western Sector of Yinxu (fig.5:4) is strikingly different, for not only is the *nei* decorated, but so is the blade. This manner of decorating the blade is not typical of other Yinxu *ge*, while it bears resemblance to the Type I *ge* from Zhuwajie, Pengxian, and Chenggu (fig. 5:5,5:6). The Position of the decor appearing on the *ge* from tomb 279 is close to the decor on the *ge* from Zhuwajie and Chenggu almost the same, but the Type I *ge* excavated at Anyang have also made use of inlaid turquoise decor, as well as zoomorphic decor typical of Yinxu, while the result is perhaps the assimilation of these characteristics into the local culture. Thus the Type I *ge* from the Western Sector tomb 279 at Yinxu appears to be linked to a non-Yinxu tradition.

The Type I *ge* is also unique in respect of the tombs in which it is found at Yinxu. These *ge* are typically found in smaller tombs such as tombs 347, 372 and 374 in the Western Sector at Yinxu. The triangular-blade *ge* is the only bronze object in these tombs. Other burial items are pottery. The triangular-blade *ge* has also been found in tombs with a greater number of burial furnishings such as Yinxu tombs 335 and 279.<sup>78</sup> In addition to the triangular-blade *ge*, the burial furnishings in these tombs include ritual vessels such as the *gu* and *jue*. Tomb 335 also includes a large amount of jade. From the weapons within the tomb archaeologists have proposed that the tomb occupant was originally a soldier attaining the status of a citizen, or free person. The triangular-blade *ge* has also been found together with bronze *yue*, bronze vessels, and jades such as the *jue*, *bi*, and *huan* in a tomb from Sanjiazhuang.<sup>79</sup> From the tomb furnishings it appears that the status of the tomb occupant was slightly higher than that of those buried in the Western Sector. This tomb however includes only a single immolated victim, and remains categorized among the smaller tombs.

The uniqueness of the triangular-blade *ge* is particularly apparent in a limited number of large-scale tombs. Characteristics of the large tombs are numerous immolated victims, quantities of bronze weapons and ritual vessels, and the large area occupied by the tomb, sometimes including tomb corridors. Xiaotun tomb 232 represents an undisturbed large tomb which is 7.82m<sup>2</sup> in size. The tomb included nine skeletons, one occupying the centre coffin. The eight others are most likely immolated victims. A total of six bronze *ge* were excavated from the tomb: five were curved-*nei ge* and one was a Type I *ge*. The five curved-*nei ge* were found within the coffin, and only the triangular-blade *ge* was excavated on the west side of the coffin

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<sup>78</sup> Yang Xizhang, 1979, p.118.

<sup>79</sup> Yang Xizhang, 1983, pp.126-32.

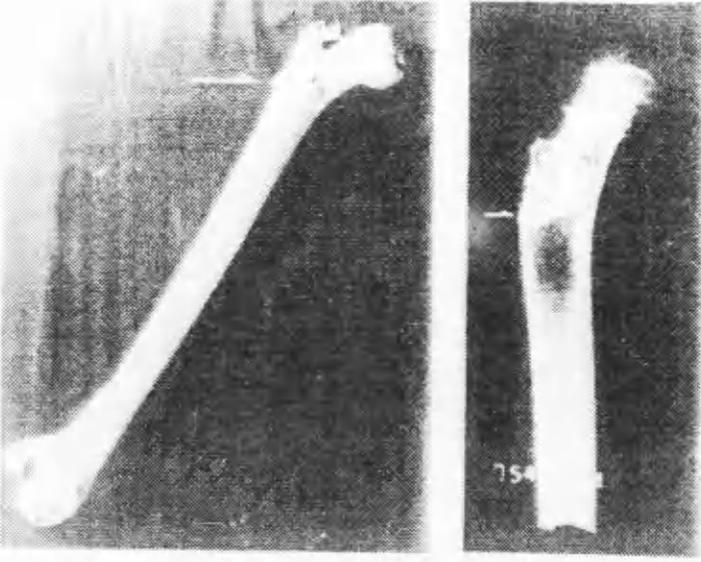


fig. 5:1 A bone arrowhead embedded in the left leg bone of the tomb occupant, M316  
Dadunzi Pixian Jiangsu. KGXJK 1981.1, p.42.

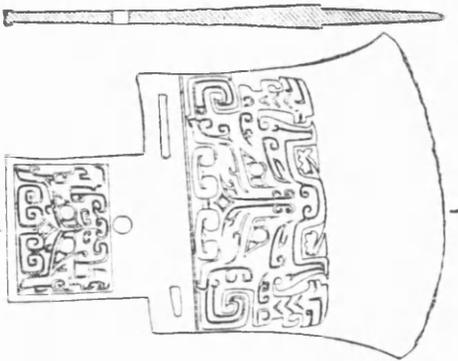


fig.5:2 Socketed *yue* from M539 Dasikongcun Anyang Henan,length 14.5  
cm. .KG1992.6,p.513,fig.7.

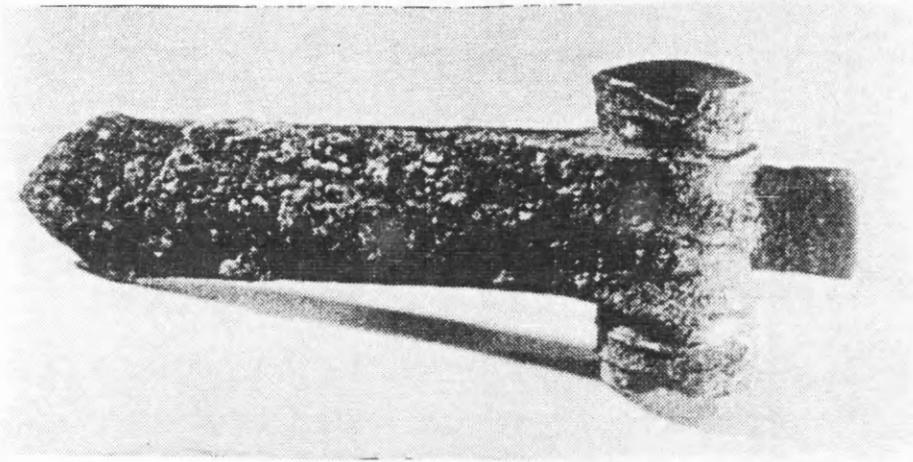


Fig.5:3 "Socketed pick" from M24 Dasikongcun Anyang Henan,length 17.3 cm.Beijing 1981a ,pl.292.

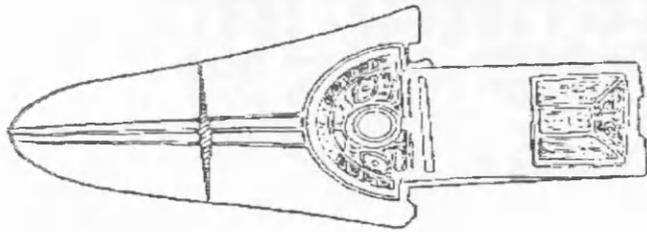


Fig. 5:4 Type I ge from M279 in the Western Sector of Yinxu,length 21.4 cm. KGXB 1979.1, p.88. fig. 64:2.

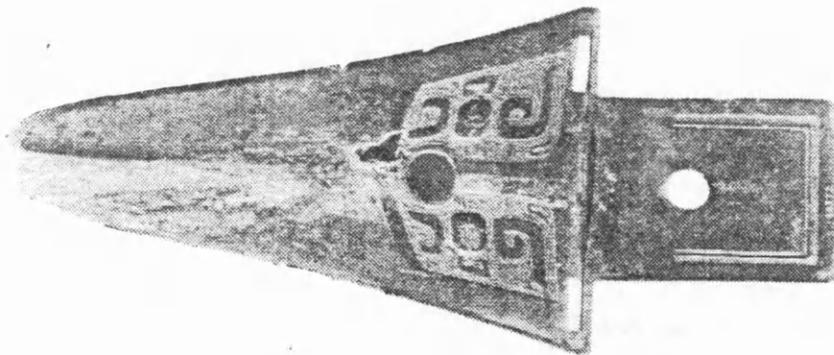


Fig. 5:5 Type I ge , Zhuwajie Pengxian Sichuan,length 29 cm. KG 1981.6, p.499, fig. 6.8.

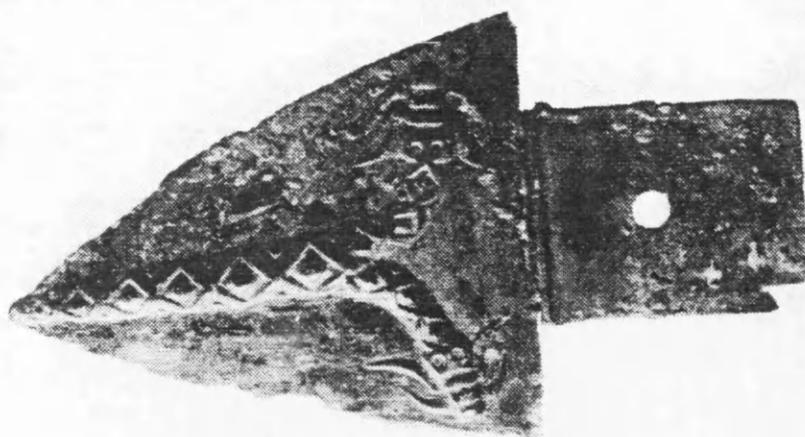


fig. 5:6 Type I ge ,Chenggu Shaanxi,length 22.2 cm. KG 1980.3, p.213, fig. 3.6.



fig. 5:7 Inlaid bronze placque.Erliton Henan.length 14.2 cm.Beijing 1985d,vol.4,pl.3.

together with the immolated victims.<sup>80</sup> This find of the Type I *ge* together with the curved-*nei ge* indicates that these two weapons were viewed very differently. This phenomenon is also found in the large cruciform tomb at Wuguancun. There were seventeen immolated victims in the eastern corridor and twenty in the western corridor. Ten *ge* were excavated from the eastern corridor. There were eight straight-*nei ge* with *lan*, and two socketed *ge*. The Type I *ge* was excavated from the mouth of the waist pit. The archaeologist reported it as the weapon carried by the tomb guardian.<sup>81</sup> So while the triangular-blade *ge* is indeed found in the large tombs at Anyang, it is a weapon belonging to persons of inferior status.

In conclusion, from excavated materials, while relatively few examples of the triangular-blade *ge* have been found at Anyang, it does not appear there any later than it does in the surrounding regions. If this type originated from the Yinxu area, it would have been to fulfil a need. Why if it appears as early as the Dasikong stage I period was it not further developed in the second through fourth stages? In terms of form, the Type I *ge* and the more common forms of Yinxu *ge* represent two different traditions. There are also definite differences between the triangular-blade *ge* and the more common Yinxu *ge*. From the archaeological context of the triangular-blade *ge*, the weapon was an inferior type, and cannot compare with the more indigenous Yinxu *ge* forms.

The great diversity in forms among the Anyang bronze weapons was perhaps inspired by contact with surrounding regions, and this characteristic manifests itself in other forms of bronze weapons besides the *ge*. Anyang's relationship with the south and the north is particularly obvious. The *yue* with *nei* found at Anyang was skillfully influenced by the tradition of the southern jade *yue* of the neolithic period and later. This advanced form of *yue* with *nei* with its significant role among the burial furnishings also became a central element in the ritual bronze weapons at Anyang to identify the military elite. Most tombs with the *yue* with *nei* include immolated victims and a number of bronze ritual vessels from as few as two to seventeen, forty or even two hundred vessels. (table 3:19).

Both the Anyang bronze *yue* and Type IV the long-*hu ge* display an interest in southern traditions, whose forms were absorbed into the main development of the Anyang bronze weapons. As the *yue* is typically decorated with motifs found on the bronze ritual vessels from Anyang such as the zoomorphic decor, the whorl pattern, and triangular blades, it is difficult to discern the foreign elements of this type of weapon. The *yue* plays an important role among Anyang bronze weapons and allows the bronze weapons to be considered as works of art.

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<sup>80</sup> Shi Zhangru 1974,3, p.42.

<sup>81</sup> Guo Baojun, 1950, p.39.

The *yue* with *nei* becomes particularly significant in the bronze weapon burial system with its splendid decoration most particularly beginning in the second stage of Yinxu exemplified by Fu Hao's tomb. The long-*hu ge* achieves popularity at Anyang beginning in Yinxu stage III and perhaps Anyang became more intimately connected with the south during Yinxu stage II and III. Some of the motifs not common to Shang bronzes such as the sun motif, the thread-relief triangles are arranged together with more typical motifs such as the cicada on bow-shaped implements (fig 3:57). Rattle-pommel and zoomorphic decor, ox-head, cicada and whorl pattern (fig 3:56,3:61) are examples of the mixing of foreign motifs with Anyang motif elements.

The south was perhaps referred to in the Late Shang as Jing Chu 荆楚 as found in historical documents, or perhaps Hu Fang 虎方, Ren Fang 人方, or Yi Fang 夷方 as seen in the oracle bone inscriptions. Direct evidence for locating the specific area referred to as such is less conclusive, yet the confrontation between the Shang and the south appears to correspond with the development of weapons seen at Anyang. The "Jiji" chapter of the *Yi Jing* states 「撻彼殷武，奮發荆楚」, Jingchu has been ascribed to the time of Gaozong, dating to the Wu Ding period. Oracle bone inscriptions describe the Yin attacking the Hu Fang, Ren Fang and Yi Fang.<sup>82</sup> While scholars cannot agree on the exact location of these places,<sup>83</sup> there is a general agreement that these *fang* are located in the south. Yi Xin 乙辛 oracle bones record the Yin attacking Ren Fang.<sup>84</sup> Attacks on the Yi Fang appear in each period, but are particularly frequent in the Di Yi 帝乙 and Di Xin 帝辛 period.<sup>85</sup> In the wars between Anyang and the south, the bronze *yue* in particular sheds light on this relationship.

The mutual interaction of Anyang and the south is not surpassed by other regions. Some evidence for the relationship between Anyang and the north, southwest and south is found in oracle bone inscriptions.

The oracle bones reveal that in the Late Shang period, particularly during the Wu Ding reign, a considerable amount of interaction occurred between the Shang and the Tu Fang and Gong Fang, frequently ending in conflict. From oracle bone inscriptions it appears that the conflicts with the Tu Fang were common and large in scale. There are about four hundred references to the fighting between the Shang and the Gong Fang.<sup>86</sup> Even Fu Hao is recorded as being sent to engage in battle with the Tu Fang.

辛巳卜，爭貞：……，呼婦好伐土方，……五月。(Heji 6412)

"On the xinji day, zheng divined,……, [the King] ordered Fu Hao to attack Tu Fang."

<sup>82</sup> Hu Feng:6667 Ren Fang: Heji 36486-36508; Yi Feng: Heji 6457-6460; 6476-6480.

<sup>83</sup> Dong Zuobin, Chen Mengjia, Shima.

<sup>84</sup> Dong Zuobin, 1945 · Dixinropu 《帝辛日譜》。

<sup>85</sup> On Zheng month, the King invaded Jiu Fang at you 正月王來征九方在攸 (Heji 26484)

<sup>86</sup> Li Xiaolan, p.262.

貞：王呼婦好進伐土方？（*Kufeng* 237）

“divined: should the King order Fu Hao to attack Tu Fang?”

The animal-pommel curved-back knife found in Fu Hao's tomb is perhaps related to attacks on the Tu Fang, as the Tu Fang and Gong Fang are located to the northwest of Yin,<sup>87</sup> as seen in the oracle bones:

迄至五日丁酉，允□來□自西。沚□告曰：土方征于我東鄙，□□二邑：□方亦牧，我西鄙田。（*Jinghua* 1）

"On the dingyou day, disaster came from the west. 沚 charge: Tu Fang have invaded our eastern borders, and are occupying two cities. The Gong Fang have invaded our western border."

九日辛卯，允有來□自北。□□告曰：土方牧我田，□十人。（*Jinghua* 2, *Tongcuan* 513）

"On the xinmao day, Tu Fang have invaded our land, ....."

While there are varying opinions among scholars as to the exact location, it is generally accepted that Tu Fang lies in the northwest. Finds of the rattle- and animal-pommel curved-grip knives and swords as well as the socketed-*fu* and socketed-*yue* are particularly concentrated in this northwestern region.

Historical records mention the Gui Fang as a *fang* state situated north of Yin. In the "Jiji" chapter of the *Yijing*, Gaozong is recorded as having spent three years to conquer the Gui Fang. 高宗伐鬼方，三年克之。Gui Fang is also mentioned in the *Shiji Wudibenji* 史記五帝本紀 According to the annotation of Weizhao, Ying shao and Fu qian, the Gui feng of Yin is equivalent to the Xongnu of Han. Wang Guowei citing from *The Bamboo Annals* "王季伐西落鬼戎" "Wang Ji attacked to the west and subjugated the Gui and the Rong"(and from the History of the *Later Han dynasty, western Qiang Chapter* 西羌傳) recognized the area to be at Qi 岐 and believed that the Gui Fang were active in the northern part of Shaanxi.<sup>88</sup> Chen Mengjia believed that the Gui Fang most likely occupied the southern Jin region 晉南, i.e, Shanxi.<sup>89</sup> Scholars dealing with the present archaeological materials, tend to regard the area characterized by its regional bronze style from the Shaanxi/ Jin region as belonging to

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<sup>87</sup> Zou Heng 1980 p.281; and Li Boqian 1988 p. 15 believe the location of the Tufang and Gongfang is perhaps located around Shilou in Shanxi. Lin Xiaohan has proposed that they are situated on the Yellow River 河套一帶, (Li Xiaohan p.165.)

Wang Guowei (1923, p.583-601) suggests northwestern Shaanxi; Chen Mengjia (1956, p.275) proposes the southern Jin region.; Lu Zhirong (1987, p.225) believes them to be located east of Ziwuling in northern Shaanxi and northeastern Jin region, north of Shaanxi and Jin in Inner Mongolia.

<sup>88</sup> Wang Guowei 1923, pp.583-605.

<sup>89</sup> Chen Mengjia, 1956 ,p.275

Gui Fang.<sup>90</sup> Lu Zhirong has gone further to propose that the Gui Fang of the Shang and Zhou period were settled in the northern Shaanxi region, east of Ziwuling and the northwestern region of Jin, reaching as far as Inner Mongolia.<sup>91</sup> If his conclusions are correct, then the style seen in the rattle-pommel knives and swords and the socketed-*fu* and *yue* which are representative of this area, when present among the artifacts from YinXu, can perhaps reflect the close interaction between YinXu and Gui Fang.

In conclusion, present materials indicate that the Shang empire interacted with the northern and northwestern states such as the Tu Fang, Gong Fang, and Gui Fang. The present study presents their possible relationship with the YinXu tradition. Present archaeological evidence from Anyang would indicate that they are perhaps "foreign elements" in the Anyang context, and these unusual elements are related to the north or northwest. Nevertheless, this relationship does not provide conclusive evidence that these elements originated there.

It is hoped that in the future more archaeological excavations of a scientific nature in the northern Jin area, northern Shaanxi, and Inner Mongolia would provide perhaps inscriptional evidence attributing these bronzes to a particular clan, and if excavated materials accumulate to a degree equal to the excavations at YinXu it would help explain whether the elements in this region represent local development or importations. Of course, more abundant archaeological studies of southern Siberia, or even farther west in the Eurasian Plateau would give clearer answers to the questions of origin and dissemination. From the available materials, the present study limits itself to the problem of inter-cultural relationships.

The Type I triangular-blade *ge* is peculiar to Sichuan province in the Warring States period, although this form of the *ge* had already made its appearance there in the Late Shang period. Late Shang triangular-blade *ge* have been found in the Hanzhong region, in the Wei River area, and in the western region of Sichuan. These finds have stimulated scholars to re-open the discussion concerning the questions regarding the location of the state of Shu in the Late Shang period.

Late Shang oracle bones include references to “𠄎” (*Tieyun* 217) 、 “𠄎” (*Houbian* 上9,7) 、 “𠄎” (*Houbian* 下27,7) , which scholars<sup>92</sup> have interpreted as Shu. There are the following oracle bone inscriptions which divine about the Shang king's attack on Shu and concern for harvests in shu :

“Cracking on the— *yin* day, Gu divined: Should the King order someone to attack Shu”

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<sup>90</sup> Zhang Yachu is also of the opinion that the Fougeng 缶方 Jifang 基方 and Gongfang 𠄎方 are perhaps *fang* states of Gui Fang. Zhang Yachu, 1983, p.400; Zou Heng, 1980, p. 279; Li Boqian, 1988, p.15.

<sup>91</sup> Lu Zhirong, 1987, p.225.

<sup>92</sup> Guo Moruo, 1954b, p.256; 1931c, p.7. Zou Heng, 1980, p.279; Li Boqian, 1988, p.15.

□寅卜，殼貞，王登人□正（征）蜀，（*Houbian* 上9,7）

“divined: with Shu perhaps not get a harvest”

貞，蜀不其受年。（*Yibian* 6522）

“Cracking on the *Ximmao* day, Gu divined: arriving in Shu, we have an envoy”

辛卯卜，殼貞，至蜀，我又（有）事（使）。（*Tongcuan* 547）

These records bear witness to the relationship between the Shu and the Shang, whether hostile or amicable. At the end of the Shang dynasty, the Shu was among those who followed the lead of Wu Wang by joining in the war against the Shang to bring it to its demise. The "Mushi" chapter of the *Shangshu* records that "Yong, Shu, Jiang, Mao, Wei, Lu, Peng, Pu" all followed Wu Wang.

There is a great controversy over the exact location of the state of Shu. Some scholars believe it to be an enemy state located to the northwest of the Shang.<sup>93</sup> Others contend that this state was located not far from the Shang capital.<sup>94</sup> Still others have proposed Taian in Shandong, Tai'an, Jishang, and Gaoyuan in Shandong<sup>95</sup>; in Shaanxi or in Sichuan,<sup>96</sup> or in the plains at Chengdu.<sup>97</sup> Or in the Shangxian, Luonan region in the southeastern area of Shaanxi<sup>98</sup>; or in the river basin of the Hanshui.<sup>99</sup>

Thus, as Chen Pan has stated, while Shu was already in existence by the Wuding period, its place of origin remains an enigma. It is clear however, that this state often migrated or divided itself.<sup>100</sup> Triangular-blade *ge* dating to the Late Shang period have primarily been found in the Hanshui region. Large numbers of this type of *ge* dating to the early and middle Western Zhou have been found in the tombs of the state of Yu at Baoji, a cemetery which scholars have proposed as belonging to the Di Qiang 氐羌 culture. During the Warring States period the triangular-blade *ge* was popular primarily in the Sichuan region. Scholars have tried to trace the origin of the state of Shu according to its distribution,<sup>101</sup> but questions still remain regarding the origin both of Shu and of the triangular-blade *ge*.<sup>102</sup> The triangular-blade *ge* from Yinxi is evidence of a relationship between the Shang and Shu whether hostile or friendly.

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<sup>93</sup> Chen Pan 1970, p.21

<sup>94</sup> Hu Houxuan, 1945, p.42.

<sup>95</sup> Dong Zuobin, 1942, 3:7.

<sup>96</sup> Tong Enzheng, 1979a, p.1-10.

<sup>97</sup> Shima, 1958, pp.378-83.

<sup>98</sup> Li Boqian, 1983, p.69.

<sup>99</sup> Chen Pan 1970, p.20下.

<sup>100</sup> Chen Pan, 1970, p.20下.

<sup>101</sup> Li Boqian, 1983, p.2, pp.68-70; Yang Xizhang, 1986:3, pp.431

<sup>102</sup> Lu Liancheng, Huzhisheng, 1988, p.431.

Anyang retained a receptive attitude to influences from the four quarters. This spirit of openness is more difficult to ascertain with regard to the bronze vessels where there is less evidence that the Shang received foreign influence, although scholarly interest in this area continues to grow.<sup>103</sup> Jades on the other hand, as both regards material and in form were perhaps at least in part the result of importation.<sup>104</sup> A jade *ge* from Fu Hao's tomb at Yinxu has an inscription stating that it is a tributary item from the Lu Fang 盧方. Yinxu turtles were probably imported from the south, and studies of the ethnic origins of people at Yinxu indicate a heterogeneous society.<sup>105</sup> As Anyang represented an international metropolis during the Late Shang period, its receptive attitude to outside influences consolidates its position as a centre for a rich variety of bronze weapons, which are manifest in its uniquely rich burial ritual. At Anyang the previously utilitarian bronze weapon was carried into the sphere of art history.

While there exists a great diversity of bronze weapon types at this centre, the *ge* is predominant.

The development of the *ge* was centered around the Anyang region. The *ge*'s function as a ritual object within the burial context, while it retained its importance as a utilitarian weapon, allowed its development to influence the north, south, northwest, and southwest, and to create cultures characterized by their use of the *ge*. The result was a great variety of forms, surpassing those of the stone and jade *ge*. The bronze *ge* assumed the role as the primary bronze weapon within the tomb, as well as the principal form of bronze weapon, retaining this position through the entire Bronze Age. This characteristic is unique to China. In the Late Shang the wide region characterized by the use of the *ge* encompassed an area which extended north to Liaoning, east to Shandong, south to Guangxi and northwest to Ordos, embracing areas where Erlitou to early Yinxu *ge* have been found such as Taixi, Gaocheng, Panlongcheng, Hubei, and the Ordos region (map5:1, see p.313). At the same time, Late Shang *ge* have been found in regions where early forms of bronze *ge* are lacking as in northern Shanxi and Shaanxi. The *ge* is distributed over a wider region and in greater concentration than other types of weapons of the same period. The reason the *ge* could pervade such an extensive area was the common characteristic it retained throughout the entire region—the characteristic of being incorporated among the burial furnishings.

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<sup>103</sup> Robert Bagley 1992, pp.209-256.

<sup>104</sup> Beijing 1980f, p.234.

<sup>105</sup> Beijing 1985b, pp.7-18; p.171.

The wide distribution of the bronze *ge* follows that of the bronze ritual vessels, with parallel regional characteristics. This unique aspect of the *ge* will be the focus of the discussion under section four of this chapter.

#### 5.4. The multifarious development of Late Shang bronze weapons

Present materials indicate that Anyang was a major centre for the development of Late Shang bronzes. The rudiments of regional characteristics are clearly seen in this period in regions outside Anyang. Using the weapons at Anyang as archetypes, different regions each manifest a different style.

Using the north as an example, the animal-pommel, rattle-pommel knives and swords, the various types of socketed-*yue* all display regional characteristics whether it be in the manner of decor, the method of hafting, or in the burial context. Each of these characteristics belongs to a tradition which stands outside the Anyang tradition. While some have been found alone in the northern tombs, in many cases they are found in context with weapons of the Anyang tradition.

The nature of the relationship between the south and Anyang is markedly different from that of the north and Anyang. Using the Xin'gan tomb in Jiangxi to exemplify the south, this regional tradition of weaponry is very close to the Anyang tradition, while maintaining a very strong local character. The local style is not only present in weapons of the Anyang tradition such as the *ge*, the spear, and the *yue*, but is also apparent in weapons which are not common among Anyang weapons such as the sword and the *ji*. This regional character also manifests itself in the organic relationship between types and the burial system as a whole.

The south maintained an intimate relationship with Anyang, while still manifesting an independent and strongly indigenous character more here than in other regions. This independent character is intertwined with the Anyang culture. The relationship is not one-sided, but mutual. As described above, Anyang absorbed some elements from the south, and these elements became central to the Anyang burial ritual.

The indigenous characteristics of the southwest are seen in the triangular-blade *ge* from Chenggu and Sichuan, and the serrated-tooth triangular-blade *ge* found at Sanxingdui. The serrated-tooth triangular-blade *ge* is particularly unique. The sacrificial pits at Sanxingdui retain an earlier characteristic in which the stone and jade weapons play a more significant role, hence at this site the indigenous style is not so evident on the bronze weapons as it is on other types of bronzes.

During the Erligang period, the bronze weapons from three aforementioned areas are characterized by a form and style which is quite similar to that of the bronze

weapons from the Zhengzhou area. These three areas lack an obvious indigenous style at this time. (This contrasts with the south, which will be discussed below)

The development of a distinct indigenous style of the bronze weapons in the Late Shang period appears to correspond to the concentration of Shang cultural sites in comparison to the wider distribution of Shang cultural sites of the Erligang period.

An example of this is typified by the Hubei/Hunan region. From a comparison of pottery styles found in this region, the Shang culture had an influence on the Hubei/Hunan region which antedates history or legend. However, by the begins of Late Shang period, the Shang cultural elements gradually diminish, and they completely disappear by the end of the Late Shang period. At the same time, indigenous cultural elements become more pronounced.<sup>106</sup> In the Wucheng culture the A-type pottery is characterized by the hard-clay body types and the glazed types, as well as the proto-porcelain types; beading, veining, and geometric patterns account for the common decoration patterns; and the trapezoidal pottery knives, the high-stem *dou*, and the flanged cover make up the typical pottery forms. B-type pottery wares are those with Shang elements such as the large mouth *zun*, the *gang*, and the pseudo-basin *dou*. The latter type gradually disappears from the repertoire of pottery in the first through the third periods of the Late Shang, while the A-type pottery gradually increases over this time.<sup>107</sup>

A similar phenomenon is seen in the north and the northwest. In the north Erligang period bronzes have been found in Chaoyang, Liaoning, <sup>108</sup> at Liujiahe, Pinggu, Hebei,<sup>109</sup> at Yaochuang, Mancheng, Hebei.<sup>110</sup> At the same time Erligang pottery types were disseminated throughout the north and finds have been made at such sites as Zhangjiakou,<sup>111</sup> Jumahe,<sup>112</sup> and Yaochuang, Mancheng.<sup>113</sup> Erligang cultural sites are distributed in the southeastern and southwestern Shanxi region such as Zhangzibeijiao which also uncovered Erligang bronzes.<sup>114</sup> Dongxiafeng, in Xiaxian uncovered Erligang architectural foundations and a city wall.<sup>115</sup> At Pinglu Qianzhuang there is a Shang archaeological site spread over an area of 10,000 square metres. The finds from this site included bronzes and pottery.<sup>116</sup> In the west sites at

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<sup>106</sup> Song Xinchao, 1991, p.158.

<sup>107</sup> Li Boqian, 1981b, pp.133-143.

<sup>108</sup> Beijing 1979a, p.89.

<sup>109</sup> WW 1977:11, pp.1-8.

<sup>110</sup> Beijing 1980a, p.16, pl.45.

<sup>111</sup> *Kaogu yu Wenwu* 1982:4, pp.10-14.

<sup>112</sup> Zou Heng 1980, p.126.

<sup>113</sup> Beijing 1980a, p.16.

<sup>114</sup> Guo Yong, 1980.3, pp.198-201.

<sup>115</sup> KG 1980:2, pp.97-107.

<sup>116</sup> Wei Su, 1992:1, pp.18-19.

Nanxiacun, Huaxian in Shaanxi<sup>117</sup>, Huaizhenfang, Lantian<sup>118</sup>, and Sanlidong, Tongchuan,<sup>119</sup> have all recovered Erligang-style bronzes. Erligang-style pottery was recovered from Baijiayao at Fufeng.<sup>120</sup> From these archaeological finds, scholars have concluded that "Shang culture of the Erligang period was spread over a region east to Taihangshan, along the Yellow River and Wei River and west to the loess plateau and through the central region of Shanxi. However, by the Yinxu period, the Shang culture's expansion into the northwest lost its strength, and although Yinxu period bronzes are found distributed over a large region of the loess plateau, the Yinxu period potteries are not so widely distributed."<sup>121</sup>

The manifestation of regional characteristics of Late Shang period bronze weapons appears to concur with records regarding conflicts between the Yin and the many *fang* or statelets.

The appearance of regional characteristics among Late Shang period bronze weapons appears to concur with finds of regional casting sites. This is particularly apparent in the south. Wucheng, Jiangxi unique casting implements—stone moulds were recovered. Five seasons of excavations at Wucheng have recovered over three hundred pieces of stone moulds, 106 of which are large.<sup>122</sup> Most of those recognizable are moulds for casting tools, weapons, and chariot fittings. *Fu*, knives, *mao* spearheads, *yue*, and arrowheads account for the majority of mould forms.<sup>123</sup> While pottery moulds have been found at the site, a 1983 calculation lists only two examples. It is obvious then that the stone moulds account for a considerably larger proportion of the moulds, although pottery moulds coexist with the stone moulds. Finds of stone moulds are not limited to the Wucheng site, but were also gathered from other sites in the Qingjiang area as well as from Shang and Zhou sites in Jiangxi province. They were recovered from all parts of Ganshen including Yingpanli, Qingjiang,<sup>124</sup> Zhuweicheng,<sup>125</sup> Fancheng, Sanqiao, Fenghuangshan, Leping,<sup>126</sup> Ganxian,<sup>127</sup> Xinqi,

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117 Xiyi, 1957, p.64. Zou Heng 1979, p.334.

118 Zou Heng 1979, p.334.

119 Beijing 1981a, pl.3.

120 Luo Xizhang, 1977, p.84.

121 Lin Yun, 1987, p.129-155.

122 WW 1975:7,p.67.

123 Peng Shifan, Hua Jueming, Li Zhongyuan, Beijing 1983b, pp.72-80.

124 KG 1962:4, pp.172-181.

125 KG 1982:2, p.135.

126 Xi Hong 1980.

127 *Jiangxi lishi wenwu* 1982:1.

Yongxiu,<sup>128</sup> and Sixi, Shanggao<sup>129</sup> as well as others. (map 5:2)<sup>130</sup>

While stone moulds are unable to stand up under high temperatures, nor is it easy to carve intricate fine patterns into them, they are more suitable for casting weapons and tools and can perhaps partially account for the regional characteristics of southern bronze weapons as a definitive regional casting technique. From present evidence, however, it is impossible to determine that the weapons such as those from Xin'gan were indeed cast from stone moulds. We can only suggest that the use of stone moulds could partly account for the regional style.

Scattered finds of regional casting sites also appear in the south. (table 5:4)(map 5:3), in addition to Wucheng in Jiangxi, Chenjiadun, at De'an,<sup>131</sup> and Tongling at Ruichang,<sup>132</sup> all of which possibly date to as early as the Shang. Following the Shang another mine site is Dagongshan, Nanling, Anhui.<sup>133</sup> Tongling, Anhui,<sup>134</sup> Tonglushan, Daye, Hubei,<sup>135</sup> Mayang, Hunan.<sup>136</sup>

Table 5:4 Foundry sites of the middle and lower Yangtse River from the Bronze Age

Site	Period	Reference
Tongling, Ruichang, Jiangxi	mid Shang to late Spring and Autumn	<i>Jiangxi Wenwu</i> 1990:3, pp.1-12
Chenjiadun, Dean, Jiangxi	Shang/Zhou	<i>Zhongguo Wenwu Bao</i> 1995.4.2
Dagongshan Nanling, Anhui	Western Zhou Spring and Autumn (few Shang potteries)	<i>Dong Nan Wenhua</i> 1988:6,pp.45-57
Tongling, Anhui	Western Zhou Spring and Autumn/Warring States	<i>Dong Nan Wenhua</i> 1988:6,pp.77-83
Tonglushan, Daye, Hubei	Eastern Zhou	<i>KG</i> 1981:1, pp.19-23
Tonglushan, Daye, Hubei	Spring and Autumn / Warring States Period	<i>WW</i> 1975:2, pp.1-10
Gangxia, Yangxin, Hubei	Late Western Zhou or early spring and Autumn period	<i>KG</i> 1988-1d, pp.30-42
Mayang, Hunan	Warring States Period	<i>KG</i> 1985:2,pp.113-124

<sup>128</sup> *Jiangxi lishi wenwu* 1981:4.

<sup>129</sup> *Jiangxi lishi wenwu* 1982:4.

<sup>130</sup> Peng Shifan, Hua Jueming, Lizhongda, 1983.

<sup>131</sup> *Zhongguo Wenwu bao* 1995.4, p.22.

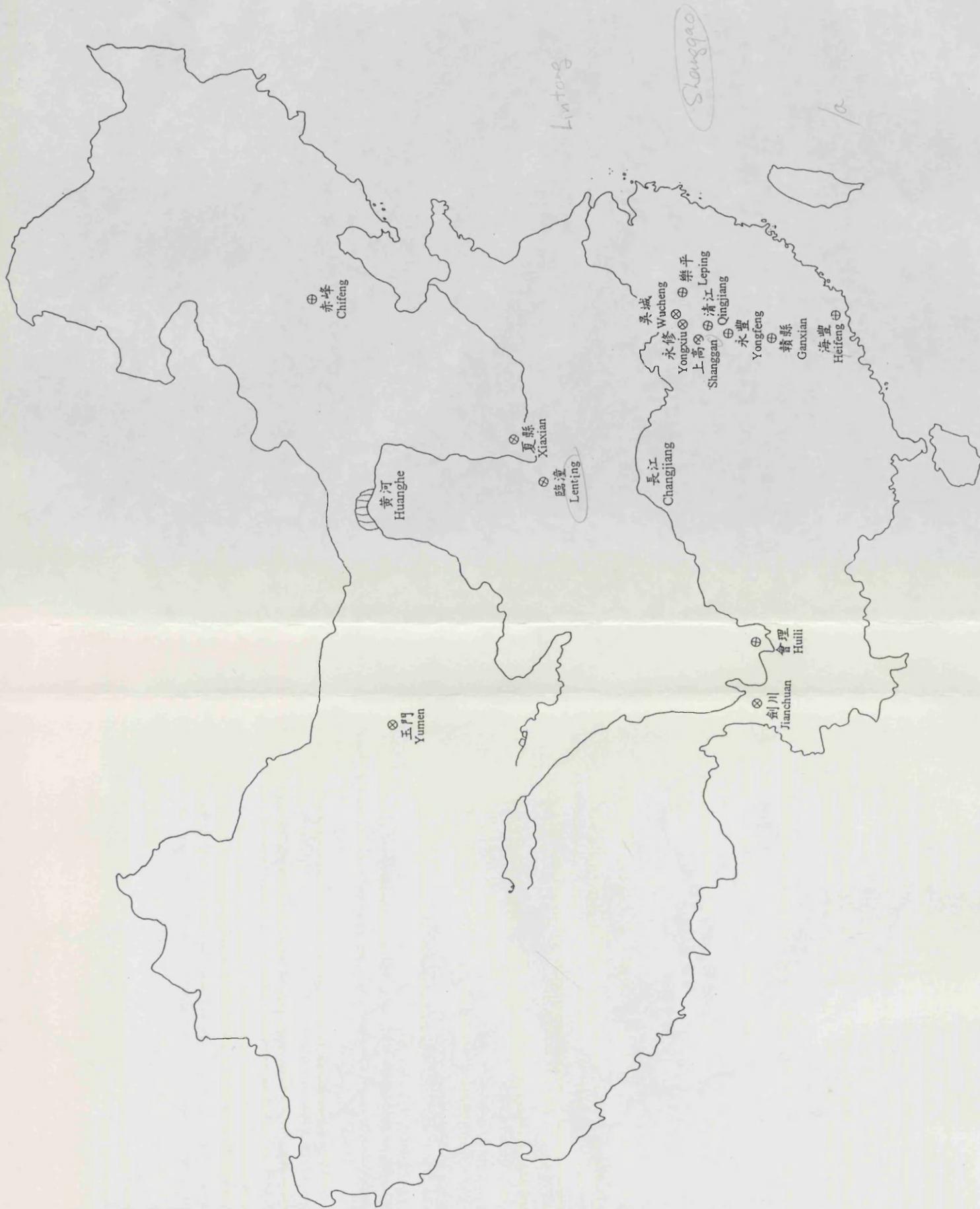
<sup>132</sup> *Dongnan Wenhua* 1990:3, pp.1-12.

<sup>133</sup> Liu Pingsheng, 1988, pp.45-57.

<sup>134</sup> *Dongnan Wenhua* 1988:6,pp.77-83

<sup>135</sup> *KG* 1981:1,pp.19-23

<sup>136</sup> *KG* 1985:2,pp.113-124



map 5:2 Distribution of stone moulds in the Shang and Zhou Dynasties

商周石范出土地分布圖



map 5.3 Distribution of bronze age mining sites in south China  
青銅時代南方礦冶遺址分布圖

Present archaeological digs have not uncovered the casting sites for the bronzes found in the sacrificial pits at Sanxingdui in Sichuan. Present analysis of the lead isotopes within the bronze suggest that the source of the ore is the same as that for the Xin'gan bronzes in Jiangxi. Their unusual lead ratio  $207\text{Pb} / 206\text{Pb}$  has the characteristic of being proportionately low.<sup>137</sup> The composition of the bronze *ge* from Sanxingdui H1 contains a particularly high percentage of copper.<sup>138</sup> From the limited number of alloy compositions of the Xin'gan bronzer, many are made with a high percentage of copper.<sup>139</sup> Both the southern casting techniques and the alloy compositions of the bronzes manifest a distinct regional character. The south perhaps

<sup>137</sup> From 50 examples of Sanxingdui bronzes 53 samples were taken, 47 of the samples, the lead isotope ratio were found  $207\text{Pb} / 206\text{Pb}$  distributed in the range of 0.695 to 0.756. Of the 11 pieces sampled from Xin'gan, all fell in the same general range as those from Sanxingdui, with some slight discrepancies. Jin Zhengyao, W.T.Chase etc., 1994, pp.744- 747.

<sup>138</sup> Table 5:5 Alloy Compositions for bronzes from No. 1 sacrificial pit Sanxingdui, Sichuan

#	object and sampled area	no.	Alloy composition ( % )										
			Cu	Sn	Pb	P	Si	Al	Fe	V	Ci	Cr	Total
1	body of a bronze <i>ge</i>	K1-53-1	98.4			0.7	0.9						100. <sup>00</sup>
2	blade tip of bronze <i>ge</i>	K1-289-8	98.04				0.31	0.82	0.29				100. <sup>00</sup>
3	bronze <i>ge</i> blade	K1-3-7	91.08	1.86	4.57	0.55	0.32	0.65	0.32	0.08	0.85		100. <sup>01</sup>

\* thanks for the information offered by professor Lin Xiang.

<sup>139</sup> Table 5:6 Alloy compositions of Shang and Western Zhou period bronzes from Jiangxi ( % )

Site	Alloy composition object	Cu	Sn	Pb	Zn	Period	Laboratory
Sanqiaotang, Qingjiang	no. 2 flat-leg <i>ding</i> foot	71.52	1.94	2.87	0.21	Late Shang	Jiangxi youse yelian jiagongchang zhongxin shiyanshi ※
Wucheng, Qingjiang collected	bronze piece	99.13				Late Shang	Luoyang 725 yanjiusuo huaxueshi
Zhongtoucheng, Dayangzhou, Xingan	<i>fu</i>	92.81	1	0.03	1.57	Late Shang to early W Zhou	Jiangxi youse yelian jiagongchang zhongxin shiyanshi ※
Wucheng WT9H11, Qingjiang	<i>ding</i> foot	98.87				Late Shang to early W Zhou	Luoyang 725 yanjiusuo huaxueshi
Zhongling Shuikubaji, Dayangzhou, Xingan	<i>ding</i>	98.87				mid W Zhou	Luoyang 725 yanjiusuo huaxueshi
Zhongling Shuikubaji, Dayangzhou, Xingan	<i>ding</i>	96.47	trace	0.03	0.16	mid W Zhou	Jiangxi youse yelian jiagongchang zhongxin shiyanshi ※

※ Due to heavy surface corrosion on the test samples given to the Jiangxi laboratory, resulting percentages are less than 100% , hence the results are not conclusive.

\* thanks for the information offered by professor Lin Xiang.

represents another centre for the development of bronze weapons during the Late Shang period outside of the Anyang region. Both the *yue* and spear found at Xingan can be traced back to the advanced forms of *yue* and spear found at Panlongcheng and dated to the Erligang period. In the neolithic period, the stone and jade *yue* have a long established tradition, carrying ritual significance within the southern tombs. The south appears to have made an important contribution to the development of the Late Shang bronzes.

The bronze weapons of the north are scattered over a wide region and present archaeological digs have not yet uncovered a large regional casting site. A casting site dating to the Erligang period has been found at Huizhenfang in Shaanxi.<sup>140</sup> This find indicates the possibility for a regional casting site located in the north. The scattered finds of iron-bladed *yue* in the north is well worth noting. (table 5:7). From an analysis of the iron-bladed *yue* recovered from Taixi, Gaocheng, the iron blade itself is believed to have contained more than 6% nickel and over 0.4% of cobalt. Even after metal-working and long weathering, the rusted iron blade still preserves the lamellar distribution of nickel and cobalt. This lamellar distribution of nickel could only occur in an iron meteorite as a consequence of very slow cooling. Based on these results and by comparison with iron meteorites and their weathering crusts, a definite conclusion can be drawn that the iron for the Guancheng *yue*-axe blade was not smelted iron, but rather came from an iron meteorite.<sup>141</sup> This weapon was likely produced by forging the meteorite iron under conditions of high heat shaping it into a flat piece and then casting the bronze body onto it. This forged alloy of iron and nickel is less than two millimeters thick. This technique for casting bronzes onto forged iron was already understood in the north, hence the four finds.

Table 5:7 Excavated Iron-bladed bronze weapons

Site	type	Period	Reference
Pinggu, Beijing	<i>yue</i>	early Shang	<i>WW</i> 1977:11
Taixi Gaocheng, Hebei	<i>yue</i>	Yinxu period I	<i>KG</i> 1973:5 <i>WW</i> 1974:8
Lingshi M1, Shanxi	<i>yue</i>	Yinxu period III or IV	<i>WWZLCK vol.no 3</i> <i>p.46</i>
Xunxian, Xincun, Henan	<i>ge</i>	Early Western Chou	R.J.Gettens,1971

<sup>140</sup>Zou Heng, 1980 p.334.

<sup>141</sup> Li Chong, *Ars Orientalis* vol XL 1979, pp.259-289. translation of an article originally published in *KGXB* 1976:2, pp.17-32.

Tang Yunming, 1975.

Ye Shi,1976, pp.56-59.

The distribution of regional styles of bronze weapons reflects a very important cultural phenomenon that some regional characteristics are often limited to a single area, like the serrated-tooth *ge* from Guanghan, Sichuan, which has been only found at Guanghan; the lappet-blade straight-*nei ge*, the tiger curved-*nei ge*, and the ovoid-grip willow leaf-blade sword from Xin'gan, Jiangxi; the rattle-pommel and animal-pommel swords which are limited to the northern region, are all examples of regional characteristics which are found bound within their regions of origin and which form the core of the regional characteristics.

Some indigenous styles are not restricted to their area of origin, but are dispersed over wider regions, typically encompassing two or more areas creating "a phenomenon where distinct cultural regions share selective stylistic characteristics."<sup>142</sup> For example the animal-pommel knife is found in the north as well as at Anyang. The bow-shaped implement is found in the north at Anyang and also in the south. The Type II large knife is seen in the north, at Anyang and in the south. The triangular-blade *ge* is found at Chenggu, in Sichuan, Hebei, and at Anyang. These regional weapons for which the distribution extends beyond the boundaries of the local region are almost certain to be found at Anyang, a large centre for weapons. The confluence of the stylistic characteristics of the different regions is observed at Anyang. Among the oracle bone inscriptions, records of hostility and peace between Anyang and many surrounding smaller states provides further evidence for this relationship.

A point to emphasize is that some regional characteristics which extend beyond their boundaries are not necessarily mediated through Anyang, but instead represent the interaction between local regions. An example is the long-*hu ge* found both at Chenggu and at Xin'gan in Jiangxi. There is also a similarity in the animal-like masks which have been recovered at both sites. The possibly for a direct communication and relationship between the Shaanxi region and the Boyang Lake region has been noted before — a contact which did not necessarily include Anyang as an intermediary, but which was instead more direct, with local regions serving as the nexus. Therefore such shared regional characteristics are excluded from elements of the Anyang repertoire.

#### 5.4.1. The shared bronze weapons in Late Shang

In contrast to regional styles of bronze weapons which are limited in their range of distribution, the metropolitan style which was centered around Anyang was also distributed over a much larger area. Because the metropolitan culture at Anyang frequently came in contact with its surrounding areas, it was able to absorb and incorporate elements of these neighboring regions within its own style. The primary

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<sup>142</sup> Liu Guanmin, pp. 162-169.

forms of bronze weapons incorporated into the burial system at Anyang are the *ge*, the *yue* with *nei* and the *mao*-spear.

Among the representative types of Anyang weapons, the *ge* attained the widest distribution, spreading to the north as far as Liaoning, east to Shandong, south to Guangxi, northwest to the Ordos region. The area marked by the finds of the Late Shang *ge* also represents the distribution area for Late Shang bronze weapons. As early as the Erligang period the *ge* was disseminated over a vast area which extended beyond the Central Plain including Pinggu in Beijing, and Taixi, Gaocheng in Hebei and Panlongcheng in Hubei. The powerful development of the *ge* in the Central Plain during the Late Shang period accompanied in part the conflicts between Anyang and the surrounding states. Therefore, the wide distribution of the *ge* and the areas of concentrated finds extend far beyond those of the Erligang period. This area of distribution encompasses regions of indigenous bronze weapons, so that the Shang bronze weapons co-exist with regional bronze weapons. In the north the *ge* appears together in assemblages with the rattle-pommel, or animal-pommel knives and swords as well as those assemblages which include ritual vessels exemplified by Jingjiecun tomb no.2, Lingshi. In the south the *ge* is found together in assemblages of the lappet *ge* and swords, and ritual vessels. The *ge* is the major form of weapon both in the east and in Sichuan.

The popularity and wide distribution of the bronze *ge* during the Late Shang period should be understood in terms of its function and its relationship to the local tradition. The bronze *ge* is double-bladed and the blade edges are perpendicular to the shaft, enabling the user to stab with the weapon. In the third and fourth periods of the Late Shang period an addition of the *hu* was added to the *ge* which enabled its handler to use the weapon for hooking, expanding the original function of the *ge*. Weapons with the ability both to hook and to stab are not found among the neolithic stone weapons. In other words, prior to the dissemination of the bronze *ge*, the different regions did not have their own indigenous tradition of a stone *ge*.<sup>143</sup> The bronze *ge* appears in the Central Plains by the Erlitou period, and by the Erligang period, the *ge* is found outside the Central Plains, in step with the appearance of bronzes in these regions, exemplified by the *ge* found at Pinggu, Beijing, and Panlongcheng, Hubei. By the Late Shang period the bronze *ge* had become highly developed in the Central Plains. It was buried not only with the elite military officers but also along with ordinary warriors, this is not the case with any other type of bronze weapon. The bronze *ge* was utilized as a weapon in a large area which extended north as far as

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<sup>143</sup> The stone *ge* found in the Fujian region are perhaps examples of neolithic bronze weapons, while many believe that the stone *ge* found in Fujian was possibly influenced by bronze *ge* and should be dated much later. (Zeng Fan, 1983, pp.146-151.)

Liaoning, east to Shandong, south to Guangxi, northwest to the Ordos region and southwest as far as Sichuan. The Late Shang bronze *ge* assumed the status attained by the stone and jade *yue* in the neolithic period. This is a watershed in the history of weapons, and the developments which took place at Anyang are crucial in this transformation.

While the bronze *yue* with *nei* was a primary form among the bronze weapons at Anyang, the distribution of the bronze *yue* is greatly limited in comparison to that of the bronze *ge*. The bronze *ge* represents a new form appearing with the onset of the Bronze Age, and it stands as the primary weapon developed at Anyang. The history of the *yue* with *nei* is very long, and the stone *yue* was the most common of the stone and jades weapons in the neolithic period.

In the neolithic period, except for the Liaoning region where a few socketed stone *fu* with crescent blades were excavated, the greater part of China south to Guangdong, north to Liaoning, Ningxia, Inner Mongolia, east to Shandong, west to Gansu and Qinghai commonly made use of the stone *fu* or *yue* with *nei*. By the Late Shang period, the distribution of the bronze *fu-yue* with *nei* had greatly constricted, concentrated around the Anyang region, east to Shandong, north to the Shaanxi and Shanxi regions. In northern Shaanxi and farther north the form with *nei* is not used but instead these areas popularized a socketed form of the *fu-yue*.

The forms with *nei* beginning in the neolithic are found distributed over a wide region of China. The form of *fu yue* develops step by step from the stone *fu* to the stone *yue* and from the stone *yue* to the jade *yue*. The jade *yue* then developed into the bronze *yue*. By the Late Shang period, centered around the Anyang area, the bronze *yue* became an important element in the burial furnishings, The form becomes fairly fixed, as well as the decor. The bronze *yue* principally appears in tombs of more sumptuous burials. Perhaps this tradition may in part originate from a tradition which began in the southern Liangzhu culture. The function of the *yue* evolved from a common and popular tool during the Neolithic period to a ritually significant or ceremonial weapon during the Late Shang period. This transformation may be the reason for the very limited distribution of the Late Shang bronze *yue* with *nei*. In contrast, the newly developed socketed form of the bronze *fu-yue* appeared in the north during the Late Shang period, concentrated in Shanxi, Shaanxi, Liaoning, and Inner Mongolia, which in turn inhibited the distribution of the bronze *yue* with *nei* from spreading to the north. Thus, the northern boundaries of the bronze *yue* with *nei* are far more limited in comparison to the bronze *ge* and the bronze ritual vessels.<sup>144</sup>

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<sup>144</sup> Bronze *ge* have been found at Zhugaigou in Inner Mongolia (KGXB 1988:3, p.325, fig.28) Bronze *ding* and *lei* were found in a hoard at Xiaopoutaitao, Liaoning (Beijing 1979a p.89.); KG 1973.4, pp.225-226; WW 1977.12b, pp.23-33 ; KG 1977.5b, p.354.

The latter two are archetypal Central Plains style bronzes, developing mainly at Anyang and its surrounding regions.

Regardless whether the northern socketed *fu yue* is related at all to the Eurasian bronze socketed *fu*, it is obvious that the development of the socketed bronze *fu* in northern China differed from its Eurasian counterpart. Persia originally produced a weapon similar to the *fu yue* with *nei*, but its existence was short-lived. With the introduction of the socketed *fu* tradition from the Mesopotamia, it became the primary form of *fu* for the region.<sup>145</sup> In contrast the development of the Late Shang socketed *fu* in northern China was clearly inhibited by the *fu yue* with *nei*.

The persistence of a traditional form of the Late Shang bronze *fu yue*, as seen in the Anyang region, is perhaps related to the refinement of the form and its role in the mortuary ritual.

With regards to the role of the *fu yue* within the mortuary ritual, the bronze *fu yue* found at Anyang perhaps succeeded to the traditional role of the stone *yue* from the Taosi Longshan culture, the jade *yue* from the Liangzhu culture, and the bronze *yue* from Panlongcheng in the Erligang period. Therefore, at the same time that the Anyang *ge* had already absorbed the socketed form of hafting, developing the socketed *ge*, the *yue* with *nei* retains its traditional position as the single most important form of the *yue* at Anyang. Although the socketed *fu yue* had been introduced at Anyang and is found together in context with a *yue* with *nei* in the Dasikongcun M539,<sup>146</sup> this represents a rare occurrence at Anyang. The socketed *fu* represents an entirely different tradition from the *yue* with *nei* in terms of both decoration and form. Among the knife-and-axe burials at Xibeigang, small socketed *fu* were excavated from the acephalous human burial pits. The forms and decor of the small socketed *fu* belong to a different tradition from that of the *yue*-axe forms with *nei*.<sup>147</sup>

With regards to the form of the *yue*-axe, beginning in the neolithic period, the blade was tied with thongs strung through a hole on the body of the blade. The *nei* and the blade gradually became distinguished as separate parts. By the Erligang period the *yue* form was securely established. The blade and the *nei* were clearly distinguished. Not only was there a clear separation between the hafting portion of the weapon and the blade, but the shoulders on the blade corresponded to a narrowing of the *nei* portion. At the same time the slit on the shaft for inserting the *nei* was also constricted. This modification allowed the *nei* to slide into the slit and for the shoulders of the blade to rest securely against the shaft. The shoulders are typically perforated, together

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<sup>145</sup> P.R.S. Moorey, 1971, pp.37-64.

<sup>146</sup> KG 1992.6, p.513.

<sup>147</sup> Gao Quxun, 1967.m, pp.355-381.

with the perforation on the *nei*, allowed the blade to be more firmly tied to the shaft. The form of the *fu* and *yue* with *nei* was continually improved upon allowing this hafting tradition to continue in spite of the appearance of other methods of hafting. This particular method using a *nei* became the primary manner for hafting a shaft for both tools and weapons in China. This tradition contrasts sharply with Bronze Age in Eurasia, where the major form of the *fu* is that of the socketed *fu*.<sup>148</sup>

The long tradition of the bronze *yue*-axe with *nei* centered around the Anyang area is evident from the large numbers excavated from Anyang. It also reflects the point of convergence in the Late Shang period for the socketed forms and the forms with *nei* as being in the Shaanxi and Shanxi region, and not in the Anyang area. Particularly notable, the great variations among the southern *fu yue* elucidate this phenomenon and region of convergence. Not only do the forms and decoration of these two traditions come together in this region, but the two distinct traditions of *yue* sometimes co-exist within a single tomb forming a unique phenomenon in the Shaanxi and Shanxi region. In contrast, farther north in the Liaoning and Ordos regions, the tomb furnishings and their forms are exclusively of the northern tradition, a region typified by the socketed *fu yue*.

These two traditions, one of a socketed form and the other a form with *nei* co-exist in the Shanxi and Shaanxi area and represent the confluence of a new system with an older tradition. Anyang absorbed to a lesser extent some elements from different systems, augmenting its diversity, but retaining its essential character. The Liaoning region, on the other hand strictly adhered to the socketed tradition. Only in the Shaanxi and Shanxi regions do the different forms and decoration of *yue*-axe, as well as the burial furnishing of these two systems merge. This phenomenon is also revealed in other weapon forms.<sup>149</sup> The Shaanxi and Shanxi region perhaps corresponds with the Tu Fang and Gong Fang as mentioned in the oracle bone inscriptions as well as the Gui Fang which appears in classical literary sources.

Oracle bone records indicate that there were frequent and violent confrontations between the Yin people and the Tu Fang and Gong Fang during the Late Shang period, especially during Wuding's reign. In a cursory calculation, there are over one hundred mentions of attacks on Tu Fang, and over four hundred references to attacks on the Gong Fang.<sup>150</sup> As noted above (p.337) even Fu Hao led an attack on the Tu Fang.<sup>151</sup>

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<sup>148</sup> While a tang (similar to the *nei* on Chinese forms served as the primary method of hafting the bronze axe in ancient Egypt and the socketed form was rarely used, and has been confirmed as a foreign element, the Bronze Age of ancient Egypt antedates China's bronze age by a considerable time period. W. V. Davies, British Museum 1987.

<sup>149</sup> Chen Fangmei, 1991, pp.263-306.

<sup>150</sup> Lin Xiaoan, p.262.

<sup>151</sup> Guo Moruo (1933), *Jinghua 2, Jinghua 5*

While there is considerable disagreement among scholars regarding the the exact location of the Tu Fang and Gong Fang, all agree that the area lies to the north. Classical literary sources record the Gui Fang lying north of the Yin, "Gaozong made an assault on the Gui Fang, and subdued them after three years." ("Jiji" chapter of the *Yijing*). As discussed earlier, there are different opinions regarding the exact location of the Gui Fang. However, scholars all agree that the Gui Fang should lie to the northwest. The independent but overlapping traditions of the bronze socketed *yue*-axe and *yue* with *nei* is perhaps material evidence for the frequent confrontation between the Yin and the Tu Fang and Gong Fang as well as the Gui Fang.

The fact that regional forms of Late Shang bronze weapons coexisted with the Anyang tradition in the various surrounding regions reflects the character of the relationship and degree of intimacy between Anyang and the surrounding regions. It also argues for the complexity of the cultural web of Late Shang bronze weapons.

The east, as represented by Sufutun at Yidu, stands out among the areas surrounding Anyang as the most intimately related to Anyang. The styles of bronze weapons such as the Type I *yue* and Type III and IV *mao* spearhead<sup>152</sup> and Type II, Type VI, and Type V *ge*.<sup>153</sup> Examining the mortuary rituals in the tomb, an immolated human head, a shield, and a *ge* were found in the four corners of the large Sufutun M2 tomb very similar to the sacrificial burials of a human, a dog and a *ge* found in the large tomb M1001 at Xibeigang, Anyang.<sup>154</sup> This indicates a consistence in the ritual burial of *ge* in the large tombs from these two regions. In tomb no. 8 at Sufutun, the bronze weapons are placed on the right and left sides of the coffin. *Mao* are placed on the left and *ge* are placed on the right. This phenomenon is similar to a number of tombs where the burial furnishing are composed mostly of weapons. While on a portion of the *ge*, like one from Sufutun tomb 8 which has both a socket and a *hu*, two registers of thunder pattern embellish the blade and *hu*. A sculptured triangular animal head is placed on the *ge* where the *nei* and blade join.<sup>155</sup> The Yachou *yue*-axe displays a more indigenous character with an animal face of openwork eyes, mouth and large teeth. The primary forms of weapons of this area are very similar to the Anyang style as exemplified by the *ge*, *yue* with *nei*, and *mao*-spearhead.

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<sup>152</sup> WW 1972:8,p.30,fig. 38:10,11.

<sup>153</sup> KG 1994:1,fig.2:1,4,5.

<sup>154</sup> WW 1972:5,p. 5.

<sup>155</sup> HDKG 1989:1,p.258,fig.5:2.

Using the Sufutun tombs as representative Shandong tombs of Late Shang period containing bronze weapons, this region appears to be the one most intimately related to Anyang. From around 2000 BC, until the formation of the Shang Dynasty the Shandong region was characterized by the *Zaoshi* culture. The Erligang period/early Yinxu period *ge* from Tengzhou, Shandong<sup>156</sup> and other bronze ritual vessels show little discrepancy between them and those recovered from the Central Plains. This phenomenon continues up to to the end of the Yinxu period, as exemplified by the *huge*, the large knives, the *yue* and *mao*-spearhead from tomb no.8 at Sufutun which belong to the Yinxu third or fourth period. Historians have concluded that "During the Qishui cultural period, the Eastern Yi clan retained considerable power and participated in the struggle for control during the early stages of Shang Dynasty ... under the powerful political and military force of the Shang ... their inevitable fate was to be absorbed into the Shang culture."<sup>157</sup> The character of Late Shang bronze weapons recovered from the Shandong region provide evidence for this process.

In the south there is Xin'gan, Jiangxi, where the weapons show a definite relationship to those from Anyang, while at the same time displaying a definite local character resulting in a very different appearance from those of the Shandong area. The conditions of Sichuan are less obvious as the bronzes have been recovered from sacrificial pits rather than from tombs. Anyang-style bronze weapons have been recovered from the north, but they definitely belong to a different system.

The greatly reduced Yinxu cultural region as compared to the area encompassed by the Erligang culture can be seen by examining the regional cultures surrounding the Central Plains such as *Zaoshi*, *Shimen* in the Two Lakes region, *Wucheng* in the Boyang Lake region both located in the south, and the *Shanxi*, *Shaanxi*, and *Hebei* regions in the north. On the other hand, the Anyang forms of weapons, particularly the bronze *ge*, achieved a much greater distribution in the Late Shang period. It was also in the Late Shang period that the *ge* achieved its status as the primary form of bronze weapon of the Late Shang period contrasting with the bronze axe of other bronze cultures.

#### 5.4.2. The historical position of Late Shang bronzes

Bronze weapons became a common item among the burial furnishings of the Late Shang period appearing as many different types and within each type assuming a great variety of forms. These changes are seemingly in accordance with the greater stratification and division of the military elite, the specialization of the military, and the ever increasing scale of the armies. Oracle bone inscriptions and bronze

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<sup>156</sup> WW1993:6, p.96.

<sup>157</sup> Shao Wangping,,1992,p.322.

inscriptions, as well as classical literary sources together with archaeological finds provide evidence for the large scale of the military. Oracle bone inscriptions dated to the Wuding period often mention conscripting three to five thousand men.<sup>158</sup> The Shang dynasty military troops were referred to as *shi* 師.<sup>159</sup> Presently there is no conclusive evidence to the exact number of soldiers in a *shi*. However, from the numbers of military conscriptions indicated in the oracle bones and in literary sources such as "70 thousand men, in resistance to Wu Wang" in the *Shiji* "Zhoubenji", and "Nei of Yin using 70 fine chariots, six thousand brave soldiers" in the "Lunwei" of *Lushi Chunqiu*, the numbers were not small. The quantity of weapons required to outfit this great army must have been great.

The broad dissemination of bronze weapons in the Late Shang period is closely related with the constant warring during this period. Both oracle bones and literary sources confirm the uneasy relationship between the Yin and the surrounding areas and the *situ*.<sup>160</sup> This is made particularly evident in the oracle bone inscriptions, which also indicate the need for a large quantity of weapons. The quality of weapons changed along with their numbers. Yinxu, as representative of the multifarious types and styles of Late Shang bronze weapons, also provides evidence for these changes. Outside the Shang political centre the bronze weapons of the south, north, southwest, and northwest manifest regional variations as well as Shang influence or perhaps influenced those of the Shang.

The origin and subsequent development of the bronze *ge*, *yue* and *mao*-spearhead perhaps lies in the south. The "Yin Wu" passage from the "Shang Song" chapter in the *Shijing* records, "they attack the Jing Chu"; Among the oracle bones, there is the following divination "已未卜，貞：多 □ 亡 □，在南方？" (*Jiabian* 2920) "Cracking on the *yüwei* day, divining: Many.....have died.....in the south" The oracle bones show concern for Duo □ in the south. This record imply the intimate relationship between the Shang dynasty and the south.

The triangular-blade *ge* provides a clear example of a relationship between the Shang dynasty and the southwest. This evidence has aroused the interest of scholars seeking the location of the Shu, the origin of the Shu-style *ge*, and the relationship between the Shu and the Shang.<sup>161</sup>

The uniqueness of the animal-pommel knives found at Anyang evidence a relationship with the animal-pommel and rattle-pommel swords of the north and northwest. Scholars have proposed the north and the northwest as perhaps being the

<sup>158</sup> Luo Zhenyu, 6.34.2:7.15.4

<sup>159</sup> Guo Moruo 1933, p.597; Yang Shingnan, , Hu Houxuan, p.341.

<sup>160</sup> Chen Mengjia, 1956, pp.319-321.

<sup>161</sup> Li Boqian 1986, p.70.

Tu Fang or Gong Fang mentioned in the oracle bone inscriptions. This area could also be location of the Gui Fang as mentioned in the "Jiji" chapter of the *Yijing*.<sup>162</sup>

In brief, the development of the bronze weapons reflects a complex network of relationships between the Shang and the surrounding regions often referred to as the four quarters.

The intermingling and merging of the regional bronze weapons with those of the Anyang area during the Late Shang period not only surpassed the bronze weapons of the previous periods in terms of types, forms and decor, but also established the principal direction for later developments in both Central Plains and regional bronze weapons.

The *ge* was the primary weapon form for the Shang and Zhou period. Contrasting with the bronze weapon development of other bronze cultures, the direction for this development was established in the Late Shang, and specifically in the Anyang area. The Erlitou and Erligang forms of the *ge* are characterized by a *lan*, but no *hu*, and carrying either a straight or a curved *nei*. Those of the following periods, initiated by the mingling of the Central Plains culture with regional cultures, created a great variety of *ge* forms which led to the *ge* becoming the most widely distributed among the bronze weapons. Experimentation with the different variations of the *ge* during the Late Shang, primarily in the Anyang area, were in the end succeeded by the *ge* with *hu*, which became the principal bronze weapon of the Western Zhou and following.

Innovations to the *ge*, the most important weapon of the Central Plains, focused on securing the blade more securely to a longer shaft. In the Late Shang period to the early Western Zhou, with the addition of the *hu* to the *ge*, the weapon became more securely fitted to the shaft, and the shaft was lengthened from 60 cm to over 80 cm. Present archaeological evidence of trace impressions of these shafts indicate that the weapon was not found associated with the chariots. The weapon was instead perhaps carried by the foot soliders. Those used on the chariots were perhaps even longer. The shafts of the *ge* from tomb no.1 at Liucheng, Changsha dating to the Spring and Autumn period were all over three meters in length with the exception of three lengths 90 to 140 cm. The fact that the shafts are particularly long perhaps indicates that these weapons were not only use by the foot soliders, but also on the chariots. The great role played by the chariots in warfare at the time could have been an important factor in developing a more secure method of hafting the weapon.

From the Western Zhou onwards the chariot played an increasing important role in battle and stimulated the development of the bronze weapons. Late Shang chariots

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<sup>162</sup> Wang Guowei pp.583-601; Chen Mengjia, 1956, p.275; Zhang Yachu, 1983, p.400.

have been uncovered in considerable numbers, often together with bronze weapons.<sup>163</sup> Most scholars would agree that the battle chariot had already been developed by the Late Shang, and the Shang had already divided the military into infantry and the chariot units.<sup>164</sup> In the oracle bone inscriptions is a reference to "chariots left, right and center, 300 persons" (*Qianbian* 3,31,2). We should also consider the actual proportion of chariots to the rest of the army. From the Western Zhou onwards, it appears that the chariot played an even greater and more important role in warfare. In both oracle bone and bronze inscriptions the numbers of chariots are used to describe the troops. The inscription on the Yu *ding* reads, "leading one hundred of the duke's military chariots, one thousand infantrymen." A passage from the "Zhoubenji" in the *Shiji* reads, "three hundred military chariots, three thousand brave warriors." Weapons used on the chariot were not restricted to the long range weapons such as the arrow which is a common phenomenon in the Late Shang, but both the *ge* and *ji* were also used on the chariot.<sup>165</sup> Both the *ge* and the *ji* were primary forms of weaponry from the early Western Zhou to the early Spring and Autumn period.

Following the Western Zhou, the *ji* became one of the most common forms of weapons, second only to the *ge*. The Western Zhou *ji* is notably the integrated type. An inchoate form of this type of *ji* is found in the Xin'gan tomb, Jiangxi. The separated form of a *ge* and *mao* spearhead is popularized in the Spring and Autumn period through the Warring States period. An early example of this separated form of the *ji* is seen in the Late Shang or perhaps slightly earlier from Taixi, Gaocheng, in Hebei.

Anyang during the Late Shang period was a great melting pot. Regional characteristics from the surrounding regions, and differing manners existed only peripherally at Anyang. Likewise, the Late Shang regional forms from the north, south, and southwest appear to be the prototypes for the bronze weapons of the Warring States period, exemplified by the triangular-blade *ge* particular to the Sichuan area during the Warring States which first appeared in the Late Shang period in Sichuan, and in the Han, Jing and Wei river basin areas. The antenna short sword popular in the north during the Warring States period has its origins in the Late Shang curved-grip animal- or rattle-pommel short sword of the north. A predecessor of the *qiongkou yue* popular in the southwest during the Warring States period is perhaps seen in the *qiongkou yue* from the Xin'gan tomb, Jiangxi.

In conclusion it can be said that both the forms and types of weapons for the Western Zhou and later periods were already established in the Late Shang period.

<sup>163</sup> Yang Hong, p.80.

<sup>164</sup> Shi Zhangru, pp.447-487; Chen Zhida, p.336.

<sup>165</sup> WW 1977:4, p.67.

## 5.5. Bronze Weapons in Late Shang and their place in the History of Bronzes

Due to the utilitarian role of the bronze weapons, the artistic aspect of these artefacts has often been neglected. Nevertheless, bronze weapons hold an unique position in the history of Late Shang and remain essential to understanding the art of the Late Shang bronzes.

The artistic element is particularly pronounced in only some of the Late Shang bronze weapons. The primary reason is due to the increasing complexity of the ritual quality of the bronze weapons. With a professional military, and the elaboration and refinement of the political and social hierarchy of the military elite, a selection of the Late Shang bronze weapons became predominantly artistic in nature. Craftsmen concentrated their energy on the weapons which were to become the possessions of high ranking military generals or even kings.

Another reason for the heightened artistic quality of the weapons was the application of special techniques on the weapons. With the increasing complexity of casting methods in the Late Shang period, new methods and techniques for embellishment were particularly applied and experimented with on the weapons.

A third reason is attributed to the confluence and mixing of the Central Plains culture with the regional cultures which is manifest in the art of the bronze weapons with an increase in the variations of motifs. This Late Shang period phenomenon allowed the bronze weapons to develop motifs and decorative techniques which are rarely seen applied to the bronze ritual vessels.

The aggregation of the three aforementioned reasons allow the bronze weapons to be regarded as objects of art in the Late Shang period. The weapons manifest their artistic nature in several areas.

### 5.5.1. Inlay

Both turquoise and malachite are used to decorate Late Shang bronze weapons, supplementing the bronze colour itself by adding the greens and blues achieved by the inlaid stones. While the inlay technique had already made its appearance in the Erlitou period III, there are very few examples of its having been used. Most frequently inlay is seen as the turquoise applied in the form of a zoomorphic mask to the bronze plaques from this period.(fig.5:7)<sup>166</sup> Many small tools have been found, providing evidence for the necessary implements to cut the many angles and shapes of turquoise required for inlay. Inlay techniques were further developed on the Late Shang bronze with a greater variation in the curves achieved in the carved stone. The

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<sup>166</sup> Beijing 1985d, vol 4, pl.3.

curved-*nei ge* (no. 740) from M5 is an excellent example.(fig.5:8)<sup>167</sup> The *nei* and blade of this 38.5 cm *ge* are inlaid with more than 2000 pieces of turquoise to create the multitude of curves in the *kui-long* and zoomorphic mask resulting in an exquisite piece of inlay decor.

It should be noted that inlay is typically used on the weapons and chariot fittings of the Late Shang bronzes and is rarely applied to the ritual bronzes. This is perhaps due to the fact that the surface of both weapons and chariot fittings is flat, whereas ritual vessels are often round, making the application of inlay on the former earlier than on the latter. While this is one possible explanation, it is also possible that the bronze weapons and chariot fittings represent a different level of ritual status from that of the bronze vessels. There is little direct evidence to support either theory, however, it was through the bronze weapons and chariot fittings that the inlay technique achieved a greater level of development following the Erlitou period, and helped pave the way for the high degree of popularity of inlay on the bronze vessels and weapons of the mid Spring and Autumn period and following.

### 5.5.2. Openwork

Openwork plays on the effect of material and its absence. The use of openwork is seen in bronzes from outside the Central Plains and characterizes the uniqueness of different regions.

Two bronze *yue* from Chenggu, Shaanxi(fig.5:9;5:10) <sup>168</sup> exemplify the skillful merging of the traditional jade *yue* tradition with openwork. The neolithic jade *yue* are commonly perforated on the central part of the blade with a large circular hole(fig. 5:11)<sup>169</sup>. The bronze *yue* of the Erligang period continued this form of the *yue* decorating the blade along the three non-bladed edges of the *yue*, as exemplified by the bronze *yue* from Panlongcheng, Hubei (fig. 4:39). The two blades from Chenggu alter the decor by placing it within the hole. One is decorated with a dragon-like animal, the other is decorated with a frog. The body of the figures are solid while the area around them is openwork, creating this interplay of solid and void.

A different form of openwork is seen on the *yue* from Xin'gan, Jiangxi (fig.4:32-1). The Xin'gan *yue* is already distanced from the neolithic jade *yue* as it has discarded the large round hole in the center of the blade, but there remains instead a large mouth in openwork with teeth. The swallowtail pattern which encircles the teeth has little relationship to the open mouth. The display of only teeth, indicates a

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<sup>167</sup> Beijing 1985a, fig. 30,3.

<sup>168</sup> Li Xixing 1994, pl.241;243.

<sup>169</sup> Hong Kong 1989, pl.224.

degree of abstraction from the animal form. This is also true of the *yue* from Taixi, Gaocheng in Hebei (fig.5:12).<sup>170</sup>

The use of openwork displays its individuality in the Shandong area. The two large *yue* from Sufutun, Yidu, in Shandong (fig.4:53;4:54) are embellished with somewhat human, somewhat animal-like faces. The pupils of the eyes, the ears and the gaping mouth are all achieved with openwork. The eyebrows, the nose and teeth are all modelled in bronze. Ten teeth are suspended from the upper lip and fourteen teeth protrude from the lower lip. This half-animal half-human face creates a striking effect.

Openwork is not limited to bronze but also appears as a decorative form in the neolithic pottery and jades. An example of openwork is seen in the fine black pottery *dou* of the Longshan culture.(fig.5:13)<sup>171</sup> Neolithic openwork jade pendants in the form of a dragon and phoenix were recently found in Lixian, Hunan,(fig.5:14,15)<sup>172</sup> and openwork headpieces were excavated at Fanshan belonging to the neolithic Liangzhu culture.(fig.5:16)<sup>173</sup> The use of openwork for embellishing the bronzes appears as early as the early Shang period. A bronze *gu* from Panlongcheng, Hubei is an excellent example of the use of openwork.(fig. 5:17)<sup>174</sup> The Late Shang continues to use this method of decor as evidenced by the *gu* from M5. (fig.5.18)<sup>175</sup> The openwork is located on the *gu* with a relatively high foot. The foot is the only practical portion of the *gu* which can support openwork and still remain functional. The ability to apply openwork to the vessels is limited, hence restricting its development on the ritual vessels. There are only a very limited number of bronze ritual vessels which are embellished with openwork, and it is not particularly common among the decors for the bronze vessels. On the other hand, the application of openwork is effective for the bronze weapons most particularly the *yue*.

### 5.5.3. The mixing of materials

The bronze weapons of the Late Shang manifest the characteristic of extending beyond the use of only bronze, boldly bringing together several different materials. The use of meteorite iron such as the iron-blade bronze *yue* (fig.5:19), the use of turquoise and malachite for inlay on the weapons as described above; the combining of jade and bronze as exemplified by a jade-blade bronze-socket *mao*-spearhead; (fig. 3:48) and a jade-blade bronze-*nei ge* (fig.3:24-1;3:24-2). These weapons which

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<sup>170</sup> Beijing 1977, p.133, fig 30.12.

<sup>171</sup> Beijing 1993, pl.2.

<sup>172</sup> Beijing 1993, pl.45,46.

<sup>173</sup> Hong Kong 1989, pl.123.

<sup>174</sup> Beijing 1985, vol 4, pl.21.

<sup>175</sup> Beijing 1989f, pl.42.

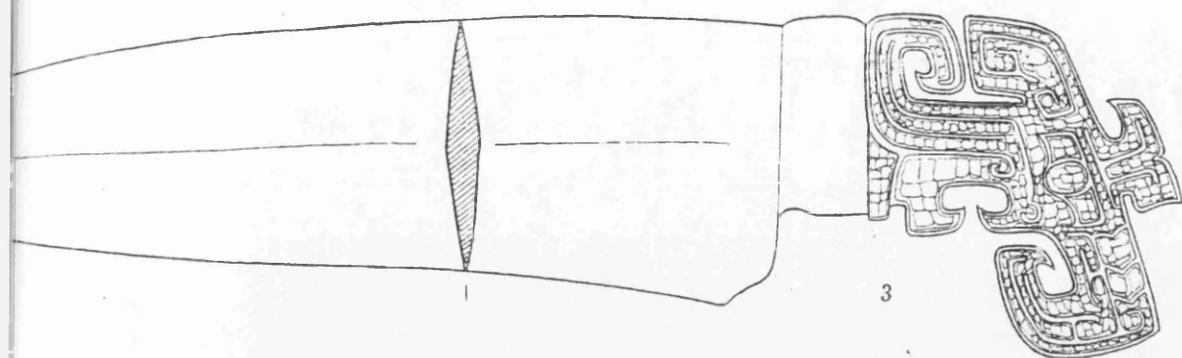


fig. 5:8 Curved-tang *ge* inlaid with turquoise,length 26.5 cm.Beijing 1985a,fig.30:3.

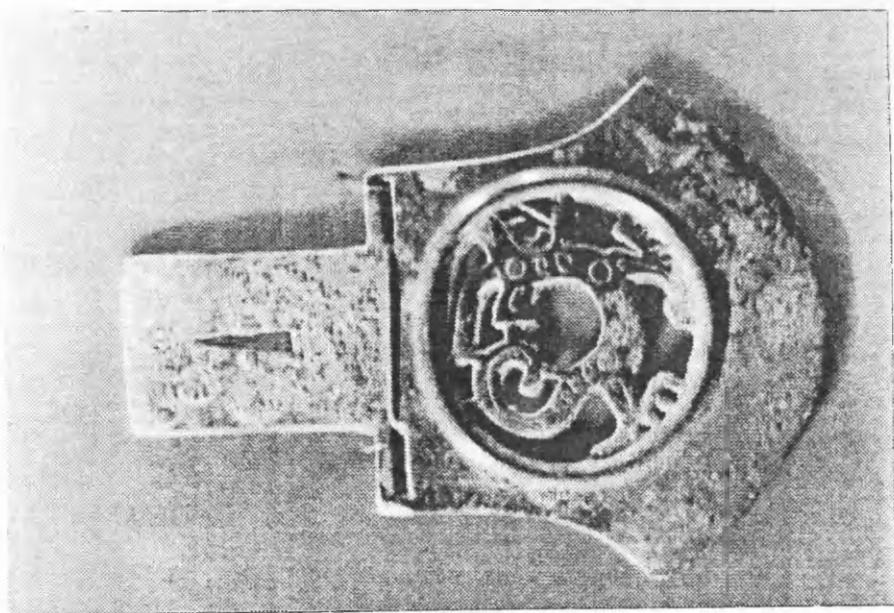


fig. 5:9 Bronze *yue*, Wulangmiao Chenggu Shaanxi,length 17 cm. Li Xixing 1994, Pl.241.

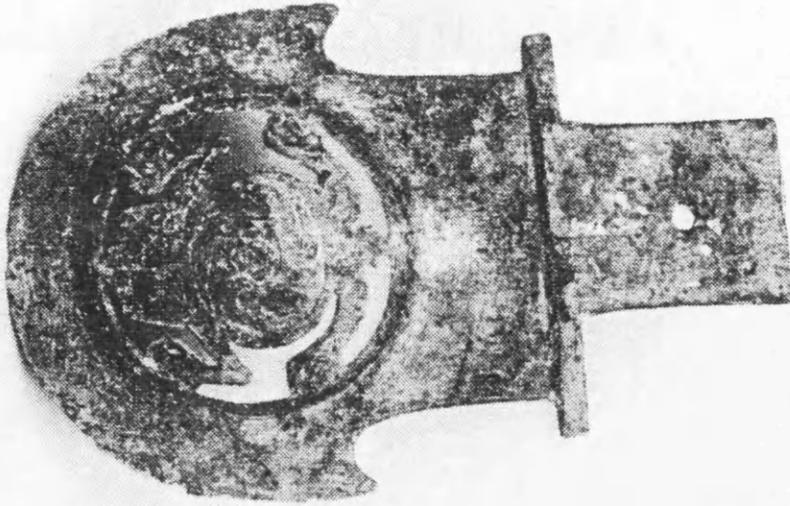


fig. 5:10 Bronze *yue*, Wulangmiao Chenggu Shaanxi, length 20 cm. Li Xixing 1994, Pl. 243.

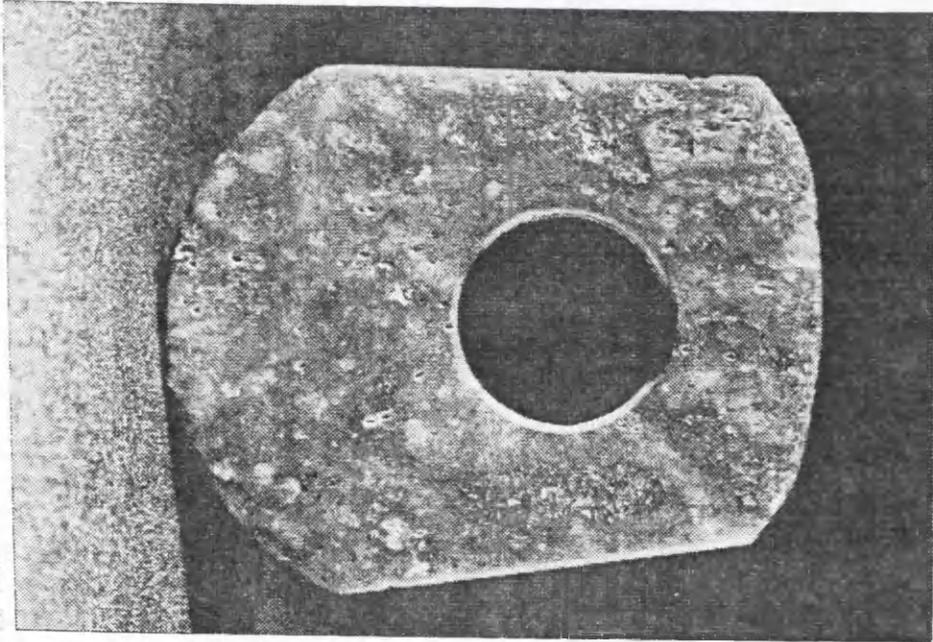


fig. 5:11 Jade *yue*, M1 Zhanglingshan Dongshan Zhejiang, length 12.5 cm. Hong Kong 1989, Pl. 224.

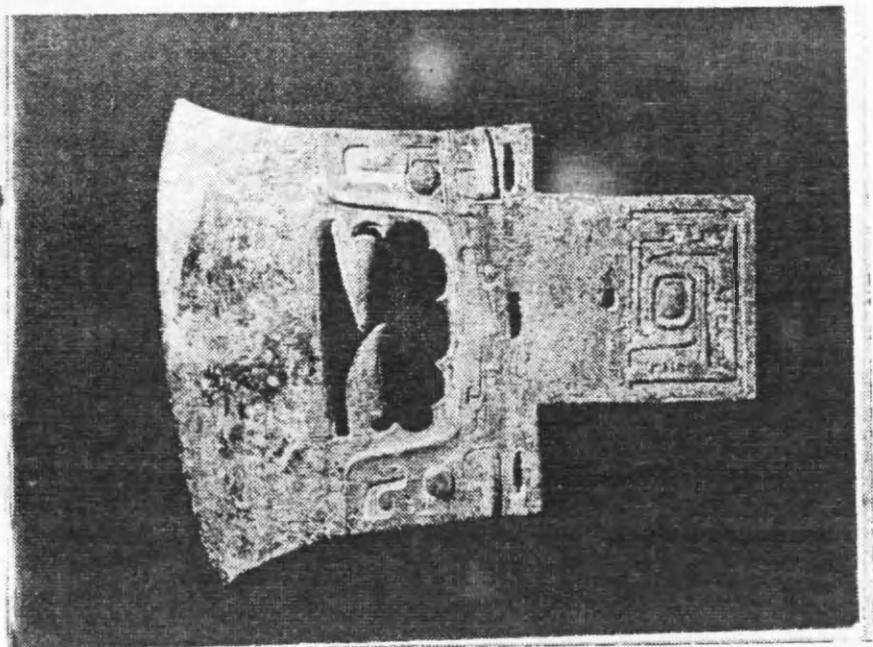


fig. 5:12 Late Shang bronze *yue*, Taixi Gaocheng Hebei, length 26.4 cm. Beijing 1977, p.133, fig. 30.12.



fig. 5:13 Black pottery *dou* with openwork decoration, Dawenkou culture, height 34 cm. Beijing 1993, Pl.2.



fig. 5:14 Jade dragon, Lixian Hunan,  
length 9.1 cm. Beijing 1993, Pl. 45.

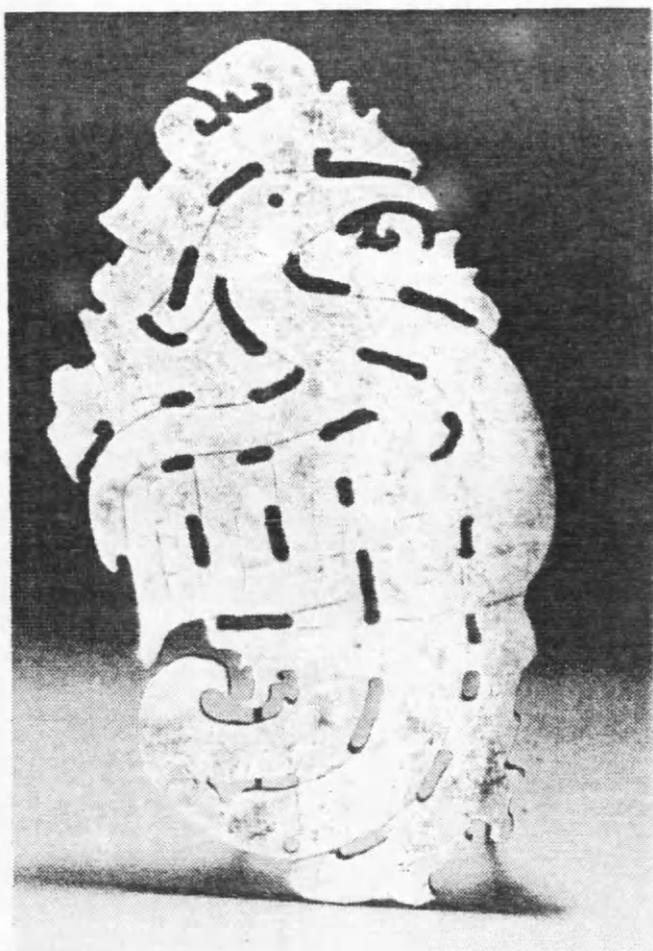


fig. 5:15 Jade phoenix, Lixian Hunan,  
length 12.6 cm. Beijing 1993, Pl. 46.

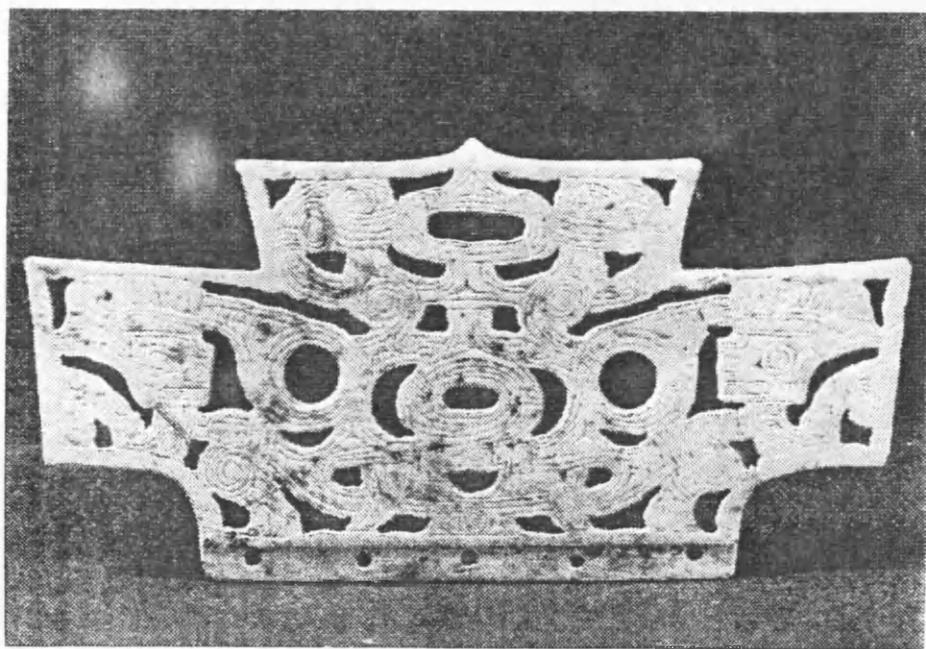


fig. 5:16 Openwork jade headpiece, Fanshan, Liangzhu culture, height 5.2 cm. Hong Kong 1989, Pl. 123.

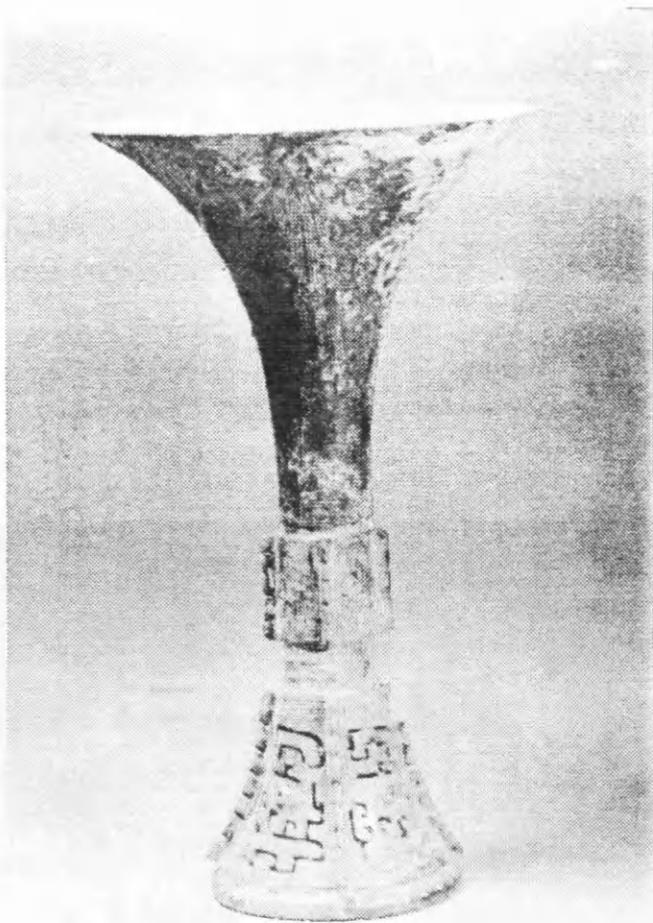


fig. 5:17 Bronze *gu*. Panlongcheng Huangpi Hubei, height 16.5 cm. Beijing 1985d, vol.4, pl.21.



fig. 5:18 Bronze *gu*. M5 Xiaotun, height 25.8 cm. Beijing 1980f, pl.42.  
(upper illustration)

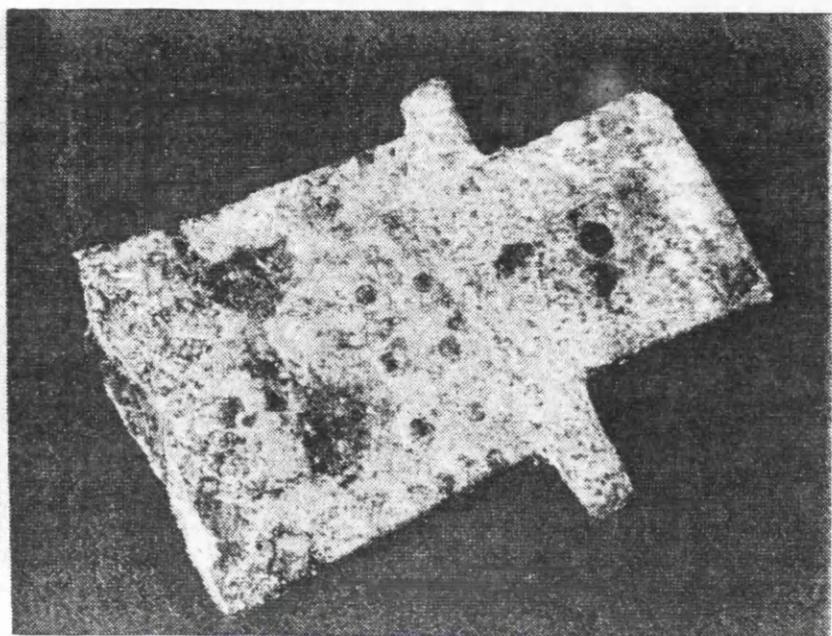


fig. 5:19 Iron-blade bronze *yue*, M112 Gaocheng Taixi. Beijing 1985c, pl. 1.

combine jade and bronze take advantage of the fact that bronze is easier to shape than jade and complex decoration is more readily achieved in bronze than in jade. The effect is a combination of a hard metallic gleam of the bronze combined with the subtle satin lustre of the jade. This combination of jade and bronze is particular to the Late Shang weapons specifically from the Anyang area and this effect is not easily achieved with the bronze ritual vessels.

#### 5.5.4. The variations of motifs:

There are a great number of motifs used on the bronze weapons which are also found on the bronze ritual vessels. Several examples are the whorl pattern; the pendants, and the zoomorphic masks, as well as birds. However, as the weapon is a tool used for killing, among these motifs found on weapons a little different from on ritual vessels. One example is the zoomorphic mask which embellishes the bronze *yue* (fig.3:33-1;33-2;3:34;4:39;4:53;4:54;5:9;5:10;5:12). The teeth of the zoomorphic mask are carefully delineated and are directed towards the blade edge enforcing the violent aspect of the weapon, and differing from general aura effected by the zoomorphic masks found on the ritual vessels. The bird as a decorative element maintains a secondary position on the Late Shang ritual vessels, while the bird head becomes a standard and particular form of decor on the curved-*nei ge* (fig.5:8). Characteristic features such as the accentuation of the curved beak and the crest of plumage on the top of the bird, and a comparison of other examples of carved marble and jade distinguishes this type of bird as an owl. The highly ritualized bronze weapons such as the curved-*nei ge*, contrast with the ritual vessels where the central decor is the zoomorphic mask, and birds serve as supplementary decor. Is it possible that this type of decor held special meaning for the ritualized bronze weapons? Did the owl hold significant meaning on the ritual bronze weapons? Among the curved-*nei ge* from Xin'gan in Jiangxi one (fig.4:35) is formed into a tiger's head. Did different clans apply different animal motifs to weapons which were there by imbued with ritual significance? Present materials make it difficult to answer these questions.

The regional styles of the Late Shang period are manifest in the unusual techniques and motifs which are rarely applied to the Central Plains ritual vessels or weapons. Examples of these regional forms are the sculptured ram head and deer head which are fashioned into pommels on the short sword and knives and bow-shaped implements. Other regional motifs are the wheel pattern, serrated pattern, and triangular serrated pattern, as well as star pattern, human-like zoomorphic mask, and human face. These motifs augment and add variety to the repertoire of Late Shang bronze motifs. Hence, the artistic aspect of the Late Shang weapons is essential in the study of the Late Shang bronzes.

# CHINESE CHARACTER GLOSSARY

## -A-

Anhui 安徽

Anqiu 安丘

Anyang 安陽

## -B-

Baicaopo 白草坡

Baihuatan 百花潭

Baijiayao 白家窯

Baiyingguancun 白鷹官

Baode 保德

Baoding 保定

Baoji 寶雞

Bashu 巴蜀

Beiyingyangying 北陰陽營

*ben* 本

*bi* 壁

## -C-

Cangshan 蒼山

Caojialou 曹家樓

Caojiayuan 曹家垣

Changling 長嶺

Changping 昌平

Changqing 長清

Changsha 長沙

Changzi 長子

Chaodaogou 抄道溝

Chenggu 城固

Chengziyai 城子崖

Chongqing 重慶

*chuan* 穿

Chujiayu 褚家峪

Chunhua 淳化

*cibing* 刺兵

## -D-

Dadunzi 大墩子

Dagongshan 大工山

*dao* 刀

Dasikongcun 大司空村

Dayangzhou 大洋洲

*ding* 鼎

Dingcun 丁村

Di Xin 帝辛

Di Yi 帝乙

Dongchengwang 東呈王

Dongxianfeng 東下馮

*dou* 豆

Doujitaigou 鬥雞臺溝

## -F-

Faku 法庫

Fangshan 房山

*feng* 鋒

Fengxi 豐西

*fu* 斧

Fufeng 扶風

Fujian 福建

Fuquanshan 福泉山

Fuxin 阜新

## -G-

Gansu 甘肅

Ganxian 贛縣

Gaocheng 藁城

Gaohong 高紅

Gaojiabao 高家堡

Gaolouzhuang 高樓莊

*ge* 戈

*goubing* 句兵

*gu* 觚

Guanghan 廣漢

Guangshan 光山

Guangxi 廣西

Guangyuanshi 廣元市

Guangzhou 廣州

Guifang 鬼方

Guizhou 貴州

Guojiazhuang 郭家莊

Gushi 固始

**-H-**

Hanshanxian 含山縣  
Hanyuan 漢源  
Hebei 河北  
Hejiacun 賀家村  
Hejing 和靜  
Henan 河南  
Hetanjia 河套甲  
Hongzhao 洪趙  
Hougang 后崗  
Houjiazhuang 侯家莊  
Houma 侯馬  
*hu* 胡  
Huaizhenfang 懷真坊  
Huangxian 黃縣  
*huang* 璜  
Huangmei 黃梅  
Huangniangniangtei 皇娘娘台  
Huangpi 黃陂  
Huangzhong 隍中  
Hubei 湖北  
Huixian 輝縣  
Huimin 惠民  
Huiping 會坪  
Huiyang 淮陽  
Hunan 湖南  
Huning 滬寧

**-J-**

*ji* 脊  
*ji* 戟  
*jia* 犍  
Jiangzhai 姜寨  
Jiangling 江陵  
Jiangsu 江蘇  
Jiangxi 江西  
Jilin 吉林  
Jimo 即墨  
*jin* 矜

Jinan 濟南  
Jingjie 旌介  
Jingjiacun 旌介村  
Jiulidun 九里墩  
Jingnansi 荆南寺  
Jixian 吉縣  
*ju* 戰 懼  
Jurong 句容

**-K-**

Kaogutu 考古圖  
Keng Ting 庚丁  
Kezuo 喀左  
Kulun 庫倫  
Kunshan 崑山  
Kunyi 昆夷

**-L-**

*lan* 欄  
Lantian 藍田  
Laoniupo 老牛坡  
Laotongyu 老峒峪  
*lei* 壘  
*li* 鬲  
Liangzhu 良渚  
Liaoning 遼寧  
Linbao 靈寶  
Linfeng 靈豐  
Lingshi 靈石  
Lingtai 靈臺  
Linxin 廩辛  
Linyi 臨沂  
Linyou 麟游  
Linzi 臨淄  
Liquan 禮泉  
Liuchengqiao 瀏城橋  
Liulige 琉璃閣  
Liulihe 琉璃河  
Liulin 柳林  
Longshan 龍山

Lüliang 呂梁

Lulong 廬龍

Luoshan 羅山

Luoyang 洛陽

**-M-**

Mancheng 滿城

mao 矛

Maqiao 馬橋

Mayang 麻陽

Meiyuanzhuang 梅園莊

Mianzhu 綿竹

Miaopubeidi 苗圃北地

mingqi ge 明器戈

Minggong lu 銘功路

**-N-**

Naiman 奈曼

Nanchang 南昌

Nan Geng 南庚

Nanjingshi 南京市

Nanling 南陵

Nanshan'gen 南山根

Nanyangcun 南陽村

nei 內

Neimenggu 內蒙古

Ningcheng 寧城

Ningdu 寧都

Ningxia 寧夏

Ningxiang 寧鄉

**-P-**

pan 盤

Pan Geng 盤庚

Panlongcheng 盤龍城

Peixian 邳縣

Peiligang 裴李崗

Pengxian 彭縣

Pingdingshan 平頂山

Pinggu 平谷

Pingtán 平潭

**-Q-**

qiao 骹

Qijiazhuang 戚家莊

Qingjiang 清江

Qinglong 青龍

Qingpu 青浦

Qingyang 慶陽

Qishan 岐山

Qujiang 曲江

Quwo 曲沃

**-R-**

ren 刃

Ruichang 瑞昌

Rujiazhuang 茹家莊

**-S-**

Sandongqiao 三洞橋

Sanjiazhuang 三家莊

Sanxingdui 三星堆

Shanxi 陝西

Shanbiaozhen 山彪鎮

Shandong 山東

Shangdu 商都

Shanggao 上高

Shanghai 上海

Shanxi 山西

Shaoqingshan 少卿山

Shiji yin ben ji 史記殷本紀

Shilouzhen 石樓鎮

Shinianshan 拾年山

Shinmin 新民

Shixia 石峽

shiyong ge 實用戈

Shangcunling 上村嶺

Shouguang 壽光

Shimian 石棉

Shucheng 舒城

Shuiguanyin 水觀音

Sichuan 四川

Sishui 泗水  
Sufutun 蘇埠屯  
Suixian 隨縣  
Suide 綏德  
Sunjiagang 孫家崗

-T-

Tai Ding 太丁  
Tanjiacun 潭家村  
Tanjiazheng 亶甲城  
Taosi 陶寺  
Tengxian 滕縣  
Tengzhou 滕州  
Tianjin 天津  
Tuoketuo 托克托

-W-

Wangjinglou 望京樓  
Wantengshan 萬滕山  
Weifang 濰坊  
Weishui 渭水  
Weixian 蔚縣  
Wo Jia 沃甲  
Wu Ding 武丁  
Wu Yi 武乙  
Wuan 武安  
Wucheng 吳城  
Wuming 武鳴  
Wuwei 武威

-X-

Xi'an 西安  
Xianyun 獫狁  
Xiajiadian 夏家店  
Xiangcheng 項城  
Xiangfen 襄汾  
Xianyang 咸陽  
Xiaogan 孝感  
Xiaotun 小屯  
Xiaoxin 小辛  
Xiaoyi 小乙

Xiaxian 夏縣  
Xichuan Xiasi 浙川下寺  
Xiduan Guoshan 西斷果山  
Xin'gan 新淦  
Xindu 新都  
Xinfan 新繁  
Xingcheng 興城  
Xingtai 刑台  
Xinjiang 新疆  
Xinyu 新余  
Xinzheng 新鄭  
Xisha 西沙群島  
Xuejiazhuang 薛家莊  
Xunxian Xincun 濬縣辛村

-Y-

Yanchuan 延川  
Yang Chia 陽甲  
Yanggu 陽谷  
Yangjiawan 楊家灣  
Yangshao 仰韶  
Yanshi 偃師  
Yejun 鄴郡  
yi 彝  
Yichang 宜昌  
Yicheng 宜城  
Yidie 義牒  
Yidu 益都  
yimeng 伊盟  
Yingpanli 營盤里  
Yingshang 潁上  
Yinjiacheng 尹家城  
Yinjiaping 尹家坪  
Yinxu 殷墟  
Yishui 沂水  
Yongfeng 永豐  
Yonghe 永和  
Yongxiu 永修  
Yuan 援

Yue Jue Shu 越絕書

yue 鉞

Yulin 榆林

-Z-

Zaoyang 棗陽

Zhangjiachuan 張家川

Zhangjiapo 張家坡

Zhangshu 樟樹

Zhangwu 彰武

Zhengzhou 鄭州

Zhongning 中寧

Zhongzhoulu 中州路

Zhukaigou 朱開溝

Zhuyuangou 竹園溝

Zibo 淄博

Zu Ding 祖丁

Zu Geng 祖庚

Zu Jia 祖甲

zun 尊

Zu Xin 祖辛

Zu Yi 祖乙

Zuozhuan 左傳

## Bibliography

- ACASA *Archives of the Chinese Society of America.*
- Allan 1987 Allan, Sarah. "Tan yindai yuzhouguan yu zhanbu 談殷代宇宙觀與占卜" 國際殷商史會, 1987年.
- Allan 1993 Allan, Sarah. "Art and Meaning" and "Epilogue" in Whitfield 1993, pp.9-33, 161-76.
- Andersson 1929 Andersson, J. G. "Symbolism in the Prehistoric Painted Ceramics of China." *BMFEA* 1(1929), pp.65-69.
- Andersson 1932 Andersson, J.G. "Hunting Magic in the Animal Style." *BMFEA* 4(1932) pp. 221-315.
- Andersson 1935 Andersson, J.G. "The Goldsmith in Ancient China." *BMFEA* 7(1935) pp. 1-38.
- Andersson 1947 Andersson, J. G. "Prehistoric Sites in Honan." *BMFEA* 19(1947) pp. 1-124.
- An Zhimin 1981 An Zhimin 安志敏. "Zhongguo zao qi tongqi de jige wenti 中國早期銅器的幾個問題." *Kaogu xuebao* 1981.3, pp.269-285. Reprinted as chapter 18 in An Zhimin 1982.
- An Zhimin 1993 An Zhimin 安志敏. "Shilun Zhongguo zao qi qingtongqi 試論中國早期青銅器" *Kaogu* 1993.12, pp.1110-1119.
- d'Argencé 1966 d'Argencé, René-Yvon Lefebvre. *Ancient Chinese Bronzes in the Avery Brundage Collection*. Berkeley: de Yong Museum Society and Diablo Press, 1966.
- d'Argencé 1977 d'Argencé. *Bronze Vessels of Ancient China in the Avery Brundage Collection*. Asian Art Museum of San Francisco, 1977.
- d'Argencé 1983 d'Argencé, ed. *Treasures from the Shanghai Museum: 6000 Years of Chinese Art*. The Shanghai Museum and the Asian Art Museum of San Francisco, 1983.

- Bagley 1977 . Bagley, Robert W. "P'an-lung-ch'eng: A Shang City in Hupei." *Artibus Asiae* 39(1977) pp. 165-219.
- Bagley 1987 Bagley, Robert W. *Shang Ritual Bronzes in the Arthur M. Sackler collections*. Harvard University, 1987.
- Bagley 1992 Bagley, Robert W. "Changjiang Bronzes and Shang Archaeology" *Zhonghua minguo jianguo bashinian zhongguo ishu wenwu taolunhui lunwenji* 中華民國建國八十年中國藝術文物討論會論文集 1992.Taipei. pp.209-256.
- Bao Quan 1981 Bao Quan 保全. "Xi'an Laoniupo chutu Shangdai zaoqi wenwu" 西安老牛坡出土商代早期文物 .*Kaogu yu Wenwu* 1981.2, pp.17-18.
- Barnard 1961 Barnard, Noel. (諾埃爾·巴納德)*Bronze Casting and Bronze Alloys in Ancient China*. (Monumenta Serica Monograph 14.) Tokyo: The Australian National University and Monumenta Serica, 1961.
- Barnard 1963 -----, Review of Cheng 1959, Cheng 1960, and Watson 1961. *Monumenta Serica*, 22(1963) pp.213-55.
- Barnard & Fraser 1972 -----, and Douglas Fraser, eds. *Early Chinese Art and Its Possible Influence in the Pacific Basin*. 3 vols. New York: Intercultural Arts Press, 1972.
- Barnard 1975 -----, *Archaic Chinese Bronzes in Australian and New Zealand Collections*. [Melbourne:] National Gallery of Victoria, 1975.
- Barnard & Sato 1975 -----, and Sato Tamotsu. *Metallurgical Remains of Ancient China*. Tokyo: Nichiosha, 1975.
- Barnard 1976 -----, ed. *Ancient Chinese Bronzes and Southeast Asian Metal and Other Archaeological Artifacts*. Melbourne: National Gallery of Victoria, 1976.
- Barnard & Cheung 1978 -----, and Cheung Kwong-yue. *Rubbings and Hand Copies of Bronze Inscriptions in Chinese, Japanese, European, American, and Australasian Collections*. Taipei: Yee Wen Publishing Co., 1978.

- Barnard 1992 -----, "Dui Guanghan maizhang ken qingtongqi ji qitang qiwu zhi yiyi de chubu renshi" 對廣漢埋葬坑青銅器及其它器物之意義的初步認識. *Nanfang minzu Kaogu* 1992.5, pp. 25-65.
- Beijing 1956a *Hui Xian fajue baogao* 輝縣發掘報告. Beijing: Kexue Chubanshe, 1956.
- Beijing 1958a *Wusheng chutu zhongyao wenwu zhanlan tulu* 五省出土重要文物展覽圖錄. Beijing: Wenwu Chubanshe, 1958.
- Beijing 1959a *Zhengzhou Erligang* 鄭州二里岡. Beijing: Kexue Chubanshe, 1959.
- Beijing 1959b *Shandong wenwu xuanji* 山東文物選集. Beijing: Wenwu Chubanshe, 1959.
- Beijing 1959c *Shangcunling Guoguo mudi* 上村嶺虢國墓地. Beijing: Kexue Chubanshe, 1959.
- Beijing 1959d *Luoyang Zhongzhoulu* 洛陽中州路. Beijing: Kexue Chubanshe, 1959.
- Beijing 1960a *Shanxi Sheng Bowuguan, Shanxi Sheng Wenwu Guanli Weiyuanhui cang qingtongqi tushi* 陝西省博物館陝西省文物管理委員會藏青銅器圖釋. Beijing: Wenwu Chubanshe, 1960.
- Beijing 1961a *Xin Zhongguo de kaogu shouhuo* 新中國的考古收穫. Beijing: Wenwu Chubanshe, 1961.
- Beijing 1962a *Fengxi fajue baogao* 灃西發掘報告. Beijing: Wenwu Chubanshe, 1962.
- Beijing 1964a *Xunxian Xincun* 濬縣辛村. Beijing: Kexue Chubanshe, 1964.
- Beijing 1972a *Wenhua dageming qijian chutu wenwu* 文化大革命期間出土文物 Vol. 1, Beijing: Wenwu Chubanshe, 1972.
- Beijing 1977a *Gaocheng Taixi Shang dai yizhi* 藁城臺西商代遺址. Beijing: Wenwu Chubanshe, 1977.
- Beijing 1978a *Guangxi chutu wenwu* 廣西出土文物. Beijing: Wenwu Chubanshe, 1978.

- Beijing 1978b *Zhongguo gudai yejin* 中國古代冶金. Compiled at the Beijing Gangtie Xueyuan 北京鋼鐵學院. Beijing: Wenwu Chubanshe, 1978.
- Beijing 1978c *Zhongguo yejin jianshi* 中國冶金簡史. Compiled at the Beijing Gangtie Xueyuan. Beijing: Kexue Chubanshe, 1978.
- Beijing 1979a *Wenwu kaogu gongzuo sanshinian 1949-1979* 文物考古工作三十年 1949-1979. Beijing: Wenwu Chubanshe, 1979. [Japanese translation: see Tokyo 1981c.]
- Beijing 1979b *Shaanxi chutu Shang Zhou qingtongqi* 陝西出土商周青銅器, vol. 1. Beijing: Wenwu Chubanshe, 1979.
- Beijing 1979c *Shang Zhou kaogu* 商周考古. Beijing: Wenwu Chubanshe, 1979.
- Beijing 1980a *Hebei sheng chutu wenwu xuanji* 河北省出土文物選集. Beijing: Wenwu Chubanshe, 1980.
- Beijing 1980b *Shanxi chutu Shang Zhou qingtongqi* 陝西出土商周青銅器, vol.2. Beijing: Wenwu Chubanshe, 1980.
- Beijing 1980c *Shanxi chutu Shang Zhou qingtongqi* 陝西出土商周青銅器, vol.3. Beijing: Wenwu Chubanshe, 1980.
- Beijing 1980d *Sui xian Zeng Hou Yi mu* 隨縣曾侯乙墓. Beijing: Wenwu Chubanshe, 1980.
- Beijing 1980e *Zhongguo Kaogu Xuehui di si ci nianhui lunwen ji*, 1979 中國考古學會第四次年會論文集, 1979. Beijing: Wenwu Chubanshe, 1980.
- Beijing 1980f *Yinxu Fu Hao mu* 殷墟婦好墓. Beijing: Wenwu Chubanshe, 1980.
- Beijing 1980g *Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo* 中國社會科學院考古研究所, *Xiaotun Nandi Jiagu* 小屯南地甲骨 Vol. 1 Beijing: Zhonghua Shuju, 1980.
- Beijing 1980h *Mancheng Hanmu Fajue Baogao* 滿城漢墓發掘報告. Beijing: Wenwu Chubanshe, 1980.

- Beijing 1981a *Henan chutu Shang Zhou qingtongqi* 河南出土商周青銅器, vol.1. Beijing: Wenwu Chubanshe, 1981.
- Beijing 1981b *Guangzhou Han Mu* 廣州漢墓. Beijing: Wenwu Chubanshe, 1981.
- Beijing 1982a *Zhongguo Kaogu Xuehui di er ci nianhui lunwen ji*, 1980 中國考古學會第二次年會論文集, 1980. Beijing: Wenwu Chubanshe, 1982.
- Beijing 1982b *Yinxu yuqi* 殷墟玉器. Beijing: Wenwu Chubanshe, 1982.
- Beijing 1983a *Zhongguo kaoguxue zhong tan shisi niandai shuju ji* 1965-1981 中國考古學中碳十四年代數據集 1965-1981. Beijing: Wenwu Chubanshe, 1983. Errata listed in Kaogu 1984.3, p. 288.
- Beijing 1983b *Zhongguo Kaogu xuehui di si ci nian hui lunwen ji* 1983 中國考古學會第四次年會論文集, 1983. Beijing: Wenwu Chubanshe, 1983 .
- Beijing 1983c *Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo* 中國社會科學院考古研究所, *Xiaotun Nandi Jiagu* 小屯南地甲骨 Vol. 2, Beijing: Zhonghua shuju, 1983.
- Beijing 1984a *Shang Zhou qingtongqi wenshi* 商周青銅器紋飾. Beijing: Wenwu Chubanshe, 1984.
- Beijing 1984b *Shanxi chutu Shang Zhou qingtongqi* 陝西出土商周青銅器 vol.4. Beijing Wenwu Chubanshe, 1984.
- Beijing 1985a *Yinxu qingtongqi* 殷墟青銅器 Beijing: Wenwu Chubanshe, 1985.
- Beijing 1985b *Anyang Yinxu tougu yanjiu* 安陽殷墟頭骨研究. Beijing: Wenwu Chubanshe, 1985.
- Beijing 1985c *Gaocheng Taixi Shangdai Yizhi* 藁城台西商代遺址 .Beijing: Wenwu Chubanshe, 1985.
- Beijing 1985d *Zhongguo Meishu Quanji. Gonyi Meishu Bian. qingtong. vol.4,5* 中國美術全集 .工藝美術編.青銅 vol.4,5. Beijing: Renmin Meishu Chubanshe, 1985.
- Beijing 1986 *Ordos qingtongqi* 鄂爾多斯式青銅器 Beijing: Wenwu Chubanshe, 1986

- Beijing 1987 *Yinxu fajue baogao* 殷墟發掘報告 . Beijing: Wenwu Chubanshe, 1987.
- Beijing 1988 *Baoji Yuguo Mudi* 寶雞魚國墓地. Beijing: Wenwu Chubanshe, 1988.
- Beijing 1989 *Zeng Hou Yi mu* 曾侯乙墓. Beijing: Wenwu Chubanshe, 1989.
- Beijing 1990 *Zhonggou Wenwu Jinghua* 中國文物精華. Beijing: Wenwu Chubanshe, 1990.
- Beijing 1991 *Xichuan Xiasi Chunqiu Chu mu* 浙川下寺春秋楚墓. Beijing: Wenwu Chubanshe, 1991.
- Beijing 1992a *Zhonggou Wenwu Jinghua* 中國文物精華. Beijing: Wenwu Chubanshe, 1992.
- Beijing 1992b *Zhonggou Kaoguxue zhong tan shisi niandai shujiji* 中國考古學中碳十四年代數據集, Beijing: Wenwu Chubanshe, 1992.
- Beijing 1993a *Zhonggou Wenwu Jinghua* 中國文物精華. Beijing: Wenwu Chubanshe, 1993.
- Beijing 1993b *Zhongguo Yuqi Quanjì, vol.2* 中國玉器全集, Beijing: Wenwu Chubanshe, 1993.
- Beijing 1994a *Yinxu de faxian yu yanjiu* 殷墟的發現與研究 . Beijing: Wenwu Chubanshe, 1994.
- Beijing 1994b *Zhonggou qingtongqi quanji* 中國青銅器全集. Vol.13, Beijing: Wenwu Chubanshe, 1994.
- Beijing 1995a *Liulihe Xizhou Yanguo mudi 1973-1977* 琉璃河西周燕國墓地 1973-1977. Beijing: Wenwu Chubanshe, 1995.
- Beijing 1995b *Zhonggou Kaoguxue Luncong* 中國考古學論叢. Beijing: Kexue Chubanshe, 1995.
- BMFEA *Bulletin of the Museum of Far Eastern Antiquities*, Stockholm.
- Bo gu tu Wang Fu 王黼 et al. *Xuanhe bo gu tulu* 宣和博古圖錄.
- B. B. Bonkob 1961 “Gebi chutu de qingtong duanjian 〈戈壁出土的青銅短劍〉”, *Sulian kaoguxue* 《蘇聯考古學》 1961:3.

- BIHP *Bulletin of the Institute of History and Philology* 中央研究院歷史語言研究所集刊.  
Taipei.
- Cai Yunzhang 1991 Cai Yunzhang 蔡運章. "Shiyi nian gao luo ge ji qi xiangguan wenti" 十一年皋落戈及其相關問題. *Kaogu* 1991.5, pp. 413-416.
- Cao Dingyun 1980 Cao Dingyun 曹定雲. "Ya Qi kao" 亞其考. *Wenwu jikan* 2, 1980, pp. 143-50.
- Cao Dingyun 1986 -----, "Luen Yin Xu Houjiazhuang 1001 hao mu muzhu" 論殷墟侯家莊1001號墓墓主. *Kaogu yu Wenwu* 1986.2, pp.44-50
- Cao Dingyun 1987 -----, "Yindai chuqi wangling shitan" 殷代初期王陵試探. *Wenwu ziliao congkan* 10 (1987) pp.80-87.
- Chalfant, Frank or Kufang *Kufang Ershicang jiagu buci* 庫方二氏藏甲骨卜辭, Shanghai: Shangwu Yinghuguan, 1935.
- Chang 1980 Chang Kwang-chih 張光直. *Shang Civilization*. New Haven and London: Yale University Press, 1980.
- Chang 1981 -----, "The Animal in Shang and Chou Bronze Art." *Harvard Journal of Asiatic Studies* 41(1981) pp. 527-54.
- Chang 1983 -----, *Art, Myth, and Ritual: The Path to Political Authority in Ancient China*. Cambridge, Mass., and London: Harvard University Press, 1983.
- Chang 1985 -----, *Kaoguxue zhuanli liujiang* 考古學專題六講. Beijing: Wenwu Chubanshe, 1985.
- Chang 1989 -----, "Yinxu wuhaomu yu yinxui kaogu shang de Panging、Xiaoxin、Xiao shidai wenti" 殷墟五號墓與殷墟考古上的盤庚、小辛、小乙時代問題. *Wenwu* 1989.9, pp.13-19.
- Chang 1991 -----, "Shuo Yindai de yaxing" 說殷代的「亞形」. *Kaogu lishi yu wenhua—Gao Xiaomei xiansheng bazhi daqing lunwenji* 考古歷史與文化—高曉梅先生八秩大慶論文集. Taipei: Zhengzhong Shujyu 1991, pp.25-34.

- Chang Kwang-yuan 1987 Chang Kwang-yuan 張光遠. *Gugong lidai tongyin tezhan tulu* 故宮歷代銅印特展圖錄. Taipei: Gugong, 1987.
- Chang Lin-sheng 1976 Chang Lin-sheng 張臨生. "Ku-beakers with Jingles in the National Palace Museum." Barnard 1976, pp. 83-110.
- Chang Ya-chu 1983 Chang Yachu 張亞初. "Yinxu ducheng yu Shanxi fangguo kaolue 殷墟都城與山西方國考略." *Guwenzi yanjiu* 古文字研究 10 (1983) pp.388-405.
- Changsha 1964 *Hunan Sheng wenwu tulu* 湖南省文物圖錄. Changsha: 1964.
- Chao Zong-xiu 1988 Chao Zongxiu 趙宗秀. "Shandong Sishui faxian Shangdai qingtongqi 山東泗水發現商代青銅器." *Kaogu* 1988.3, p.284.
- Chase 1979 Chase, W.T and Franklin, Ursula Martius, "Early Chinese black mirror and pattern-etched weapons." *Ars Orientalis*, vol. xi, 1979, pp.215-258.
- Chen Fangmei 1987 Chen Fang-mei 陳芳妹. "Cong kaoguziliao lun qingtong jue fengge fazhan de zhuyao qushi 從考古資料論青銅爵風格發展的主要趨勢." *Gugong jikan* 1987, vol. 4, no.4, pp.45-94.
- Chen Fangmei 1991 -----, "Xiaotun wuzumu de qingtongqi —cong Erligang dao dianxing yinxu fengge de zhuanbian 小屯五座墓的青銅器—從二里岡到典型殷墟風格的轉變." *Kaogu lishi yu wenhua—Gao Xiaomei xiansheng bazhi daqing lunwenji* 考古歷史與文化—高曉梅先生八秩大慶論文集. Taipei: Zhengzhong shuju 1991, pp.181-232.
- Chen Fangmei 1992 -----, "Gugong suo cang Yin zhi Zhouchu de yixing bingqi ji qi suo fanyin de wenhua guanxi wenti —Shang Zhou qingtong bingqi yanjiu zhi er 故宮所藏殷至周初的異形兵器及其所反映的文化關係問題—商周青銅兵器研究之二." *Zhonghua minguo jianguo bashinian Zhongguo Yishu wenwu taolunhui lunwenji* 中華民國建國八十年中國藝術文物討論會論文集 1992. Taipei: pp.259-306.

- Chen Fang-mei 1997 -----, "Shang houqi qingtong fu yue zhi de fazhan ji qi wenhua yiyi 商後期青銅斧鉞制的發展及其文化意義." *Zhongguo kaoguxue yu lishixue zhenghe guoji yantaohui lunwenji* 中國考古學與歷史學整合國際研討會論文集. Taipei: Institute of History and Philology. (forth coming), 1997.
- Chen Ping 1987 Chen Ping 陳平. "Shilun Zhanguo xing Qin bing de niandai ji qi youguan wenti 試論戰國型秦兵的年代及其有關問題." *Zhongguo Kaoguxue yanjiu lunji—jinian Xia Nai xiansheng kaogu wu shi zhounian*.中國考古學研究論集—紀念夏鼐先生考古五十周年.
- Chen Ping et al 1990 -----, "Neimeng yimeng xin chutu shi wu nian shangjun shoushou ge minggao 內蒙伊盟新出土十五年上郡守壽戈銘考." *Kaogu* 1990.6, pp.550-3.
- Chen Menyjia 1945 Ch'en Meng-chia. 陳夢家 "Style of Chinese Bronzes." *ACASA* 1 (1945-46), pp. 26-52 and pls. 1-7.
- Chen Mengjia 1946 -----, *Haiwai Zhongguo tongqi tulu* 海外中國銅器圖錄(Chinese Bronzes in Foreign Collections, First Series). Beijing: Gaoli Beiping tushuguan, 1946.
- Chen Mengjia 1954 -----, "Yin dai tongqi 殷代銅器." *Zhongguo Kaogu xuebao* 7, 1954, pp. 15-59, with 44 plates.
- Chen Mengjia 1955 -----, *Xi Zhou tongqi duandai* 西周銅器斷代.  
Published in six parts:  
Part 1: *Kaogu xuebao* 1955.9, pp. 137-75.  
Part 2: *Kaogu xuebao* 1955.10, pp. 69-142.  
Part 3: *Kaogu xuebao* 1956.1, pp. 65-114.  
Part 4: *Kaogu xuebao* 1956.2, pp. 89-94.  
Part 5: *Kaogu xuebao* 1956.3, pp. 105-27.  
Part 6: *Kaogu xuebao* 1956.4, pp. 85-112.
- Chen Mengjia 1956 -----, *Yinxu buci zongshu* 殷墟卜辭綜述. Beijing: Kexue Chubanshe, 1956.
- Chen Mengjia 1964 -----, "Zhanguo Du Liang Hing Lueshuo 戰國度量衡略說." *Kaogu* 1964.6, pp.312-314.

- Chen Mengjia 1977 -----, *Yin Zhou qingtongqi fenlei tulu* 殷周青銅器分類圖錄(In *Shu seidóki bunrui zuroku* ; A Corpus of Chinese Bronzes in American Collections).2 vols. Tokyo:Kyulp Shoin, 1977. A Japanese version of Meidiguo zhuyi jieliao de wo guo *Yin Zhou tongqi tulu* 美帝國主義侵掠的我國殷周銅器圖錄, compiled by Chen Mengjia and published by Kexue Chubanshe, Beijing: 1962. The Japanese version is edited by Matsumaru Michio. The inscriptions in volume 1 are reproduced, their numbering unaltered, as the first 526 rubbings in Zhou Fagao 1980.
- Chen Pan 1970 Chen Pan 陳槃. *Bu Jian yu Chunqiu Dashibiao zhi Chunqiu Fangguo Gao* 不見於春秋大事表之春秋方國稿 (1970) 1, cited from Zhu Youzeng 朱右曾 *Zhushi Jixun xian shishuo* 朱氏集訓校釋說.
- Chen Peifen 1981 Chen Peifen 陳佩芬. "Gudai tongbing tongjing de chengfen ji youguan zhizao jishu" 古代銅兵銅鏡的成份及有關製造技術 *Shanghai bowuguan guan kan* 1上海博物館館刊1 (1981) pp.143-50.
- Chen Xu & Yang Xingping Chen Xu 陳旭, Yang Xingping楊新平. "Shang Zhou Zingtong yue" 商周青銅鉞. *Zhongyuan wenwu* 中原文物 1984.4, pp71-75.
- Chen Zhida Chen Zhida 陳志達. "Yinxu wuqi gaishu" 殷墟武器概述. *Qingzhu Su Bingqi kaogu 55 nian lunwenji*慶祝蘇秉琦考古五十五年論文集, 1989, pp. 326-337.
- Chen Zhenzhong Chen Zhenzhong 陳振中. "Woguo gudai de qingtongdao" 我國古代的青銅刀. *Kaogu* 1985. pp.73-8.
- Cheng 1959 Cheng Tê-k'un. *Archaeology in China, Volume I, Prehistoric China*. Cambridge: W. Heffer & Sons, 1959. Reprinted with corrections, 1966.
- Cheng 1960 -----, *Archaeology in China, Volume II, Shang China*. Cambridge:W. Heffer & Sons, 1960.
- Cheng 1963a -----, *Archaeology in China, Volume III, Chou China*. Cambridge:W. Heffer & Sons,1963.

- Cheng 1963b -----, "Animal Styles in Prehistoric and Shang China." *BMFEA* 35(1963), pp. 129-40.
- Cheng 1974 -----, "Metallurgy in Shang China." *T'oung Pao* 60(1974) pp. 209-29.
- Cheng Dong 1989 Cheng Dong 成東. "Xian Qin shidai de dun" 先秦時代的盾. *Kaogu* 1989.1, pp.71-9.
- Cheng Dong 1990 -----, *Zhongguo gudai bingqi tuji* 中國古代兵器圖集. Beijing : Jiefangjun Chubanshe ,1990.
- Cheng Xuehua et al Cheng Xuehua 程學華. "Shaanxi sheng Chenggu, Baoji, Lantian chutu he shouji de qingtongqi" 陝西省城固、寶雞、藍田出土和收集的青銅器. *Wenwu* 1966.1, p.2.
- Cheng Yaotian Cheng Yaotian 程瑤田. "Kaogongji chuanguwu xiaoji" 考工記創物小記. *Tongilu* 通藝錄 . 1933
- Chernova 1972 H. JI. 契列諾娃, 卡拉蘇克時期遺跡的年代學, (1972). In Wu En 1978.
- Cui Rui 1991 Cui Rui 崔璿. "Zhukaigou yizhi taoqi shixi" 朱開溝遺址陶器試析. *Kaogu* 1991.4. pp.361-371.
- Dai Yingxing Dai Yingxing 戴應新. "Shanxi Qishan Hejiacun Xi Zhou muzang" 陝西岐山賀家村西周墓葬. *Kaogu* 1976.1, pp.31-38.
- Dai Zunde Dai Zunde 戴尊德. "Shanxi Lingshi Jianjiacun Shang dai mu he qingtongqi" 山西靈石旌介村商代墓和青銅器. *Wenwu ziliao congkan*, no.3, 1980, pp.46-47.
- Davies, W.V. W. V. Davies, *Catalogue of Egyptian antiquities in the British Museum*, VII, *Tools and Weapons, I, Axes*. London: British Museum, 1987.
- Ding Shan 1956 Ding Shan 丁山. *Jiaguwen suo jian shizu ji qi zhidu* 甲骨文所見氏族及其制度. Beijing: Kexue Chubanshe, 1956.
- Dongnan Wenhua* *Dongnan Wenhua* 東南文化, bi-monthly periodical.

- Dongnan Wenhua 1988 “Anhui Tongling diqu gu kuangye yizhi diaocha baogao” 安徽銅陵地區古礦冶遺址調查報告. *Dongnan Wenhua* 1988.6, pp.77-83.
- Dongnan Wenhua 1990 “Jiangxi Ruichang Tonglin Shang Zhou kuangye yizhi di yiqi fajue jianbao” 江西瑞昌銅鈴商周礦冶遺址第一期發掘簡報. *Dongnan Wenhua* 1990.3, pp.1-12.
- Dong Zuobin 1933 Dong Zuobin 董作賓. “Jiaguwen duandai yanjiu li” 甲骨文斷代研究例. *Bulletin of the Institute of History and Philology* (supplement, In honor of Cai Yuanpei's 50th Birthday) waibian 慶祝蔡元培先生六十五歲論文集, 中央研究院歷史語言研究所集刊外編1.1, 1933, pp.323-424.
- Dong Zuobin 1942 -----, “Yindai Jiang yu Shu 殷代羌與蜀.” *Shuowen Yuekan* 說文月刊 (1942) 3:7.
- Dong Zuobin 1945 -----, *Yin li pu* 殷歷譜. Sichuan Nanqi: 1945. All references are to xiabian(i.e. the first number in a citation is the number of one of the ten juan of xiabian).
- Dong Zuobin 1948 -----, “Yin li pu hou ji 殷歷譜後記.” *Bulletin of the Institute of History and Philology* 13, 1948, pp. 183-208. Reprinted in Dong Zuobin 1979, pp. 807-32.
- Dong Zuobin 1956 -----, “Wang Sun She Kao 王孫舌考.” *Journal of Oriental Studies* (Hong Kong), vol. 3 no. 1(1956) pp. 1-9; an English summary (pp. 10-14) is entitled “A Study of Wang-sun Shê (Prince Shê).” The Chinese text is reprinted in Dong Zuobin 1979, pp. 1077-85.
- Du Zaizhong 1985 Du Zaizhong 杜在忠. “Guan yu Xia dai Zao qi huodong de chubu tanxi 關於夏代早期活動的初步探析.” *Xiashi luncong* 夏史論叢, Jinan: Qilu shushe 1985, pp.245-265.
- Du Zhengsheng 1992 Du Zhengsheng 杜正勝. *Gudai Shehui yu Guojia* 古代社會與國家. Taipei :Yunchen Chubanshe ,1992.
- Du Zhengsheng -----, “Ouya caoyuan dongwu wenshi yu Zhongguo gudai beifan minzu zhi kaocha” 歐亞草原動物紋飾與中國古代北方民族之考察. *Bulletin of the Institute of History and Philology*, 中央研究院歷史語言研究所集刊 64:2, 1993, pp.2331-408.

- Duan Shipu 1987 Duan Shipu 段士朴. "Shanxi Quwo chutu qingtong jian" 山西曲沃出土青銅劍. *Kaogu* 1987.12, pp.114.
- Egami Namio and Mizuno Seiich Egami Namio & Mizuno Seiichi 江上波夫, 水野清一 "Naimōko chojō chitai" 內蒙古長城地帶 Tōho kōkogaku Sokan. 2-shu. dai, 1-satsu 東方考古學叢刊二種, 第一冊, 東亞考古學會, Tokyo: 1935
- Emura Haruki Emura Haruki 江村治樹. "Shunjū Sengoku jidai no doka ,geki no hennen to meibun" 春秋戰國時代の銅戈,戟の編年と銘文 *Toho gakuho* 52 (kyoto), (1980) pp.63-123.
- Fang Falian 1938 Fang Falian 方法斂, Kufang ershi cang jiagu buci 庫方二氏藏甲骨卜辭, 1938.  
or Ku
- Fan Weiyue Fan Weiyue 樊維岳. "Shanxi Qishan Hejiacun Xizhou muzang" 陝西岐山賀家村西周墓葬. *Wenwu ziliao congkan* 文物資料叢刊 1980:3 · pp.25-7.
- Fan Yuzhou Fan Yuzhou 范毓周. "Yindai Wuding shiqi de zhanzheng" 殷代武丁時期的戰爭. *Jiaguwen yu Yin Shang shi* 甲骨文與殷商史 3,1991, pp.175-239.
- Fang Xunyi Fang Xunyi 方濬益, Zhuiyizhai Yiqi Kaoshi 綴遺齋彝器考釋, 1935.
- Feng Hanji 1961 Feng Hanji 馮漢驥. "Guanyu Chugong ge de zhenwei bing lue lun Sichuan Bashu shiqi de bingqi" 關於「楚公冢」戈的真偽並略論四川「巴蜀」時期的兵器. *Wenwu* 1961.11, pp.32-4.
- Feng Hanji 1980 -----, "Sichuan Pongxian chutu de tongqi 四川彭縣出土的銅器." *Wenwu* 1980.12, pp.38-47.
- Feng Duren 1983 Feng puren 馮普仁. "Wuguo qingtong bingqi chutan" 吳國青銅兵器初探. Beijing 1983, pp.136-145.
- Feng Yunpeng Feng Yunpeng 馮雲鵬. *Jin shi suo* 金石索. 1822.
- Fu Sinian 1934 Fu Sinian 傅斯年 *Chengziyai* 城子崖 Nanjing:1934.

- Fu Xianguo 1985 Fu Xianguo 傅憲國. "Shilun Zhongguo xingshiqi shidai de shiyue" 試論中國新石器時代的石鈹. *Kaogu* 1985.9, pp.820-832.
- Fu Xianguo 1988 -----, "Lun youduan shiben yu youjan shiqi" 論有段石銼與有肩石器 *Kaogu xuebao* 1988.1, pp.1-36.
- Gao Quxun 1962 -----, *Houjiazhuang* (Henan Anyang Houjiazhuang Yin dai mudi) Vol.2, 1001 hao da mu 侯家莊(河南安陽侯家莊殷代墓地)第二本, 1001 號大墓. 2 vols. Taipei: Zhongyang Yanjiuyuan Lishi Yuyan Yanjiusuo, 1962.
- Gao Quxun 1967a -----, *Houjiazhu and (Henan Anyang Houjiazhuang Yin dai mudi) di si ben, 1003 hao da mu* 侯家莊(河南安陽侯家莊殷代墓地)第四本, 1003 號大墓. Taipei: Zhongyang Yanjiuyuan Lishi Yuyan Yanjiusuo, 1967.
- Gao Quxun 1967b -----, "Dao fu zang chong de tongdao 刀俯葬中的銅刀." *Bulletin of the Institute of History and Philology* 中央研究院歷史語言研究所集刊, 37(1967) pp.355-381.
- Gao Quxun 1969 -----, "Yindai damu de mushi ji qi hani zhi tuice 殷代大墓的木室及其涵義之推測" *Bulletin of the Institute of History and Philology* 中央研究院歷史語言研究所集刊 39 (1969) pp.175-188.
- Gao Quxun 1970 Gao Quxun 高去尋. *Houjiazhu(Henan Anyang Houjiazhuang Yin dai mudi) di wu ben, 1004 hao da mu* 侯家莊(河南安陽侯家莊殷代墓地)第五本, 1004 號大墓. Taipei: Zhongyang Yanjiuyuan Lishi Yuyan Yanjiusuo, 1970.
- Gao Quxun 1973 -----, "Xibeigang chutu de Yindai Gongxintongqi" 西北岡出土的殷代弓形銅器 *Dongwu Daxue Zhongguo yishushi jikan* 《東吳大學中國藝術史集刊》 *Dongwu Daxue chubanshe* 東吳大學出版社. Vol. 2.(1973) pp.117.
- Gao Quxun 1976 -----, *Houjiazhuang* (Henan Anyang Houjiazhuang Yin dai mudi) Vol.8, 1550 hao da mu 侯家莊. (河南安陽侯家莊殷代墓地) 第八本.1550號大墓. 8 vols. Taipei: Zhongyang Yanjiuyuan Lishi Yuyan Yanjiusuo, 1976.
- Gao Zhixi 1959 Gao Zhixi 高至喜. "Chu Gongge" 楚公冢戈. *Wenwu* 1959.12, p.60.

- Gao Zhixi 1982 -----, "Zhongguo nanfang chutu Shang Zhou tong nao gai lun" 中國南方出土商周銅鏡概論. Paper prepared for the International Conference on Shang Civilization, East-West Center, Honolulu, 1982. *Hunan Kaogu jikan* 2, 1984, pp. 128-35 and pls. 5-6.
- Gettens 1969 Gettens, Rutherford John. *The Freer Chinese Bronzes*, Volume II, Technical Studies. Washington: Smithsonian Institution, 1969.
- Gettens et al. 1971 Gettens, Rutherford John, Roy S. Clarke Jr. and W.T.Chase, Two Early Chinese Bronze Weapons with meteoritic Iron Blades. *Freer Gallery of Art Oriental Papers*. Vol.4, No.1, Washington, 1971.
- Golomshtok 1933 Golomshtok, E. "Anthropological Activities in Soviet Russia", *American Anthropologist*, vol.35 (1933) pp.301-327.
- Gong Qiming 1981 Gong Qiming 鞏啓明. "Jiangzhai yizhi kaogu fajue de zhuyao shouhuo ji qi yiyi 姜寨遺址考古發掘的主要收穫及其意義" *Renwen Zazhi* 人文雜誌 1981.4.
- Gu Derong 1982 Gu Derong 顧德融. "Zhongguo gudai renxun, renshengzhe de shenfen tanxi 中國古代人殉、人牲者的身分探析." *Zhongguo Shi Yanjiu* 中國史研究 1982.2, pp.112-123.
- Gugong Jikan* *Gugong Jikan* 故宮季刊 (National Palace Museum Quarterly). Taipei.
- Gugong Wenwu Yuekan* *Gugong Wenwu yuekan* 故宮文物月刊 (National Palace Museum Monthly). Taipei.
- Guo Baojun 1935 Guo Baojun 郭寶鈞. "Ge ji yulun" 戈戟餘論. *Bulletin of the Institute of History and Philology* 中央研究院歷史語言研究所集刊5 (1935) pp.313-326.
- Guo Baojun 1951 -----, "1950 nian chun Yin Xu fajue baogao" 1950年春殷墟發掘報告. *Zhongguo Kaogu xuebao* 5, 1951, pp. 1-61.
- Guo Baojun 1959 -----, *Shanbiaozhen yu Liulige* 山彪鎮與琉璃閣. Beijing: Kexue Chubanshe 科學出版社, 1959.
- Guo Baojun 1961 -----, "Yin Zhou de qingtong wuqi 殷周的青銅武器." *Kaogu* 1961.2, pp.111-118.

- Guo Baojun 1964 -----, *Xun xian Xincun* 濬縣辛村. Beijing : Kexue Chubanshe, 1964.
- Guo Baojun 1981 -----, *Shang Zhou tongqiqun zonghe yanjiu* 商周銅器群綜合研究. Beijing: Wenwu Chubanshe, 1981.
- Guo Moruo 1931a Guo Moruo 郭沫若. “Shuo ji” 說戟 *Yin Zhou qingtongqi mingwen yanjiu* 殷周青銅器銘文研究. Shanghai : Dadong shujyu, 1931.
- Guo Moruo 1931b -----, 1931. *Liangzhou jinwenci daxi ji kaoshi* 兩周金文辭大系及考釋 . Beijing : Kexue Chubanshe, 1957.
- Guo Moruo 1931c -----, 1931. *Jiagu wenzi yanjiu* 甲骨文字研究. *Guo Moruo quanji Kaogu ban di yi juan* 郭沫若全集考古編第一卷. Beijing : Kexue Chubanshe, 1982.
- Guo Moruo 1933 -----, *Buci tong zhuan* 卜辭通纂. Beijing : Kexue Chubanshe, 1933.
- Guo Moruo 1937 or Cui -----, *Yinqi cui bian* 殷契粹編, 1937. Beijing : Kexue Chubanshe, 1965.
- Guo Moruo 1947 -----, “Kaogongji de niandai yu guobie 考工記的年代與國別” *Kaiming shudian 20 zhounian jinian wenji* 開明書店20週年紀念文集. 1947; 1985, pp.149-156.
- Guo Moruo 1954a -----, *Nuli zhi shidai* 奴隸制時代. Beijing: Renmin Chubanshe, 1954.
- Guo Moruo 1954b -----, *Zhongguo Gudai Shehui Yanjiu* 中國古代社會研究 Beijing: Renmin Chubanshe, 1954.
- Guo Moruo 1960 -----, “Anyang yuankangzhong dingming kaoshi 安陽圓坑中鼎銘考釋” *Kaogu Xuebao* 1960.1, pp.1-5.
- Guo Moruo 1962 -----, “Changan xian Zhangjiapo tongqiqun mingwen huishi” 長安縣張家坡銅器群銘文匯釋 *Kaogu Xuebao* 1962.1 , pp1-14.
- Guo Moruo 1962 -----, *Zhongguo shi kao* 1中國史稿1 . Beijing: Renmin Chubanshe, 1962.

- Guo Weide 1984 Guo Weide 郭維德. "Ge ji zhi bian" 戈戟之辨 *Kaogu* 1984.12, pp.1108-1113.
- Guo Yong 1962 Guo Yong 郭勇. "Shilouhou Lanjiagao faxian Shangdai gingtongqi" 石樓后蘭家溝發現商代青銅器. *Wenwu* 1962.4、5, pp.33-34.
- Guo Yong 1980 -----, "Shanxi Changzixian bei jiao faxian Shangdai tongqi" 山西長子縣北郊發現商代銅器, *Wenwu ziliao congkan* 3 (1980) pp.198-201.
- HDKG *Haidai Kaogu* 海岱考古. Shandong Daxue 山東大學.
- HDKG 1989 Qingzhoushi Sufutun Shangdaimu fajue baogao 青州市蘇埠屯商代墓發掘報告, *Haidai Kaogu* 1(1989) pp.254-273.
- Han Jiagu Han Jiagu 韓嘉谷. "Changcheng dudai qingtong duanjian de kaoguxue wenhua han zushu" 長城地帶青銅短劍的考古學文化和族屬.
- Han Kangxin 1991 Han kangxin 韓康信. "Xin'gan Shangmu chutu renyu jiating" 新淦商墓出土人牙鑑定 *Wenwu* 1991.10, pp.24-26.
- Hao Benxing 1972 Hao Benxing 郝本性. "Xinzheng 'Zheng Han gucheng faxian yi pi Zhanguo tongbingqi" 新鄭「鄭韓故城」發現一批戰國銅兵器. *Wenwu* 1972.10, p.32.
- Hayashi 1972a Hayasi, Minao 林巳奈夫. *Chugoku In Shu jidai no buki* 中國殷周時代の武器. Kyoto: The Research Institute for Humanistic Studies, Kyoto University, 1972.
- Hayashi 1984a -----, *In Shu jidai seidoki no kenkyu (In shu eidoki soran, 1)* 殷周時代青銅器の研究 (殷周青銅器一). 2 vols. Tokyo: Yoshikawa Kobunkan, 1984.
- Hayashi 1994 -----, *Kachu seidoki jyakanshu no ukamon no dento* "華中青銅器若干種の羽渦紋傳統" *Senoku Hakkokan kiyō* 1994 vol.10, pp3-56.
- Hebei 1993 *Zhongguo yuqi quanji* 2 中國玉器全集 2. Hebei : Hebei meishu chubanshe 1993.
- He Gang He Gang 賀剛. "Xian Qin baiyue diqu chutu tongjian chulun 先秦百越地區出土銅劍初論" *Kaogu* 1991.3, pp.252-262.

- Hei Guang & Zhu Jieyan 黑光、朱捷元。"Shaanxi Suide Yantoucun faxian ipi jiaocang cingtongqi" 陝西綏德塢頭村發現一批窖藏商代銅器 *Wenwu*1975.2, pp.82-87.
- Henan Wenpo tongxun 1980.1 "Henan Xianzheng Wangjinglou chutu de qingtongqi yu yuqi" 河南新鄭望京樓出土的青銅器與玉器 Henan Wenpo tongxun 河南文博通訊 1980.1, p.62.
- Higuchi 1973 Higuchi, Tadayasu 樋口隆康. *Chugoku bijutsu* 中國美術, vol.4. Tokyo: Kodansha, 1973.
- Higuchi 1976 -----, "Kanan shutsudo no Sho (In) shiki doki 華南出土商(殷)式銅器." *Museum* 301(April 1976) pp. 4-16.
- Hong Kong 1984 *Yuewang goujian jian yu Wuwang Fuchai mao* 越王勾踐劍與吳王夫差矛. Hong Kong, 1984.
- Hong Kong 1989 *Liangzhu Wenhua Yuqi* 良渚文化玉器, Hong Kong, 1989.
- Hong Kong 1994 *Changjiang zhongyou qingtong wangguo Jiangxi xingan chutu qingtong yishu* 長江中游青銅王國江西新淦出土青銅藝術. Hong Kong, 1994.
- Hu Houxuan 1945 Hu Houxuan 胡厚宣。"Buci zhong xuo jian zhi Yindai nongye 卜辭中所見之殷代農業。" *Jiaguxue Shangshi Luncong Xuji* 甲骨學商史論叢續集, 1945. Shanghai: Shanghai shudian, 1990.
- Hu Houxuan 1945 -----, *Jiagu liu lu* 甲骨六錄. Chingdu: Qilu daxue gaoxue yanjiusuo, 1945.
- Hu Houxuan 1951 -----, *Zhan hou Huning xinhuo jiaguji* 戰後滬寧新獲甲骨集. Beijing: Lai xun ge. 來勳閣, 1951.
- Hu Houxuan 1965 -----, *Jiagu xucun (shang bian)* 甲骨續存 (上編). Shanghai: Qunlian Chubanshe 群聯出版社, 1955.
- Hu Houxuan 1982 *Jiaguwen Heji* 甲骨文合集, Beijing: Zhouhuang shuju, 1982.
- Hu Houxuan 1983 -----, ed. *Jiaguwen yu Yinshang shi* 甲骨文與殷商史. Shanghai: Shanghai guji Chubanshe, 1983.

- Hua Jueming 1981 Hua Jueming 華覺明, Feng Fugen 馮富根, Wang Zhenjiang 王振江, and Bai Rongjin 白榮金. "Fu Hao muqing tongqi qun zhuzao jishu de yanjiu 婦好墓青銅器群鑄造技術的研究." *Kaoguxue jikan* 1, 1981, pp. 244-72 and pls. 45-8.
- Huang Bosi Huang Bosi 黃伯思. *Dong guan yu lun 東觀餘論*. Jingyin Wenyange sikuquanshu 850 景印文淵閣四庫全書 850.
- Huang Xun 1935 Huang Xun 黃濬. *Yezhong pianyu chu ji 鄴中片羽初集*. Beijing: 1935. (Rong Geng & Zhang Weichi 1958, p. 145.)
- Huang Xun 1936 -----, *Zun Gu Zhai suo jian jijin tu chu ji 尊古齋所見吉金圖初集*. Beijing: 1936. (Rong Geng & Zhang Weichi 1958, p.146.)
- Huang Xun 1937 -----, *Yezhong pianyu er ji 鄴中片羽二集*. Beijing: 1937.
- Huang Xun 1942 -----, *Yezhong pianyu san ji 鄴中片羽三集*. Beijing: 1942.
- Huang Maolin 1973 Huang Maolin 黃茂琳. "Xinzheng chutu Zhanguo bingqi zhong de yixie wenti 新鄭出土戰國兵器中的一些問題" *Kaogu* 1973.6, pp. 372-380.
- Hunan Kaogu Hunan Kaogu jikan 湖南考古輯刊*. Changsha: Hunan Sheng jikan Bowuguan, 1982-.
- Huang Shengzhang 1974 Huang Shengzhang 黃盛璋. "Shi lun Sanjing bingqi de guobiehan nian dai ji qi xiangguan wenti 試論三晉兵器的國別和年代及其相關問題." *Kaogu xuebao* 考古學報 1974.1, pp.13-44.
- Huang Shengzhang 1987 -----, "Xin chutu wu nian tongqiu ge ji qi xiangguan gucheng wenti 新出土五年銅丘戈及其相關古城問題." *Kaogu* 1987.12, pp. 1107-1111.
- Huang Zhanyue 1983 Huang Zhanyue 黃展岳. "Yin Shang muzhang zhong ren xin ren sheng de zai kaocha—fulun xun sheng jisheng 殷商墓葬中人殉人牲中的再考察—附論殉牲祭牲." *Kaogu* 1983.10, pp. 935-949.
- Huo Wei 1989 Huo Wei 霍巍 and Huang Wei 黃偉. "Shilun wu hu shu shi ge de ji ge wenti 試論無胡蜀式戈的幾個問題" *Kaogu* 1989.3, pp. 251-259.

- Jiabian* 1948      Dong Zubin 董作賓 “Yinxu wenzi jiabian” 殷墟文字甲編. Zhongyang Yanjiuyuan Lishi Yuyan Yanjiusuo, 1948.
- Jianghan Kaogu*      *Jianghan Kaogu* 江漢考古. Wuchang: Hubei Kaogu Xuehui, 1980-.
- Jiangxi Lishi Wenwu*      *Jiangxi Lishi Wenwu* 江西歷史文物. Nanchang.
- Jiangxi Lishi Wenwu* 1982.1      ——, “Ganxian Baiyingguancun Shang Zhou yizhi diaocha” 贛縣白鷹官村商周遺址調查. *Jiangxi Lishi Wenwu* 1982.1.
- Jiangxi Lishi Wenwu* 1982.4      ——, “Shanggaoxian faxian jiuchu guwenhua yizhi” 上高縣發現九處古文化遺址. *Jiangxi Lishi Wenwu* 1982.4.
- Jin Xiangheng      Jin Xiangheng 金祥恒. “Lun zhenren fu de fenji wenti” 論真人扶的分期問題. *Dong Zuoben shishi shisi zhounian jiniankan* 董作賓逝世十四周年紀念刊, 1978.
- Jin Xudong 1992      Jin Xudong 金旭東. “Shilun Jilin xiduan Guoshan xin shiqi shidai yicun” 試論吉林西斷果山新石器時代遺存. *Kaogu* 1992.9, pp. 849-853.
- Jin Zhengyao, 1984.      Jin Zhengyao 金正耀, W.T. Chase, et.al., “Jiangxi Xin’gan Dayangzhou Shang mu qian tongweishu bizhi yanjiu.” 江西新淦大洋洲商墓鉛同位素比值研究 *Kaogu* 1994.8, pp. 744-747.
- Jinghua*      Luo Zhenyu 羅振玉. *Yinxu shuqi jinghua* 殷墟書契菁華, 1914.
- Kane 1970      Kane, Virginia C. *Chinese Bronze Vessels of the Shang and Western Chou Periods*. Unpublished doctoral thesis, Harvard University, 1970.
- Kane 1973      -----, “The Chronological Significance of the Inscribed Ancestor Dedication in the Periodization of Shang Dynasty Bronze Vessels.” *Artibus Asiae* 35(1973) pp. 335-70.
- Kane 1974      -----, “The Independent Bronze Industries in the south of China Contemporary with the Shang and Western Chou Dynasties.” *Archives of Asian Art* 28(1974-75) pp. 77-107.

- Kane 1975 -----, "A Re-examination of An-yang Archaeology." *Ars Orientalis* 10(1975) pp. 93-110.
- Kaizuka Shigeki 1953 Kaizuka Shigeki 貝塚茂樹 Kokotsubun dandai kenkyuhō saikentō 甲骨文斷代研究法再檢討 Toho gakuho (kyoto) 東方學報23 (1953) pp.1-70
- KG *Kaogu* 考古 (before 1959, *Kaogu tongxun* 考古通訊)
- KG 1958.10 "1958 nian chun Henan Anyangshi Dasikongcun Yindai muzang fajue jianbao1" 1958年春河南安陽市大司空村殷代墓葬發掘簡報." *Kaogu tongxun* 1958.10, pp.52-62.
- KG 1959.8 "Sichuan Xinfan Shuiguanyin yizhi shijue jianbao" 四川新繁水觀音遺址試掘簡報. *Kaogu* 1959.8, pp.404-10.
- KG 1960.2 C.B.Kislev, "Sulian Jingnei qingtongwenhua yu zhongguo shangwenhua de guanxi" 蘇聯境內青銅文化與中國商文化的關係, 1960.2, pp.51-53.
- KG 1961.2 "1958-1959 nian yinxu fajue jianbao" 1958-1959年殷墟發掘簡報 *Kaogu* 1961.2, pp.63-76.
- KG 1962.4 "Jiangxi Qingjiang Yingpanli yizhi fajue baogao" 江西清江營盤里遺址發掘報告. *Kaogu* 1962.4, pp.172-181.
- KG 1962.12 "Hebei Qinglong xian Chaodaogou faxian yipi qingtongqi" 河北青龍縣抄道溝發現一批青銅器 *Kaogu* 1962.12, pp.644-645.
- KG 1963.4 "1957 nian qiu Anyang Gaolouzhuang Yindai yizhi fajue" 1957年秋安陽高樓莊殷代遺址發掘 *Kaogu* 1963.4, pp.213-216
- KG 1964.8 "1962 nian Anyang Dasikongcun fajue jianbao" 1962年安陽大司空村發掘簡報 *Kaogu* 1964.8, pp.380-384.
- KG 1965.5 "Henan Yanshi Erlitou yizhi fajue jianbao" 河南偃師二里頭遺址發掘簡報 *Kaogu* 1965.5, pp.215-224.

- KG 1965.10 “Zhengzhoushi Mingonglu xice de liangzuo Shangdai mu” 鄭州市銘功路西側的兩座商代墓. *Kaogu* 1965.10, pp. 500-6.
- KG 1972.3 “1971 nian Anyang Hougang fajue jianbao” 1971年安陽后崗發掘簡報. *Kaogu* 1972.3, pp.14-5.
- KG 1972.4 “Shanxi Shilou Idie faxian Shangdai tongqi” 山西石樓義牒發現商代銅器, *Kaogu* 1972.4, pp.29-30.
- KG 1972.5 “1972 nian Anyang Hougang fajue jianbao” 1972年安陽后崗發掘簡報. *Kaogu* 1972.5, pp.8-19.
- KG 1973.4 “Liaoning Kezuoxian Beidongcun faxian Yindai qingtongqi” 遼寧喀左縣北洞村發現殷代青銅器. *Kaogu* 1973.4, pp.225-6,257.
- KG 1974.3 “Shandong Huiminxian faxian Shangdai qingtongqi” 山東惠民縣發現商代青銅器 *Kaogu* 1974.3, pp.208.
- KG 1975.1 “1973 nian Anyang Xiaotun nandi fajue jianbao” 1973年安陽小屯南地發掘簡報 *Kaogu* 1975.1, pp.27-46.
- KG 1975.5 “Henan Yanshi Erlitou yizhi san ba qu fajue jianbao” 河南偃師二里頭遺址三、八區發掘簡報 *Kaogu* 1975.5, pp.302-309.
- KG 1976.1 “Shaanxi Qishan Hejiacun Xizhou Muzang” 陝西岐山賀家村西周墓葬, *kaogu*, 1976.1, pp.31-38.
- KG 1976.4a “Yanshi Erlitao yizhi xinfaxian de tongqi yu yuqi” 偃師二里頭遺址新發現的銅器與玉器 *Kaogu* 1976.4, pp.259-263.
- KG 1976.4b “Beijing diqu you yi zhongyao kaogu shouhuo Changping Baifu Xi Zhou muguo de xin qishi” 北京地區又一重要考古收獲—昌平白浮西周木槨的新啓示. *Kaogu* 1976.4, pp.246-258.

- KG 1977.3 “Anhui Hanshanxian Sunjiagang Shangdai yizhi diaocha yu shijue” 安徽含山縣孫家崗商代遺址調查與試掘. *Kaogu* 1977.3, pp.166-168.
- KG 1977.5a “Anyang Yinxu wuhaomu zuotan jiyao” 安陽殷墟五號墓座談記要 *Kaogu* 1977.5, pp.341-350.
- KG 1977.5 b “Liaoning Keshen Ketengqi Tianbaotong faxian Shangdai tong xian” 遼寧喀什克騰旗天寶同發現商代銅甗. *Kaogu* 1977.5, pp.354
- KG 1977.5c “Shanxi Yuonghe faxian Yindai tongqi” 山西永和發現殷代銅器, *Kaogu* 1977.5, pp.355-356.
- KG 1978.4 “Erlitou yizhi chutu de tongqi he yuqi” 二里頭遺址出土的銅器和玉器 *Kaogu* 1978.4, p.270.
- KG 1978.6 “Liaoning Xingcheng Yanghe faxian qingtongqi” 遼寧興城楊河發現青銅器.” *Kaogu* , 1978.6, p.387.
- KG 1980.2 “Shanxi Xiaxian Dongxianfeng yizhi dongqu zhongqu fajue jianbao” 山西夏縣東下馮遺址東區、中區發掘簡報 *Kaogu* 1980.2, pp.97-107.
- KG 1980.3 “Shaanxi sheng Chenggu xian chutu Yin Shang tongqi zhengli jianbao” 陝西省城固縣出土殷商銅器整理簡報 *Kaogu* 1980.3, pp. 211-218.
- KG 1981.3 “Shenxi Liulin Gaohong faxian Shangdai tongqi 山西柳林高紅發現商代銅器 ” *Kaogu* 1981.3, pp.21-22.
- KG 1981.6 “Sichuan Pengxian XiZhou Jiaocang tongqi” 四川彭縣西周窖藏銅器 *Kaogu* 1981.6, pp.496-499.
- KG 1982.2 “Jiangxi Qingjiang Zhuweicheng yizhi di erci fajue” 江西清江築衛城遺址第二次發掘. *Kaogu* 1982.2, pp.130-8.
- KG 1983.1 “1978-1980 Shanxi Xiangfen Taosi mudi fajue baogao 1978-1980” 山西襄汾陶寺墓地發掘報告. *Kaogu* 1983.1, pp.30-42.

- KG 1983.2 “Anyang Sanjiazhuang dong de fajue” 安陽 三家莊東的發掘. *Kaogu* 1983.2, pp.126-132.
- KG 1983.3a “1980 nian qiu Henan Yanshi Erlitou yizhi fajue jianbao” 1980年秋河南偃師二里頭遺址發掘簡報. *Kaogu* 1983.3, pp. 199-205.
- KG 1983.3b “Henan Yanshi Erlitou erhao gongdian yizhi” 河南偃師二里頭二號宮殿遺址 *Kaogu* 1983.3, pp.206-216.
- KG 1984.1 “1981 nian Henan Yianshi Erlitou muzang fajue jianbao” 1981年河南偃師二里頭墓葬發掘簡報. *Kaogu* 1984.1, pp. 37-40.
- KG 1984.7 “Yanshi Erlitou yizhi 1980-1981 nian sanqyu fajue jianbao” 偃師二里頭遺址1980-1981年三區發掘簡報 *Kaogu* 1984.7, pp.584.
- KG 1984.10 “1983 nian qiuji Henan Yanshi Shangcheng fajue jianbao” 1983年秋季河南偃師商城發掘簡報. *Kaogu* 1984.10, pp. 872-879.
- KG 1984.12 “Anhui Yingshang xian chutu yipi Shang Zhou qingtongqi” 安徽穎上縣出土一批商周青銅器 *Kaogu* 1984.12, pp.1132-1133.
- KG 1985.2 “Hunan Mayang zhanguo shiqi gutongkuang qingli jianbao” 湖南麻陽戰國時期古銅礦清理簡報 *Kaogu* 1985.2, pp.113-124.
- KG 1985.4 “Jiangsu Jurongcheng Toushan yizhi shijue jianbao” 江蘇句容城頭山遺址試掘簡報.” *Kaogu* 1985.4, pp.289-302,335.
- KG 1985.9a “Shanxi Jixian chutu Shangdai qingtongqi” 山西吉縣出土商代青銅器 *Kaogu* 1985.9, pp.848-849.
- KG 1985.9b “Gansu Qingyang Hanjia Tanmiaozui faxian yizuo Xi Zhou mu” 甘肅慶陽韓家灘廟嘴發現一座西周墓. *Kaogu* 1985.9, pp. 853-4.
- KG 1985.12 “1982 nian qiu Yanshi Erlitou yizhi jiuqu fajue jianbao” 1982年秋偃師二里頭遺址九區發掘簡報 *Kaogu* 1985.12, pp.1085-1094.

- KG 1986.4a “1984 nian qiu Henan Yanshi Erlitou yizhi faxian de jizuo muzang” 1984年秋河南偃師二里頭遺址發現的幾座墓葬 *Kaogu* 1986.4, pp.318-323.
- KG 1986.4b “Zhengzhou Shangdai yizhi fajue jianbao” 鄭州商代遺址發掘簡報 *Kaogu* 1986.4, pp.324-336.
- KG1986.8 “Anyang Yinxu xiqu 1713 hao mu de fajue” 安陽殷墟西區一七一三號墓的發掘 *Kaogu* 1986.8, pp.703-12,725.
- KG 1986.12 “Anyang Xuejiazhuang dongnan Yinmu fajue jianbao” 安陽薛家莊東南殷墓發掘簡報 *Kaogu* 1986.12, pp.1067-1072.
- KG 1987.9 “Ningxia Zhongning xian qingtong duanjian mu qingli jianbao 寧夏中寧縣青銅短劍墓清理簡報. *Kaogu* 1987.9, pp.773-7.
- KG 1988.1a “Luoyang laocheng faxian xi Zhou chema keng” 洛陽老城發現西周車馬坑. *Kaogu* 1988.1, pp.15-23.
- KG 1988.1b “Shandong Linzi Qiguo gucheng xi Zhou mu ” 山東臨淄齊國故城西周墓. *Kaogu* 1988.1, pp. 24-9.
- KG 1988.1c “Shandong Yanggu xian Jingyang gang Chunqiu mu” 山東陽谷縣景陽崗春秋墓. *Kaogu* 1988.1, pp. 27-9.
- KG 1988.1d “Hubei Yangxin Gangxia Gukuangjing yizi fajiu jianbao” 湖北陽新港下古礦井遺址發掘簡報, *Kaogu* 1988.1, pp.30-42.
- KG 1988.3 “Shandong Sishui faxian Shangdai qingtongqi” 山東泗水發現商代青銅器 *Kaogu* 1988.3, p.284.
- KG 1988.10a “Anyang Dasikongcun dongnan de yizuo Yinmu” 安陽大司空村東南的一座殷墓 *Kaogu* 1988.10, pp.865-874.
- KG 1988.10b “1987 nian xia Anyang Guojiazhuang dongnan Yinmu de fajue” 1987年夏安陽郭家莊東南殷墓的發掘 *Kaogu* 1988.10, pp.875-881.

- KG 1988.10c “Anyang Guojiazhuang xinan de Yindai chemakeng” 安陽郭家莊西南的殷代車馬坑  
*Kaogu* 1988.10, p.882.
- KG 1989.1 “Henan Guangshan Chunqiu Huangjituofu mu fajue jianbao” 河南光山春秋黃季佗父  
墓發掘簡報. *Kaogu* 1989.1, pp. 26-32.
- KG 1989.2 “1984 nian qiu Anyang Miaopubeidi Yin mu fajue jianbao” 1984年秋安陽苗圃北地殷  
墓發掘簡報. *Kaogu* 1989.2, pp. 123-138.
- KG 1989.6 “Chang’an Zhangjiapo M183 xi Zhou dongshimu fajue jianbao” 長安張家坡M183 西  
周洞室墓發掘簡報. *Kaogu* 1989.6, pp. 524-529.
- KG 1989.7a “Shanghai Qingpu xian Jinshanfeng yizhi shijue” 上海青浦縣金山遺址試掘. *Kaogu*  
1989.7, pp. 577-590.
- KG 1989.7b “1986 nian Anyang Dasikongcun nandi de liang zuo Yin mu” 1986年安陽大司空村南  
地的兩座殷墓. *Kaogu* 1989.7, pp. 591-7.
- KG 1989.8a “Hubei Jiangling Jingnansi yizhi diyierci fajue jianbao” 湖北江陵荆南寺遺址第一、二  
次發掘簡報 *Kaogu* 1989.8, pp.679-692.
- KG 1989.8b “Shandong Jimo xian Xinshiqi shidai yizhi diaocha jianbao” 山東即墨縣新石器時代  
遺址調查簡報 *Kaogu* 1989.8, pp.673-678.
- KG 1989.10 “1987 nian Anyang Xiaotun cun dongbeidi de fajue” 1987年安陽小屯村東北地的發  
掘. *Kaogu* 1987.10, pp. 873-905.
- KG1989.12 “Liaoning Faku xian wan liaowan yizhi fajue” 遼寧法庫縣灣柳遺址發掘. *Kaogu*  
1989.12, pp.1076-86.
- KG 1990.1a “Beijing Liulihe 1193 hao damu fajue jianbao” 北京琉璃河1193號大墓發掘簡報.  
*Kaogu* 1990.1, pp. 20-31.
- KG 1990.1b “Beijing Liulihe xinfaxian changming tongqi zuotan jiyao” 北京琉璃河新發現長銘銅  
器座談紀要” *Kaogu* 1990.1, pp.20-31

- KG 1990.6 “Shanxi Chang’an Zhangjiapo M170 hao jingshu mu fajue jianbao” 陝西長安張家坡 M170 號井叔墓發掘簡報. *Kaogu* 1990.6, pp. 504-510.
- KG 1991.2a “Shanxi Houma Dongchengwang xin shiqi shidai yizhi” 山西侯馬東呈王新石器時代遺址. *Kaogu* 1991.2, pp. 110-24.
- KG 1991.2b “1987 nian qiu Anyang Meiyuanzhuang nandi Yinmu de fajue” 1987年秋安陽梅園莊南地殷墓的發掘. *Kaogu* 1991.2, pp. 125-142.
- KG 1991.5a “Anyang Guojiazhuang 160 hao mu” 安陽郭家莊160號墓. *Kaogu* 1991.5, pp. 390-1.
- KG 1991.5b “Baoji shi Tanjiacun Chunqiu ji Tang dai mu” 寶雞市潭家村春秋及唐代墓. *Kaogu* 1991.5, pp. 392-9.
- KG 1991.6 “Hubei Huangmei Ludun xin shiqi shidai muzhang” 湖北黃梅陸墩新石器時代墓葬. *Kaogu* 1991.6, pp. 481-496.
- KG 1991.7 “Fujian Pingtan Keqiutou yizhi fajue jianbao” 福建平潭殼頭遺址發掘簡報. *Kaogu* 1991.7, pp. 587-99.
- KG 1991.8 “Liaoning Zhangwu Xian Kaogu fucha jilue” 遼寧彰武縣考古復查紀略. *Kaogu* 1991.8, pp. 673-683.
- KG 1991.9a “Sichuan Guangyuanshi Zhangjiapo xingshiqi shidai yizhi de diaocha yu fajue” 四川廣元市張家坡新石器時代遺址的調查與發掘, 1991.9, pp. 774-780.
- KG 1991.9b “Neimenggu Tuoketuo Xian faxian de jijian mozhi shiqi” 內蒙古托克托縣發現的幾件磨製石器. *Kaogu* 1991.9, pp. 859-860.
- KG1991.10 “Shanxisheng Xiangfenxian Dingcun xingshiqi shidai yizhi fajue jianbao” 山西省襄汾縣丁村新石器時代遺址發掘簡報, *Kaogu* 1991.10, pp. 882-891.
- KG 1991.11 “Weishui liuyu Yangshao wenhua yizhi diaocha” 渭水流域仰韶文化遺址調查. *Kaogu* 1991.11, pp. 961-982.

- KG 1991.12a “Gansu Zhangjiachuan Xian yuanshi wenhua yizhi diaocha” 甘肅張家川縣原始文化遺址調查. *Kaogu* 1991.12, pp. 1057-1070.
- KG 1991.12b “Henan Yanshi Erlitou yizhi fajue xinde tongqi” 河南偃師二里頭遺址發現新的銅器. *Kaogu* 1991.12, pp. 1138-9.
- KG 1992.5 “Liaoning Fuxin Pingdingshan Shicheng zhi fajue baogao” 遼寧阜新平頂山石城址發掘報告. *Kaogu* 1992.5, pp. 399-417.
- KG 1992.6 “1980 nian Henan Anyang Dasikongcun fajue jianbao” 1980年河南安陽大司空村發掘簡報. *Kaogu* 1992.6, pp.509-17.
- KG 1992.7 “Hubei Zaoyang shi diaolongbei xinshiqi shidai yizhi shijue jianbao” 湖北棗陽市雕龍碑新石器時代遺址試掘簡報. *Kaogu* 1992.7, pp. 589-606.
- KG 1992.8 “Jilin Changling xian Yaojingzi xinshiqi shidai yizhi” 吉林長嶺縣腰井子新石器時代遺址. *Kaogu* 1992.8, pp. 673-688.
- KG 1992.10 “Shandong Linyi xinshiqi shidai yizhi diaocha jianbao” 山東臨沂新石器時代遺址調查簡報. *Kaogu* 1992.10, pp. 875-893.
- KG 1992.12a “Shanxi Weishui liuyu Longshan wenhua yizhi diaocha” 陝西渭水流域龍山文化遺址調查. *Kaogu* 1992.12, pp. 1057-67.
- KG 1992.12b “Chongqing shi Changjiangheduan xinshiqi shidai yizhi diaocha yu shijue” 重慶市長江河段新石器時代遺址調查與試掘. *Kaogu* 1992.12, pp. 1068-1081.
- KG 1992.12c “Neimenggu Shangdu Xian xinshiqi shidai yizhi diaocha” 內蒙古商都縣新石器時代遺址調查. *Kaogu* 1992.12, pp. 1082-1091.
- KG 1993.9 “Shandong Weifang diqu Shang-Zhou yizhi diaocha” 山東濰坊地區商周遺址調查. *Kaogu* 1993.9, pp.781-789.
- KG 1993.10 “Anyang Hougang Yinmu de fajue” 安陽后崗殷墓的發掘. *Kaogu* 1993.10, pp.880-903.

- KG 1994.1 “Shandong Tengzhou chutu Shangdai qingtongqi” 山東滕州出土商代青銅器 *Kaogu* 1994.1, pp.94-95
- KG 1958.10 “1958 nian Chun Henan Anyang shi Dasikongcun Yindai muzang fajue jianbao” 1958年春河南安陽市大司空村殷代墓葬發掘簡報 *Kaogu tongxun* 1958.10, p.56
- KGXB *Kaogu xuebao* 考古學報.
- KGXB 1957.1 “Zhengzhou Shang dai yizhi de fajue” 鄭州商代遺址的發掘 *Kaogu xuebao* 1957.1, pp. 52-73.
- KGXB 1958.1 “Nanjingshi Beiyinyangying diyierci fajue” 南京市北陰陽營第一、二次發掘. *Kaogu xuebao* 1958.1, pp.7-23.
- KGXB 1958.3 “1955 nian qiu Anyang Xiaotun Yinxu de fajue” 1955年秋安陽小屯殷墟的發掘 1958.3, pp.63-72.
- KGXB 1972.1 “Changsha Liuchengqiao yihaomu” 長沙瀏城橋一號墓 *Kaogu xuebao* 1972.1, pp.59-72.
- KGXB 1973.2 “Ningcheng xian Nanshange de shiguomu” 寧城縣南山根的石槨墓. *Kaogu xuebao* 1973.2, pp.27-39.
- KGXB 1977.2 “Gansu Lingtai Baicaoopo Xizhou mu” 甘肅靈臺白草坡西周墓. *Kaogu xuebao* 1977.2, pp.99-130.
- KGXB 1978.1 “Shanghai Maqiao yizhi diyierci fajue” 上海馬橋遺址第一、二次發掘. *Kaogu xuebao* 1978.1, pp.109-137.
- KGXB 1978.4 “Wuwei Huangniangniangtai yizhi disici fajue” 武威皇娘娘台遺址第四次發掘 *Kaogu xuebao* 1978.4, pp.421-448 .
- KGXB 1979.1 “1966-1977 nian Yinxu xiqu muzang fajue baogao” 1966-1977年殷墟西區墓葬發掘報告 *Kaogu xuebao* 1979.1, pp.27-118

- KGXB 1988.1 a “Hubei Yicheng Caojialou xinshiqi shidai yizhi” 湖北宜城曹家樓新石器時代遺址  
*Kaogu xuebao* 1988.1, pp.51-74.
- KGXB 1988.1b “Xinjiang Hejing xian Chawu pinggoukou yihao mudi” 新疆和靜縣察吾平溝口一號  
墓地. *Kaogu xuebao* 1988.1, pp.75-100.
- KGXB 1981.3 “Zhongguo zaoqi tongqi de chubu yanjiu” 中國早期銅器的初步研究 *Kaogu xuebao*  
1981.3, pp.287-302.
- KGXB 1981.4 “Anyang Xiaotun cun bei de liangzuo Yindai mu” 安陽小屯村北的兩座殷代墓  
*Kaogu xuebao* 1981.4 ,pp.491-517.
- KGXB 1982.2 “Anhui Shucheng Jiulidun Chunqiu mu” 安徽舒城九里墩春秋墓 *Kaogu xuebao*  
1982.2, pp.229-242.
- KGXB 1983.2 “Jiangsu Hai'an Qingdun yizhi” 江蘇海安青墩遺址 *Kaogu xuebao*1983.2,pp.147-190.
- KGXB 1984.1 “1979 nian Peiligang yizhi fajue baogao” 1979年裴李崗遺址發掘報告. *Kaogu xuebao*  
1984.1, pp. 23-52.
- KGXB 1984.4 “Shanxi changzi xian dong Zhou mu” 山西長子縣東周墓. *Kaogu xuebao* 1984.4, pp.  
503-529.
- KGXB 1987.1 “Yinxu 259、260 hao mu fajue baogao” 殷墟259、260號墓發掘報告. *Kaogu xuebao*  
1987.1, pp. 96-116.
- KGXB 1987.2 “Guanghan Sanxingdui yizhi” 廣漢三星堆遺址. *Kaogu xuebao* 1987.2, pp.227-254.
- KGXB 1988.3 “Neimenggu Zhukaigou yizhi” 內蒙古朱開溝遺址 *Kaogu xuebao* 1988.3,pp.301-332.
- KGXB 1991.3 “Yinxu Qijiazhuang dong 269 hao mu” 殷墟戚家莊東269號墓. *Kaogu xuebao*  
1991.3, pp. 325-352.
- KGXB 1992.3a “Wuan Zhaoyao yizhi fajue baogao” 武安趙窯遺址發掘報告 *Kaogu xuebao* 1992.3,  
pp.329-363.

- KGXB 1992.3b “Tengzhou Qianzhangda Shangdai muzang” 滕州前掌大商代墓葬 *Kaogu xuebao* 1992.3, pp.365-392.
- KGXB 1993.3 “Jiangxi Xinyu Shinianshan yizhi” 江西新余拾年山遺址. *Kaogu xuebao* 1993.3, pp. 235-322.
- Kaogu tu* Lyu Dalin 呂大臨. *Kaogu tu* 考古圖. Preface dated 1092; earliest surviving edition, in the Harvard-Yenjing Library, dated 1299. (Rong Geng & Zhang Weichi 1959, p. 140.)
- Kaoguxue jikan* *Kaoguxue jikan* 考古學集刊. Beijing: Zhongguo Shehui Kexue Chubanshe, 1981-.
- Kaoguxue jikan* 1981.1 “Jiangsu Pei xian Dadunzi yizhi dierci fajue” 江蘇邳縣大墩子遺址第二次發掘 *Kaoguxue jikan* 1(1981) pp.27-81.
- Kaoguxue jikan* 1981.2 “Shanxi Suide faxian han shoucang de Shangdai qingtongqi” 陝西綏德發現和收藏的商代青銅器, *Kaoguxue jikan* 2(1982) pp.41-43.
- KGYWW *Kaogu yu Wenwu* 考古與文物. Xi'an: Shanxi Renmin Chubanshe, 1980-.
- KGYWW 1981.1 “Baoji diqu faxian jipi Shang-Zhou qingtongqi” 寶雞地區發現幾批商周青銅器 *Kaogu yu Wenwu* 1981.1, pp.5-7.
- KGYWW 1981.3 “Shanxi Lantian Huaizhenfang Shangdai yizhi shijue jianbao” 陝西藍田懷真坊商代遺址試掘簡報 *Kaogu yu Wenwu* 1981.3, pp.48-53.
- KGYWW 1982.4 “Weixian kaogu jilue” 蔚縣考古紀略 *Kaogu yu Wenwu* 1982.4, pp.10-14.
- KGYWW 1985.5 “Dongnan diqu qingtongqi fenqi” 東南地區青銅器分期 *Kaogu yu Wenwu* 1985.5, pp.90-101.
- KGYWW 1986.5 “Shanxi Chunhua xian chutu de Shang-Zhou qingtongqi” 陝西淳化縣出土的商周青銅器 *Kaogu yu wenwu* 1986.5, p22.
- KGYWW 1988.4 “Shanxi Yanchuan xian wenhuaguan shoucang de jijian Shangdai qingtongqi” 陝西延川縣文化館收藏的幾件商代青銅器 *Kaogu yu Wenwu* 1988.4, pp.103-4.

- Karlgren 1936           Karlgren, Bernhard. "Yin and Chou in Chinese Bronzes." *BMFEA* 8(1936) pp. 9-156.
- Karlgren 1937           -----, "New Studies on Chinese Bronzes." *BMFEA* 9(1937) pp. 11-117.
- Karlgren 1938           -----, "Notes on a K'in-t's'un Album." *BMFEA* 10(1938) pp. 65-81.
- Karlgren 1944           -----, "Some Early Chinese Bronze Masters." *BMFEA* 16(1944) pp. 1-24.
- Karlgren 1945           -----, "Some Weapons and Tools of the Yin Dynasty." *BMFEA* 17(1945) pp. 101-44.
- Karlgren 1948           -----, "Bronzes in the Hellström Collection." *BMFEA* 20(1948) pp. 1-38.
- Karlgren 1949           -----, "Some Bronzes in the Museum of Far Eastern Antiquities." *BMFEA* 21(1949)  
pp. 1-25.
- Karlgren 1952a           -----, *A Catalogue of the Chinese Bronzes in the Alfred F. Pillsbury Collection.*  
Minneapolis: University of Minnesota Press, 1952.
- Karlgren 1952b           -----, "Some New Bronzes in the Museum of Far Eastern Antiquities." *BMFEA*  
24(1952) pp. 11-25.
- Karlgren 1954           -----, "Notes on Four Bronzes." *BMFEA* 26(1954) pp. 369-74.
- Karlgren 1958           -----, "Bronzes in the Wessén Collection." *BMFEA* 30(1958) pp. 177-96.
- Karlgren 1959           -----, "Marginalia on Some Bronze Albums." *BMFEA* 31(1959) pp. 289-331.
- Karlgren 1960           -----, "Marginalia on Some Bronze Albums. II." *BMFEA* 32(1960) pp. 1-24.
- Karlgren 1962           -----, "Some Characteristics of the Yin Art." *BMFEA* 34(1962) pp. 1-28.
- Karlgren 1968           -----, "Early Chinese Mirrors." *BMFEA* 40(1968) pp. 79-95.
- Karlgren 1969           -----, and Jan Wirgin. *Chinese Bronzes: The Natanael Wessén Collection.* Stockholm:  
The Museum of Far Eastern Antiquities, 1969.

- Keightley 1978a      Keightley, David N. *Sources of Shang History: The Oracle-Bone Inscriptions of Bronze Age China*. Berkeley, Los Angeles, and London: University of California Press, 1978.
- Keightley 1978b      Keightley, David N. "The Bamboo Annals and Shang-Chou Chronology." *Harvard Journal of Asiatic Studies* 38(1978) pp.423-38.
- Kelley 1946            Kelley, Charles Fabens, and Ch'en Meng-chia. *Chinese Bronzes from the Buckingham Collection*. Chicago: The Art Institute of Chicago, 1946.
- Li Boqian1979        Li Boqian 李伯謙 "Yinxu wuhaomu de niandai wenti" 殷墟五號墓的年代問題 *Kaogu*1979.2, pp.165-170.
- Li Boqian 1981a      -----, "Dongxiafing leixing chubu fenxi" 東下馮類型初步分析 *Zhongyuan Wenwu* 1981.1, pp.25-29.
- Li Boqian 1981b      -----, "Shilun Wucheng wenhua" 試論吳城文化 *Wenwujikan* 文物集刊3, 1981, pp.133-143.
- Li Boqian1982        -----, "Zhongyuan diqu dongzhou tongjian yuanyuan shitan" 中原地區東周銅劍淵源試探 *Wenwu*1982.1, pp.44-47.
- Li Boqian 1983        -----, "Chenggu qiqun yu zaoqi Shu wenhua" 城固器群與早期蜀文化 *Kaogu yu Wenwu* 1983.2, pp.66-70.
- Li Boqian 1986        -----, "Erlitou leixing de wenhua xingzhi yu zushu wenti" 二里頭類型的文化性質與族屬問題 *Wenwu*1986.6, pp.41-47.
- Li Boqian 1988        -----, "Cong Lingshi Jingjie Shang mu de faxian kan Jin-Shan gaoyuan qingtong wenhua de guishu" 從靈石旌介商墓的發現看晉陝高原青銅文化的歸屬 *Beijing Daxue Xuebao*北京大學學報 *Zhexue Shehui Kexueban* 哲學社會科學版 1988.2, pp.15-29.
- Li Boqian 1990a      -----, "Zhongguo wenhua de fazhan jieduan yu fenqu xitong" 中國文化的發展階段與分區系統 *Huaxia kaogu* 華夏考古 1990.2, pp. 82-91.

- Li Boqian 1990b -----, "Lun Xiajiadian xiaceng wenhua" 論夏家店下層文化 *Zhounian Beijing Daxue Kaogu Zhuanye Chengli 30 Zhounian Jijinian wenji* 紀念北京大學考古專業成立三十周年紀念論文集. 1990, pp.150-170.
- Li 1977 Li Chi. *Anyang*. Seattle: University of Washington Press, 1977.
- Li Chi 1932 Li Chi 李濟 "Yinxu tongqi wuzhong jiqi xiangguan zhi wenti" 殷墟銅器五種及其相關之問題 *Cai Yuanpei 65 qingzhu lunwenji* 蔡元培六十五歲慶祝論文集. 1932, pp.73-104.
- Li Chi 1948 -----, "Ji Xiaotun chutu zhi qingtongqi" 記小屯出土之青銅器(Studies of Hsiao-t'un Bronzes, Part I). *Zhongguo kaogu xuebao* 3, 1948, pp. 1-99.
- Li Chi 1949 -----, "Ji Xiaotun chutu zhi qingtongqi." 記小屯出土之青銅器(Studies of Hsiao-t'un Bronzes, Part II) *Zhongguo kaogu xuebao* 4, 1949, pp. 1-69.
- Li Chi 1952 -----, "Ji Xiaotun chutu zhi qingtongqi zhongpian, fengrenqi" 記小屯出土之青銅器中篇一鋒刃器. *Guoli Taiwan daxue wenshizhe xuebao* 國立台灣大學文史哲學報4, 1952, pp.180-240.
- Li Chi 1950a -----, "Zhonggou guqiwuxue de xinjichu" 中國古器物學的新基礎. *Guoli Taiwan daxue wenshizhe xuebao* 國立台灣大學文史哲學報 1,1950, pp.63-80.
- Li Chi 1950b -----, "Yubei chutu qingtong gobing fenlei tujie" 豫北出土青銅句兵分類圖解. *Bulletin of the Institute of History and Philology* 22, 1950, pp.1-18.
- Li Chi 1956 -----, *Xiaotun* (Henan Anyang Yinxu yizhi zhi yi) disanben, Yinxu qiwu: jiabian, taoqi: shangji 小屯(河南安陽殷墟遺址之一)第三本, 殷墟器物: 甲編, 陶器: 上輯. Taiwan Nangang: Academia Sinica, 1956.
- Li Chi 1958 -----, "You jixingqi yanbian suo kanjian de Xiaotun yizhi yu Houjiazhuang muzang de shidai guanxi" 由筭形器演變所看見的小屯遺址與侯家莊墓葬的時代關係 *Bulletin of the Institute of History and Philology* 中央研究院歷史語言研究所集刊29, 1958, pp.809-816.

- Li Chi & Wan Jiabao 1964 -----, and Wan Jiabao 萬家保. *Yinxu chutu qingtong guxingqi zhi yanjiu* 殷墟出土青銅觚形器之研究(Studies of the Bronze Ku-Beader). Taiwan Nangang: Academia Sinica, 1964.
- Li Chi & Wan Jiabao 1966 -----, *Yinxu chutu qingtong juexingqi zhi yanjiu* 殷墟出土青銅爵形器之研究(Studies of the Bronze Chüeh-Cup). Taiwan Nangang: Academia Sinica, 1966.
- Li Chi & Wan Jiabao 1968 -----, *Yinxu chutu qingtong jiaxingqi zhi yanjiu* 殷墟出土青銅斝形器之研究(Studies of the Bronze Chia-Vessel). Taiwan Nangang: Academia Sinica, 1968.
- Li Chi & Wan Jiabao 1970 -----, *Yinxu chutu qingtong dingxingqi zhi yanjiu* 殷墟出土青銅鼎形器之研究(Studies of the Bronze Ting-Cauldron). Taiwan Nangang : Academia Sinica, 1970.
- Li Chi & Wan Jiabao 1972 -----, *Yinxu chutu wushisanjian qingtong rongqi zhi yanjiu* 殷墟出土伍拾叁件青銅容器之研究(Studies of Fifty-three Ritual Bronzes). Taiwan Nangang: Academia Sinica, 1972.
- Li Chi 1990 *Li Chi kaoguxue lunwen xuanji* 李濟考古學論文選集 Beijing: Wenwu Chubanshe 1990.
- Li Chong Li chong, Studies on the iron blade of a Shang Dynasty bronze *yue*-axe unearthed at Gaocheny, Hebei, *ARS Orientalis* vol XL 1979, pp.259-289, translation of an article originally publicated KGXB 1976.2, pp.17-32.
- Li Dianfu 1983 Li Dianfu李殿福 “Jilinsheng Kulun Naiman liangqi Xiajiadian xiacing wenhua yizhi fenbu yu neihan” 吉林省庫倫、奈曼兩旗夏家店下層文化遺址分布與內涵 *Wenwu Ziliao Congkan* 文物資料叢刊7 (1983) pp.98-114.
- Lienert 1979 Lienert, Ursula. *Typology of the Ting in the Shang Dynasty. A Tentative Chronology of the Yin-hsü Period*. Publikationen der Abteilung Asien Kunsthistorisches Institut der Universität Köln, Band 3.1 2 vols. Wiesbaden: Franz Steiner verlag, 1979.
- Li Jia 1976 Li Jia李家. “Guanyu Gaocheng Shang dai tongyue tieren de fenxi” 關於藁城商代銅鉞鐵刃的分析. *Kaogu xuebao* 1976.2, pp.17-32.

- Li Jiahe & Yang Houli      Li Jiahe 李家和、Yang Houli 楊后禮, “Nanchang Yongxiu, Ningdu faxian de sanchu Shang Zhou yizhi” 南昌、永修、寧都發現的三處商周遺址 *Jiangxi lishi wenwu* 江西歷史文物1981.4.
- Li Jianmin                      Li Jianmin 李健民 “Zhongguo gudai qingtongge” 中國古代青銅戈 *Kaoguxue jikan* 考古學集刊1991.7, pp.104-146.
- Li Weiming                      Li Weiming 李維明. “Jianlun Shangdai qingtong dao” 簡論商代青銅刀 *Zhongyuan Wenwu* 1988. 2, pp.42-47.
- Li Xiaohan                      Li Xiaohan 林小安. “Yin Wuding chenshu zhengfa yu xingji kao” 殷武丁臣屬征伐與行祭考. *Jiaguwen yu Yin Shang shi* 甲骨文與殷商史 (2) Shanghai: Shanghai guoji Chubanshe, 1983, pp.223-302.
- Li Xiaoding 1974              Li Xiaoding 李孝定 *Jiagu wenzi jishi* 甲骨文字集釋. 7 vols. Taiwan Nangang: 1974. First issued in 1965 in 8 volumes.
- Li Xixing 1994                  Li xixing 李西興 *Shanxi qingtongqi* 陝西青銅器. Shanxi renmin meishu chubanshe 1994.
- Li Xueqin 1959                 Li Xueqin 李學勤. *Yin dai dili jian lun* 殷代地理簡論. Beijing: Kexue Chubanshe, 1959.
- Li Xueqin 1975                 Yan Wan 晏琬 [= Li Xueqin]. “Beijing, Liaoning chutu tongqi yu Zhou chu de Yan” 北京、遼寧出土銅器與周初的燕. *Kaogu* 1975.5, pp. 274-9, 170.
- Li Xueqin 1977                 Li Xueqin 李學勤. “Lun ‘Fu Hao’ mu de niandai ji youguan wenti” 論‘婦好’墓的年代及有關問題. *Wenwu* 1977.11, pp. 32-7.
- Li Xueqin 1980                 -----, “Guanyu fuzu buci de yixie wenti” 關於阜組卜辭的一些問題. *Guwenzi yanjiu* 古文字研究3 (1980) pp.32-42.
- Li Xueqin 1981                 -----, “Xiaotun nandi jiagu yu jiagu fenqi” 小屯南地甲骨與甲骨分期. *Wenwu* 1981.5, pp.45-58.

- Li Xueqin 1988 -----, "Fei Zhongyuan diqu qingtongqi yanjiu de jige wenti" 非中原地區青銅器研究的幾個問題. *Dongnan wenhua* 東南文化 1988.5, pp. 78-82.
- Li Xueqin 1991a -----, "Xingan Dayangzhou Shangmu ruogan wenti" 新淦大洋洲商墓若干問題. *Wenwu* 1991.10, p.36.
- Li Xueqin 1991b -----, "Shang mo Zhou chu de duochuan ge" 商末周初的多穿戈 *Wenbo* 文博, 1991.6, pp.3-5.
- Liang and Gao 1965 Liang Siyong 梁思永 and Gao Quxun 高去尋. *Houjiazhuang(Henan Anyang Houjiazhuang Yin dai mudi) di san ben, 1002 hao da mu* 侯家莊(河南安陽侯家莊殷代墓地)第三本, 1002 號大墓. Taipei: Zhongyang Yanjiuyuan Lishi Yuyan Yanjiusuo, 1965.
- Liang and Gao 1968 -----, *Houjiazhuang (Henan Anyang Houjiazhuang Yin dai mudi) di liu ben, 1217 hao da mu* 侯家莊(河南安陽侯家莊殷代墓地)第六本, 1217 號大墓. Taipei: Zhongyang yanjiuyuan Lishi Yuyan Yanjiusuo, 1968.
- Liang and Gao 1970 -----, *Houjiazhuang(Anyang Houjiazhuang yin dai mudi)di wu ben, 1004 hao da mu* 侯家莊 (安陽侯家莊殷代墓地)第五本, 1004 號大墓. Taiwan Nangang: Zhongyang Yanjiuyuan Lishi Yuyan Yanjiusuo, 1970.
- Liao Yongmin Liao Yongmin 廖永民, "Zhengzhou shi faxian di yichu Shang dai juyuzhu yu zhuzao tongqi yizhi jianjie" 鄭州市發現的一處商代居住與鑄造銅器遺址簡介 *Wenwu* 1957.6, pp.73-74.
- Lin Chun Lin Chun 林春. "Yichang diqu Changjiang yan'an Xia-Shang shiqi de yizhi xin wenhua leixing" 宜昌地區長江沿岸夏商時期的一支新文化類型. *Jiangnan Kaogu* 1984.2, pp.29-38.
- Lin Yun 1984 Lin Yun 林澐 "Xiaotun nandi fajue yu Yinxu jiagu duandai" 小屯南地發掘與殷墟甲骨斷代 *Guwenzi yanjiu* 古文字研究9 (1984) pp.111-154.

- Lin Yun 1987 -----, "Shang wenhua qingtongqi yu beifang diqu qingtongqi guanxi zhi zai yanjiu" 商文化青銅器與北方地區青銅器關係之再研究. *Kaoguxue wenhua lunji* 考古學文化論集 1987, pp.129-55.
- Liu Kaiguo 1991 Liu Kaiguo 劉開國. "Gushi xian Wantengshan liuhao Shang dai mu fajue jianbao" 固始縣萬滕山六號商代墓發掘簡報. *Zhongyuan Wenwu* 1991.1, pp. 96-9.
- Liu Guanmin Liu Guanmin 劉觀民 "Butong wenhua zhijian tezhengpin jiaocha xianxiang shi li" 不同文化之間特徵品交叉現象釋例. *Zhongguo Kaoguxue Luncong* 中國考古學論叢. 中國社會科學院考古研究所編著, 1992, pp. 162-169.
- Liu Guanmin & Xu Guangji 1981 -----, and xu Guangji 劉觀民,徐光冀. "Neimenggu dongbu diqu qingtongshidai de liangzhong wenhua" 內蒙古東部地區青銅時代的兩種文化. *Neimenggu Wenwu Kaogu* 內蒙古文物考古, 1981 first issue.
- Liu Pingsheng Liu Pingsheng 劉平生 "Anhui Nanling Dagongshan gudai tongkuang yizhi faxian han yanjiu" 安徽南陵大工山古代銅礦遺址發現和研究. *Dongnan Wenhua* 1988.6, pp.45-57.
- Liu Shi'e et al Liu Shi'e 劉士峨 et al. "Xi'an Laoniupo Shangdai mudi de fajue" 西安老牛坡商代基地的發掘. *Wenwu* 1988.6, pp.1-22.
- Liu Tizhi 1934 Liu Tizhi 劉體智. *Shan Zhai jijin lu* 善齋吉金錄. Shanghai: 1934.(Rong Geng & Zhang Weichi 1958, p. 145.)
- Liu Tizhi 1935 -----, *Xiaojiao jingge jinwen taben* 小校經閣金文拓本. 1935.(Rong Geng & Zhang Weichi 1958, p. 149.)
- Liu Yuxia 1933 Liu Yuxia 劉嶼霞. "Yin dai yejintongshu zhi yanjiu" 殷代冶金銅術之研究. *Anyang fajue baogao* 安陽發掘報告 4 (Shanghai: 1933) pp. 681-96.
- Loehr 1948 Loehr, Max. "The Earliest Chinese Swords and the Akinakes." *Oriental Art*, Winter 1948, pp. 132-42.

- Loehr 1949a -----, "Weapons and Tools from Anyang, and Siberian Analogies." *American Journal of Archaeology* 53(1949) pp.126-44.
- Loehr 1949b -----, "Ordos Daggers and Knives: New Material, Classification and Chronology. First Part: Daggers." *Artibus Asiae* 12(1949) pp. 23-83.
- Loehr 1951 -----, "Ordos Daggers and Knives: New Material, Classification, and Chronology. Second Part: Knives." *Artibus Asiae* 14(1951) pp.77-162.
- Loehr 1953 -----, "The Bronze Styles of the Anyang Period." *ACASA* 7(1953) pp. 42-53.
- Loehr 1956 -----, *Chinese Bronze Age Weapons, The Werner Jannings Collection in the Chinese National Palace Museum, Peking*. Ann Arbor: University of Michigan Press, 1956.
- Loehr 1965 -----, *Relics of Ancient China from the Collection of Dr. Paul Singer*. New York: The Asia Society, 1965.
- Loehr 1967a -----, *Chinese Art: Symbols and Images*. Wellesley, Mass: Wellesley College, 1967.
- Loehr 1967b -----, "The Fate of the Ornament in Chinese Art." *Archives of Asian Art* 21(1967-68) pp. 8-19.
- Loehr 1968 -----, *Ritual Vessels of Bronze Age China*. New York: The Asia Society, 1968.
- Loehr 1980 -----, "The Question of Content in the Decoration of Shang and Chou Bronzes." Unpublished paper presented at the Symposium on the Bronze Age of China, Metropolitan Museum, New York, 2-3 June 1980.
- Lu Liancheng & Hu Zhisheng 1983 Lu Liancheng 盧連成 and Hu Zhisheng 胡智生 " Baoji Rujiazhuang Zhuyuangou mudi chutu bingqi de chubu yanjiu" 寶雞茹家莊、竹園溝墓地出土兵器的初步研究 *Kaogu yu Wenwu* 1983.5, pp.50-65.

- Lu Liancheng & Hu Zhisheng 1988 -----, *Baoji Yuguo Mudi* 寶雞虢國墓地 (*The Yu State Cemetery*), Beijing Wenwu Chubanshe, 1988.
- Luo Xizhang Luo Xizhang 羅西章 “Fufeng Baijiayao Shuiku Chutu de Shang-Zhou wenwu” 扶風百家窯水庫出土的商周文物 *Wenwu* 1977.12, p.84.
- Luo Zhenyu 1913 or Qian Luo Zhenyu 羅振玉. *Yinxu shuqi qianbian* 殷墟書契前編. 1913, Taipei: Yiwen yinshuguan, around 1950.
- Luo Zhenyu 1914 -----, *Yinxu shuqi jinghua* 殷墟書契菁華. 1914.
- Luo Zhenyu 1916a -----, *Yinxu shuqi houbian* 殷墟書契後編. 1916. Taipei: Yiwen yinshuguan, 1959.
- Luo Zhenyu 1916b -----, *Yinxu gu qiwu tulu* 殷墟古器物圖錄. Luo Shi Yingyin 羅化影印, 1916.
- Luo Zhenyu 1917a -----, *Meng Wei Cao Tang jijin tu* 夢鄩草堂吉金圖. Taipei: Wenhua Chubangongsi, 1917.(Rong Geng & Zhang Weichi 1958, p. 143.)
- Luo Zhenyu 1917b -----, *Yin wen cun* 殷文存. 1917. In “ Sandai Jijin Congshu Chubian” 三代吉金叢書初編. Taipei: Yinshuguan, 1968.
- Luo Zhenyu 1927 -----, *Zengding Yinxu shuqi kaoshi* 增訂殷墟書契考釋. Taipei: Yiwen yin shu guan, 1927.
- Luo Zhenyu 1931 -----, *Zhen Song Tang ji gu yiwen* 貞松堂集古遺文. 1931.(Rong Geng & Zhang Weichi 1958, p. 149.)
- Luo Zhenyu 1933 -----, *Yinxu shuqi xubian* 殷墟書契續編. 1933.
- Luo Zhenyu 1935 -----, *Zhen Song Tang jijin tu* 貞松堂吉金圖. Dalian: 1935.

- Luo Zhenyu 1937 -----, *Sandai jijin wen cun* 三代吉金文存.1937.(Rong Geng & Zhang Weichi 1958, p. 150.) Rubbings are cited as in Zhou Fagao 1977(e.g. 13.11.2 is the third rubbing on page 11 of *juan* 13 because the first two rubbings on that page come from lid and body of a single vessel, 13.11.1). A reference to Luo Zhenyu 1937 thus doubles as a reference to Zhou Fagao1977, which provides an exhaustive bibliography for the inscription and the vessel bearing it.
- Lu Zhirong Lu Zhirong. 呂智榮. “Shilun Shaan-Jin beibu Huanghe liang diqu chutu de Shang dai qingtongqi ji youguan wenti 試論陝晉北部黃河兩地區出土的商代青銅器及有關問題.” *Zhongguo Kaoguxue yanjiu lunji—jinian Xia Nai xiansheng kaogu 50 zhounian* 中國考古學研究論集—紀念夏鼐先生考古五十週年,1987, pp.214-225.
- Ma Chengyuan 1982 Ma Chengyuan 馬承源. *Zhongguo gudai qingtongqi* 中國古代青銅器. Shanghai: Shanghai Renmin Chubanshe, 1982.
- Ma Chengyuan 1988 -----, *Zhongguo qingtongqi* 中國青銅器.Shanghai : Shanghai guji Chubanshe 上海古籍出版社, 1988.
- Ma Chengyuan 1992 -----, “Wu-Yue wenhua qingtongqi de yanjiu-jianlun Dayangzhou chutu de qingtongqi” 吳越文化青銅器的研究—兼論大洋洲出土的青銅器 *Wuyue qingtongqi yanjiu zuotanhui* 吳越青銅器研究座談會,1992, pp. 19-21.
- Ma Xulun 1962 Ma Xulun 馬敘倫, *Du jinqi keci* 讀金器刻詞. Beijing: Zhunghua shuju, 1962.
- Ma Dezhi et al. Ma Dezhi 馬得志, Zhou Yongzhen 周永珍, and Zhang Yunpeng 張雲鵬, “1953 nian Anyang Dasikongcun fajue baogao” 一九五三年安陽大司空村發掘報告. *Zhongguo Kaogu xuebao* 9, 1955, pp. 25-90.
- Ma Heng Ma Heng 馬衡 “Ge ji zhi yanjiu” 戈戟之研究 *Yanjing xuebao* 燕京學報5, (1929) pp.745-53.
- Ma Zhaozong & Han Rufu Ma Zhaozong 馬肇曾, Han Rufu 韓如玠 “Gutongqi biao mian huaxue chuli yanjiu” 古銅器表面化學處理研究 *Huaxue tongbao* 化學通報1988.8, pp.59-61.

- Moorey 1971                    Moorey, P. R. S. *Catalogue of the Ancient Persian Bronzes in the Ashmolean Museum*. Oxford: Oxford University Press, 1971.
- Moorey 1974                    -----, *Ancient Bronzes from Luristan*. London: Trustees of the British Museum, 1974.
- New York 1980                Fong, Wen, ed. *The Great Bronze Age of China, An Exhibition from the People's Republic of China*. New York: Metropolitan Museum of Art, 1980.
- Nie Chongyi                    Nie Chongyi 聶崇義, San li tu 三禮圖, 景文淵閣四庫全書, 129.
- Ningshou jian gu*            *Ningshou jian gu* 寧壽鑑古. Shanghai :1931. Earliest supplement, compiled c.1980, to *Xi Qing gu jian*. (Rong Geng & Zhang Weichi 1958, p. 141.)
- Noel Barnard                Noel Barnard “Dui Guanghan maizangkeng qingtongqi ji qita qiwu zhi yiyi de chubu rnshi” 對廣漢埋葬坑青銅器及其他器物之意義的初步認識 *Nanfang minzu kaogu* 南方民族考古 1992.5, pp.25-65.
- Ouyang Xiu                    Ouyang Xiu 歐陽修 *Jigu lu*集古錄 1063. *Qinding sikuquanshu shibu 439* 欽訂四庫全書史部439.
- Pan Zuyin 1872                Pan Zuyin 潘祖蔭. *Pan Gu Lou yiqi kuanshi* 攀古樓彝器款識. 1872.(Rong Geng & Zhang Weichi 1958, p.142.)
- Peng Shifan, Hua Jueming, & Li Zhongda            Peng Shifan 彭適凡, Hua Jueming 華覺明, Li Zhongda 李仲達. “Jiangxi diqu zaoqi qingtongqi yezhu jishu de jige wenti” 江西地區早期銅器冶鑄技術的幾個問題. Beijing: 1983, pp.72-80.
- Peng Shifan 1991            Peng Shifan 彭適凡, Liu Lin 劉林, Zhan Kaixun 詹開遜, “Guanyu Xingan Dayangzhou Shangmu de ruogan wenti” 關於新淦大洋洲商墓的若干問題, *Wenwu* 1991.10, pp.27-32.
- Petrie, 1917                    Petrie, *Tools and Weapons*, London: 1917.

- Pope et al. 1967 Pope, John Alexander, Rutherford John Gettens, James Cahill, and Noel Barnard. *The Freer Chinese Bronzes, Volume I, Catalogue*. Washington: Smithsonian Institution, 1967.
- Qiu Xigui 裘錫圭 “Lun lizu buci de shidai” 論歷組卜辭的時代 *Guwenzi yanjiu* 古文字研究6 (1981) pp.263- 321 .
- Qi Yanpei 1947 Qi Yanpei 祁延霽. “Shandong Yidu Sufutun chutu tongqi diaochaji” 山東益都蘇埠屯出土銅器調查記. *Zhongguo Kaogu xuebao* 2(1947) pp.167-177.
- Qyu Wanli 1961 Qyu Wanli 屈萬里. *Yinxu Wenzi jiabian kaoshi* 殷墟文字甲編考釋. Taiwan Nangang: Zhongyang Yanjiuyuan Lishi Yuyan Yanjiusuo, 1961.
- Rawson 1980 Rawson, Jessica. *Ancient China, Art and Archaeology*. London: Trustees of the British Museum. 1980.
- Rawson 1990 -----, *Western Zhou Ritual Bronzes in the Arthur M. Sackler Collections*. Harvard University 1990.
- Rawson 1995 -----, *Chinese Jade from the Neolithic to the Qing*. Trustees of the British Museum 1995.
- Rawson 1996 -----, *Mysteries of Ancient China*, New York: George Braziller. 1996.
- Rong Geng 1929 -----, *Bao Yun Lou yiqi tulu* 寶蘊樓彝器圖錄. Jinghua shuju yingyin ben 京華書局影印本, 1929.(Rong Geng & Zhang Weichi 1958, p.144.)
- Rong Geng 1933 -----, *Song Zhai jijin tulu* 頌齋吉金圖錄. Beijing: Wenkui Tang 文奎堂, 1933.(Rong Geng & Zhang Weichi 1958, p.144.)
- Rong Geng 1934 -----, *Wuyingdian yiqi tulu* 武英殿彝器圖錄. Beijing: Hafo Yanjing Xueshe, 1934.(Rong Geng & Zhang Weichi 1958, p.144.)
- Rong Geng 1935 -----, *Haiwai jijin tulu* 海外吉金圖錄. Beijing:1935. (Rong Geng & Zhang Weichi 1958, p.145.)

- Rong Geng 1936 -----, *Shan Zhai yiqi tulu* 善齋彝器圖錄. Beijing:1936. (Rong Geng & Zhang Weichi 1958, p.146.)
- Rong Geng 1938 -----, *Song Zhai jijin xulu* 頌齋吉金續錄. Beijing:1938. (Rong Geng & Zhang Weichi 1958, p.144.)
- Rong Geng 1939 -----, *Jinwen bian* 金文編. Changsha: Shangwu yinshuguan, 1939.
- Rong Geng 1940 -----, *Xi Qing yiqi shiyi* 西清彝器拾遺. Beijing:Wen Kui Tang Shu Zhang, 1940. (Rong Geng & Zhang weichi 1958, p.146.)
- Rong Geng 1941 -----, *Shang Zhou yiqi tongkao* 商周彝器通考. 2. vols. Beijing: Harvard-Yenjing Institute, 1941. (Rong Geng & Zhang Weichi 1958, p.151.) References are to volume 2 (plates) unless volume 1 is specified.
- Rong Geng & Zhang Weichi 1958 -----, and Zhang Weichi 張維持. *Yin Zhou qingtongqi tonglun* 殷周青銅器通論. Beijing: Kexue Chubanshe, 1958.
- Ruan Yuan Ruan Yuan 阮元. *Jigu Zhai dingyiqi kuanshi* 積古齋鼎彝器款識.
- Shang Chengzuo or Yi Shang Chengzuo 商程祚. *Yinqi yicun* 殷契佚存, 1933.
- Shanxi 1980 山西省文物工作委員會編 *Shanxi chutu wenwu* 山西出土文物 1980.
- Shao Wangping 1992 Shao Wangping 邵望平. “Gongyuanqian 2000 Haidai diqu lishi dashi” 公元前二千年海岱地區歷史大勢. *Huaxia Wenming* vol.3 華夏文明第三集, Tiang Chan-wu ed. 田昌五編, 1992.
- Shen Rong 1992a Shen Rong 沈澍 “Lun zaoqi qingtongge de shiyong fangfa” 論早期青銅戈的使用方法 *Kaogu* 考古, 1992.1, pp.69-75
- Shen Rong 1992b -----, “Shangshu guming suo lie bingqi ming kao” 尚書顧命所列兵器名考. *Wenbo* 文博, 1992.1, pp.20-30.

- Shen Wu 1991 Shen Wu 申(武). "Fuhaomu yuqi cailiao tanyuan" 婦好墓玉器材料探源. *Zhongyuan Wenwu* 1991.1, pp.73-7.
- Shi Yongshi 1983 Shi Yongshi 石永士. "Yanwang tongbingqi yanjiu" 鄧王銅兵器研究. Beijing 1983 pp. 98-107.
- Shima 1958 島邦男, *Inkyo bokuji kenkyu* 殷墟卜辭研究. Hirosaki: Chugokugaku Kenkyukai, 1958.
- Shima 1971 -----, *Inkyo bokuji sorui* 殷墟卜辭綜類. 2nd ed. Tokyo: Kyuko Shoin, 1971. A concordance to oracle tests. The second edition supplies modern character equivalents and cross references to Li Xiaoding 1974.
- Shirakawa Shirakawa Shizuka 白川靜, *Kinbun tsushaku* 金文通釋. Kyoto : Hakutsuru Bijutsukan. 1963-1973, 1962.
- Shirakawa 1963a -----, *Kinbunshu* 金文集. 4 vols. Tokyo: Nigensha, 1963-64.
- Shirakawa 1963b -----, *In kokotsu bunshu* 殷甲骨文集. Tokyo: Nigensha, 1963.
- Shirakawa 1964 -----, *Kinbun tsūshaku* 金文通釋 六. Tokyo: Nigensha, 1964.
- Shi Zhangru 1947 Shi Zhangru 石璋如. "Yinxu zuijin zhi zhongyao faxian, fu lun Xiaotun diceng" 殷墟最近之重要發現, 附論小屯地層. *Zhongguo Kaogu xuebao* 2, 1947, pp. 1-82. See Loehr 1957.
- Shi Zhangru 1950 -----, "Xiaotun Yindai de chengtao bingqi" 小屯殷代的成套兵器. *Bulletin of the Institute of History and Philology* 中央研究院歷史語言研究所集刊 22, 1950, pp.19-77.
- Shi Zhangru 1951 -----, "Xiaotun xiqyu de muzangqun" 小屯西區的墓葬群 *Bulletin of the Institute of History and Philology* 23, 1951 ,pp.447-487.
- Shi Zhangru 1955 -----, "Yin dai de zhu tong gongyi" 殷代的鑄銅工藝 *Bulletin of the Institute of History and Philology* 26, 1955, pp.95-129.

- Shi Zhangru 1959 -----, *Xiaotun 1, Yinxu jianzhu yicun, yizhi de faxian yu fajue, yibian* 小屯一, 殷墟建築遺存, 遺址的發現與發掘, 乙編. Taiwan Nangang: Zhongyang Yanjiuyuan Lishi Yuyan Yanjiusuo, 1959.
- Shi Zhangru 1970 -----, *Xiaotun 1, yizhi de faxian yu fajue, bingbian 1, Yinxu muzang zhi 1, beizu muzang shang* 小屯一, 遺址的發現與發掘, 丙編一, 殷墟墓葬之一, 北組墓葬上. Taiwan Nangang: Zhongyang Yanjiuyuan Lishi Yuyan Yanjiusuo, 1970.
- Shi Zhangru 1972 -----, *Xiaotun 1, yizhi de faxian yu fajue, bingbian 2, Yinxu muzang zhi 2, zhongzu muzang* 小屯一, 遺址的發現與發掘, 丙編二, 殷墟墓葬之二, 中組墓葬. Taiwan Nangang: Zhongyang Yanjiuyuan Lishi Yuyan Yanjiusuo, 1972.
- Shi Zhangru 1973 -----, *Xiaotun 1, yizhi de faxian yu fajue, bingbian 3, Yinxu muzang zhi 3, nanzu muzang fu beizu mu buyi* 小屯一, 遺址的發現與發掘, 丙編三, 殷墟墓葬之三, 南組墓葬附北組墓補遺. Taiwan Nangang: Zhongyang Yanjiuyuan Lishi Yuyan Yanjiusuo, 1973.
- Shi Zhangru 1976 -----, *Xiaotun 1, yizhi de faxian yu fajue, bingbian 4, Yinxu muzang zhi 4, yiqu jizhi shangxia de muzang* 《小屯一, 遺址的發現與發掘, 丙編四, 殷墟墓葬之四, 乙區基址上下的墓葬. Taiwan Nangang: Zhongyang Yanjiuyuan Lishi Yuyan Yanjiusuo, 1976.
- Shi Zhangru 1980 -----, *Xiaotun 1, yizhi de faxian yu fajue, bingbian 5, Yinxu muzang zhi 5*, 小屯一, 遺址的發現與發掘, 丙編五, 殷墟墓葬之五. Taiwan Nangang: Zhongyang Yanjiuyuan Lishi Yuyan Yanjiusuo, 1980.
- Sommarström 1956 Sommarström, Bo. "The Site of Ma-kia-yao." *BMFEA* 28 (1956) pp. 55-138.
- Song Xinchao Song Xinchao 宋新潮. *Yin Shang wenhua quyu yanjiu* 殷商文化區域研究. Xian: Shanxi Renmin Chubanshe, 1991.
- Song Zhenhao Song Zhenhao 宋鎮豪. *Xia Shang shehui shenghuo shi* 夏商社會生活史. Beijing: Zhongguo Kexue Chubanshe, 1994.
- Soper 1966 Soper, Alexander C. "Early, Middle, and Late Shang: A Note." *Artibus Asiae* 28(1966) pp. 5-38.

- Su Bingqi 1948 Su Bingqi 蘇秉琦. *Doujitaigou dongqu muzang* 鬥雞臺溝東區墓葬. Beijing:Beiping yanjiu yan shixue yanjisuo, 1948.
- Su Bingqi et al. 1987 Su Bingqi 蘇秉琦 .*Kaoguxue wenhai lunji* 考古學文化論集. Beijing:Wenwu Chubanshe ,1987.
- Su Bingqi 1991 Su Bingqi 蘇秉琦. “Guanyu chongjian Zhonggou shiqianshi de sikao” 關於重建中國史前史的思考. *Kaogu* 1991.12,pp.1109-1118.
- Sun Haipo 1934 Sun Haipo 孫海波 *Jiaguwen bian* 甲骨文編. Beijing: Hafo Yanjing Xueshe, 1934. Taipei : Yiwen yinshuguan reprint 1959.
- Sun Ji 1980 Sun Ji 孫機. “ You ren che pai yu duo ge ji” 有刃車轡與多戈戟. *Wenwu* 1980.12, pp.83-5.
- Sun Ji 1990 Sun Ji 孫機, “Shilun gongxingqi de yuogtu han dingming” 試論“弓形器”的用途和定名, *Zhongguo quyufu luncuang* 中國古輿服論叢, Wenwu Chubanshe 1993, pp.62-68.
- Sun Shuyi & Han Rufen Sun Shuyi 孫淑藝 and Han Rufen 韓汝玢. “Zhongguo zaoqi qingtongqi de chubu yanjiu” 中國早期青銅器的初步研究. *Kaogu xuebao* 1981.3, pp.294-299.
- Sun Zhuang Sun Zhuang 孫壯. *Cheng Qiu Guan jijin tu* 澂秋館吉金圖. Beijing: Shangwu yinshuguan, 1930.(Rong Geng & Zhang Weichi 1958, p. 144.)
- Takahama Takahama Shu 高濱秀. “Orudosu seido tanken no Keishiki burui bunrui” オルドス青銅短劍の型式分類, *Tokyo Hankubtsuken Kiyo* 18 (1983) ,pp.95-132.
- Tao Zhinggang Tao Zhinggang 陶正剛. “Shanxi chutu de Shangdai tongqi” 山西出土的商代銅器 *Zhongguo Kaoguxuehui disici nianhui lunwenqi* 中國考古學會第四次年會論文集 1983,pp.56-64.
- Taipei 1958 *Gugong tongqi tulu* 故宮銅器圖錄. 2 vols. Taipei: 1958.
- Tang Lan 1972 Tang Lan 唐蘭. “Gongxingqi yongtukao” 弓形器用途考 *Kaogu*,1972.3,pp.178-184.

- Tang Lan 唐蘭. “Zuoce ling zun ji zuoce ling yi kaoshi ” 作冊令尊及作冊令彝考釋  
*Guexue jikan* 4.
- Tieyun* Liu e 劉鶚原藏, Luo Zhenyu 羅振玉編著 *Tieyun canggui zhiyu* 鐵雲藏龜之餘, 1903,  
Hong Kong Shudian, 1972.
- Tian Guangjin et al Tian Guangjin 田廣金, Guo Suxing 郭素新 et al. *Ordos Qingtongqi* 鄂爾多斯式青銅器.  
Beijing: Wenwu Chubanshe, 1986.
- Tianye Kaogu baogao* *Tianye Kaogu baogao* 田野考古報告.
- Toyo gakuho* *Toyo gakuho* 東洋學報.
- Tokyo 1981a *Sensei-sho Hakubutsukan* (*Chugoku no Hakubutsukan, vol.1*) 陝西省博物館(中國の博  
物館, 第一卷). Tokyo: Kodansha, 1981.
- Tokyo 1981b *Konan-sho Hakubutsukan* (*Chugoku no Hakubutsukan, vol.2*) 湖南省博物館(中國の博  
物館, 第二卷). Tokyo: Kodansha, 1981.
- Tokyo 1981c *Chugoku kokogaku sanjunen 1949-1979* 中國考古學三十年 1949-1979. Tokyo:  
Heibonsha, 1981. Translation of Beijing 1979a by Sekino Takeshi 關野雄.
- Tokyo 1981d Treasures from the tombs of Zhong Shan guo Kings: an exhibition from the people's  
republic of China. *Chugoku Sengokujidai no yu: Chuzan Okoku bunbutsuten* 中國戰國  
時代の雄, 中山王國文物展 Tokyo National Museum 1981.
- Tokyo 1982a *Nankin Hakubutsuin* (*Chugoku no Hakubutsukan, vol.4*) 南京博物院 (中國の博物館,  
第四卷). Tokyo: Kodansha, 1982.
- Tokyo 1982b *Chugoku Rekishi Hakubutsukan* (*Chugoku no Hakubutsukan, vol.5*) 中國歷史博物館  
(中國の博物館, 第五卷). Tokyo: Kodansha, 1982.
- Tokyo 1983a *Kanan-sho Hakubutsukan* (*Chugoku no Hakubutsukan. vol.7*) 河南省博物館 (中國の博  
物館, 第七卷). Tokyo: Kodansha, 1983.

- Tokyo 1983b *Shanghai Hakubutsukan (Chugoku no Hakubutsukan, vol.8)* 上海博物館 (中國の博物館, 第八卷). Tokyo: Kodansha, 1983.
- Tong Enzheng 童恩正. *Gudai de Ba Shu* 古代的巴蜀. Chengdu: Sichuan Renmin Chubanshe, 1979.
- Tong Enzheng 1979a -----, “Woguo xinan diqu qingtongge de yanjiu 我國西南地區青銅戈的研究” *Kaogu Xuebao* 1979.4, pp.441-460.
- Tong Enzheng 1979b -----, “Woguo xinan diqu qingtongge de yanjiu 我國西南地區青銅戈的研究” *Kaogu Xuebao* 1979.4, pp.441-460.
- Tong Zhuchen 佟柱臣. “Erlitou wenhua han Shang Zhou shidai jinshuqi daiti shi gu bangqi de guoching 二里頭文化和商周時代金屬器代替石骨蚌器的過程” *Zhongyuan Wenwu* 1983.2, p.1-13.
- Toronto 1972 *Chinese Art in the Royal Ontario Museum*. Toronto: Royal Ontario Museum, 1972.
- Umehara 1932 Umehara Sueji 梅原末治. *Inkyo shutsudo hakushoku doki no kenkyu* 殷墟出土白色土器の研究 (Etude sur la poterie blanche fouillée dans la ruine de l'ancienne capitale des Yin). Kyoto: Toho Bunka Gakuin Kyoto Kenkyujo, 1932.
- Umehara 1940a -----, *Kanan Anyo iho* 河南安陽遺寶 (Selected Ancient Treasures found at Anyang, Yin Sites). Kyoto: Kobayashi, 1940.
- Umehara 1940b -----, *Kodoki keitai no kokogaku-teki kenkyu* 古銅器形態の考古學的研究 (On the Shapes of the Bronze Vessels of Ancient China: An Archaeological Study). Kyoto: Toho Bunka Kenkyujo, 1940.
- Umehara 1941 -----, *Kanan Anyo ibutsu no kenkyu* 河南安陽遺物の研究 (A Study of Relics from Anyang, Honan). Kyoto: 1941.
- Umehara 1959 -----, *Inbo hakken mokki in'ei zuroku* 殷墓發見木器印影圖錄. Kyoto: Benrido, 1959.
- Umehara 1961a -----, “In chuki to sarete iru Teishu [Zhengzhou] shutsudo kodoki to seishitsu 殷中期とされこいる鄭州出土古銅器の性質.” *Shigaku* 33.2(1961), pp. 123-46.

- Umehara 1961b -----, *Sen'oku Seisho, Shinshu hen* 泉屋清賞新收編 (Sen'oku Seisho, New Acquisitions). Tokyo: 1961.
- Umehara 1964 -----, *Inkyo* 殷墟 (Yin Hsü, Ancient Capital of the Shang Dynasty at An-yang). Tokyo: Asahi Shimbunsha, 1964.
- Umehara 1971 -----, *Shinshu Sen'oku Seisho* 新修泉屋清賞. 2 vols. Kyoto: Sen'oku: Hakkokan, 1971.
- Wang Chen 1935 Wang Chen 王辰. *Xu Yin wen cun* 續殷文存, Kaogu Xueshe 考古學社, 1935.
- Wang Feng 1990 Wang Feng 王峰. "Hebei Xinglong xian faxian Shang Zhou qingtongqi jiaocang" 河北興隆縣發現商周青銅器窖藏. *Wenwu* 1990.11, pp. 57-8.
- Wang Guimin Wang Guimin 王貴民. *Shang Zhou zhidu kaoxin* 商周制度考信. Taipei: Mingwen Chubanshe, 1989.
- Wang Guowei 1923 Wang Guowei 王國維. "Guifang Kunyi Xianunkao" 鬼方昆夷獫狁考. *Guantang jilin* 觀堂集林 1923.
- Wang Haiping Wang Haiping 王海平. "Guizhou xibu diqu chutu de qingtongqi" 貴州西部地區出土的青銅器 *Kaogu* 1989.10, pp.948-50.
- Wang Hengjie 1992 Wang Hengjie 王恒杰. "Xisha qundao de kaogu diaocha" 西沙群島的考古調查. *Kaogu* 1992.9, pp. 769-777.
- Wang Renxiang Wang Renxiang 王仁湘. "Guanyu woguo xinshiqi shidai shuangjian shiqi de jige wenti" 關於我國新石器時代雙肩石器的幾個問題. *Nanfang Minzukaogu* 1987.1, p.21-36.
- Wang Shenxing Wang Shenxing 王慎行. "Buci suojian Qiangren kao" 卜辭所見羌人考. *Zhongyuan Wenwu* 1991.1, pp.65-71.
- Wang Xiantang Wang Xiantang 王獻唐. *Huang Xian Ji qi* 黃縣祭器. Shandong Renmin Chubanshe, 1960.

- Wang Youpeng      Wang Youpeng 王有鵬. "Sichuan Mianzhu xian chuang'uanzang" 四川綿竹縣船棺葬. *Wenwu* 1987.10, pp.22-33.
- Wang Yuxin      Wang Yuxin 王宇信. "Shilun Yinxu wuhaomu de Fuhao" 試論殷墟五號墓的婦好. *Kaogu Xuebao* 1977.2, pp.1-21.
- Watson 1960      Watson, William. *Archaeology in China*. London: Max Parrish, 1960.
- Watson 1968      -----, "The Five Stages of Shang." (Review of Loehr 1968.) *Art News* 67.7 (November 1968) pp. 42-7, 62-4.
- Watson 1971      -----, *Cultural Frontiers in Ancient East Asia*. Edinburgh: Edinburgh University Press, 1971.
- Watson 1977      -----, *Ancient Chinese Bronzes*. London: Faber and Faber, 1977.
- Watson 1981a      -----, "The Individuality of the Honan Tradition in the Shang Period." *Zhongyang Yanjiuyuan Guoji Hanxue Huiyi lunwen ji, yishu shi zu* 中央研究院國際漢學會議論文集, 藝術史組 (Taipei: Zhongyang Yanjiuyuan, 1981) pp. 171-90.
- WB      *Wenbo* 文博.
- Weber 1968      Weber, Charles D. *Chinese Pictorial Bronze Vessels of the Late Chou Period*. Ascona: Artibus Asiae Publishers, 1968. Originally published in *Artibus Asiae* vols. 28-30(1966-68).
- Weber 1973      Weber, George W., Jr. *The Ornaments of Late Chou Bronzes*. New Brunswick, New Jersey: Rutgers University Press, 1973.
- Wenwu cankao zilao*      -----, *cankao zilao* 文物參考資料. Beijing: Wenwu Chubanshe.
- Wenwu jikan*      -----, *jikan* 文物集刊. Beijing: Wenwu Chubanshe, 1980-.
- Wenwu jinghua*      -----, *jinghua* 文物精華.

- Wenwu kaogu gongzuo* 30 nian ——, *kaogu gongzuo 30 nian* 文物考古工作30年.
- Wen Fong 1980            *The Great Bronze Age of China. The Metropolitan Museum of Art, New York., 1980.*
- Wei Su 1992            Wei Su 衛斯. “Pingluxian Qianzhuang Shangdai yizhi chutuwu” 平陸縣前莊商代遺址出土物 *Wenwu jikan* 文物季刊1992.1, pp.18-19.
- White 1956            White, William Charles. *Bronze Culture of Ancient China.* Toronto: University of Toronto Press, 1956.
- Whitfield 1993        Roderick Whitfield.ed. *The Problem of Meaning in Early Chinese Ritual Bronzes.* Colloquies on Art and Archaeology in Asia. no.15. University of London, 1993.
- WW                    *Wenwu* 文物 (before 1959, *Wenwu cankao ziliao* 文物參考資料).
- WW 1957.6            “Zhingzhoushi faxian de yichu Shangdai jyuzhu yu zhuzao tongqi yizhi jianjie” 鄭州市發現的一處商代居住與鑄造銅器遺址簡介 *Wenwu* 1957.6, pp.73-74.
- WW 1957.8            “Shenxi Hongzhao Yuongning Dongbao chutu de tongqi” 山西洪趙永凝東堡出土的銅器, *Wenwu* 1957.8, pp.42-44.
- WW 1960.7            “Shanxi Luliang xian Shilouzhen you faxian tongqi” 山西呂梁縣石樓鎮又發現銅器 *Wenwu* 1960.7, p.5.
- WW 1961.11          “Ji Sichuan Pingxian Zhuwajie chutu de tongqi” 記四川彭縣竹瓦街出土的銅器 *Wenwu* 1961.11, pp.28-31.
- WW 1962.4, 5        “Shilouhou Lanjiagou chutu Shangdai qingtongqi” 石樓后蘭家溝出土商代青銅器, *Wenwu* 1962.4, 5, pp.33-34.
- WW 1964.4            “Shandong Changqing chutu qingtongqi” 山東長清出土青銅器 *Wenwu* 1964.4, pp.41-50.

- WW 1964.9 “Tianjinshi xin shouji de Shang Zhou qingtongqi” 天津市新收集的商周青銅器  
*Wenwu* 1964.9, p.33.
- WW 1965.7 “Shandong Cangshanxian chutu qingtongqi” 山東蒼山縣出土青銅器 *Wenwu* 1965.7,  
pp.27-30.
- WW 1966.1 “Shanxi Chinggu Baoji Lantian chutu han shouji de qingtongqi” 陝西城固寶雞藍田出  
土和收集的青銅器 *Wenwu* 1966.1, pp.1-6.
- WW 1972.4 “Baode xian xinfaxian de Yindai qingtongqi” 保德縣新發現的殷代青銅器  
*Wenwu*1972.4, p.62.
- WW 1972.5 “Gaishu jinnianlai Shandong chutu de Shang Zhou qingtongqi” 概述近年來山東出土  
的商周青銅器. *Wenwu*1972.5, pp.3-18.
- WW 1972.8 “Shandong Yidu Sufutun diyihao nuli xunzangmu” 山東益都蘇埠屯第一號奴隸殉葬  
墓. *Wenwu*1972.8, pp.17-30.
- WW 1974.2 “Shanxi Shilou Yidie huiping faxian Shangdai bingqi” 山西石樓義牒會坪發現商代兵  
器. *Wenwu*1974.2, p.67.
- WW 1975.7 “Jiangxi Qingjiang Wuching Shangdai yizhi fajue jianbao” 江西清江吳城商代遺址發  
掘簡報. *Wenwu* 1975.7, pp.51-71.
- WW 1976.1 “1963 nian Hubei Huangpo Panlongcheng Shangdai yizhi de fajue” 1963年湖北黃陂  
盤龍城商代遺址的發掘 *Wenwu* 1976.1 pp.49-59.
- WW 1976.2a “Panlongcheng 1974 nian du tianye kaogu jiyao” 盤龍城一九七四年度田野考古紀  
要 *Wenwu* 1976.2, pp.5-15.
- WW 1976.2b “Panlongcheng Shang dai erligang qi de qingtongqi” 盤龍城商代二里岡期的青銅器.  
*Wenwu* 1976.2, pp.26-41
- WW 1976.3 “Chengdu Baihuatan zhongxue shihaomu fajue qi” 成都百花潭中學十號墓發掘記  
*Wenwu* 1976.3, pp.40-46.

- WW 1976.6 “Shaanxi Fufeng chutu xi Zhou Bodong zhuqi” 陝西扶風出土西周伯夔諸器 *Wenwu* 1976.6, pp.51-60.
- WW1977.4 “Jiaoxian Xiyan yizhi diaocha shijue jianbao” 膠縣西庵遺址調查試掘簡報. *Wenwu* 1977.4, pp.63-71.
- WW 1977.10 “Xianyang Yangjiawan Hanmu fajue jianbao” 咸陽楊家灣漢墓發掘簡報 *Wenwu* 1977.10, pp10-15.
- WW1977.11 “Beijingshi Pingguxian faxian Shangdai mu” 北京市平谷縣發現商代墓. *Wenwu* 1977.11, pp.1-8.
- WW 1977.12a “Fufeng Baijiayao shuiku chutu de Shang Zhou wenwu” 扶風白家窯水庫出土的商周文物, *Wenwu*1977.12, pp.84-86.
- WW 1977.12 b “Liaoning Kezuoxian Shanwanzi chutu Shang Zhou qingtongqi” 遼寧喀左縣山灣子出土商周青銅器. *Wenwu* 1977.12, pp.23-33.
- WW 1978.7 “Guangdong Qyujiang Shixia muzang fajue jianbao” 廣東曲江石峽墓葬發掘簡報 *Wenwu* 1978.7, pp.1-15.
- WW 1978.10 “Fufeng Meiyang faxian Shang Zhou tongqi” 扶風美陽發現商周銅器, *Wenwu* 1978.10, pp.91-92.
- WW 1980.8 “Wucheng Shang dai yizhi xin faxian de qingtongbingqi” 吳城商代遺址新發現的青銅兵器. *Wenwu* 1980.8, pp.1-2.
- WW 1981.6 “Sichuan Xindu Zhanguo muguomu” 四川新都戰國木槨墓. *Wenwu* 1981.6, pp.1-16.
- WW 1981.8 “Shanxi Shilou Chujiayu Caojiahuan faxian Shangdai tongqi” 山西石樓褚家峪,曹家垣發現商代銅器, *Wenwu* 1981.8, pp.49-53.
- WW 1981.9 “Shanxi Changzhshi jianxuan zhengji de Shangdai qingtongqi” 山西長治市揀選徵集的商代青銅器, *Wenwu* 1982.9, pp.49-52.

- WW 1983.3 “Zhengzhou bei 27 lu xin faxian san zuo Shang mu” 鄭州北二七路新發現三座商墓。  
*Wenwu* 1983.3, pp. 60-77.
- WW 1985.3 “Shandong Shouguangxian xinfaxian yipi Qiguo qingtongqi” 山東壽光縣新發現一批  
紀國銅器 *Wenwu* 1985.3 pp.1-11.
- WW 1985.5 “Neimenggu xibu diqu yuanshi wenhua de biannian ji xiangguan wenti” 內蒙古西部地  
區原始文化的編年及相關問題。 *Wenwu* 1985.5, pp.77-78.
- WW 1985.10 “Anhui Yingshang Wanggang Zhaoqi faxian shangdai wenwu” 安徽穎上王崗趙集發  
現商代文物 *Wenwu*1985.10, pp.36-41.
- WW 1986.10 “Shanghai Qingpu Fuquanshan Liangzhu wenhua mudi” 上海青浦福泉山良渚文化墓  
地 *Wenwu*1986.10, pp.1-25.
- WW 1986.11 “Shanxi Lingshi Jingjiecun Shang mu” 山西靈石旌介村商墓。 *Wenwu* 1986.11, p.1-18.
- WW 1988.1 “Jiangsusheng Kunshanxian Shaoqingshan yizhi” 江蘇省崑山縣少卿山遺址 *Wenwu*  
1988.1, pp.52-57.
- WW 1988.6 “Xian Laoniupo Shangdai mudi de fajue” 西安老牛坡商代墓地的發掘, *Wenwu*  
1988.6, pp.1-22.
- WW 1989.3 “Henan Huaiyang xian chutu yi pi wan Shang *Wenwu*” 河南淮陽縣出土一批晚商文  
物。 *Wenwu* 1989.3, pp. 94-6.
- WW 1989.5 “Guanghan Sanxingdui yizhi er hao jisikeng fajue jianbao” 廣漢三星堆遺址二號祭祀  
坑發掘簡報。 *Wenwu* 1989.5, pp. 1-20.
- WW 1989.11 “Shandong Yishui faxian Shangdai tongqi” 山東沂水發現商代銅器 *Wenwu* 1989.11  
pp.95-96.
- WW 1989.12 “Shanxi Hongdongxian faxian Shangdai yiwu” 山西洪洞縣發現商代遺物, *Wenwu*  
1989.12, pp.90-91.

- WW 1991.10 “Jiangxi Xingan Dayangzhou Shangmu fajue jianbao” 江西新干大洋洲商墓發掘簡報  
*Wenwu* 1991.10, pp.1-26.
- WW1993.6 “Shandong Tengzhou faxian Shangdai qingtongqi” 山東滕州發現商代青銅器。  
*Wenwu* 1993.6, pp.95-6.
- WWZLCK *Wenwu ziliao congkan* 文物資料叢刊. Beijing: Wenwu Chubanshe, 1977-.
- WWZLCK 1978a “Beijingshi xinzhengji de Shang Zhou qingtongqi 北京市新徵集的商周青銅器”  
*Wenwu ziliao congkan* 2 ( 1978 ) pp.14-21.
- WWZLCK 1978b “Jiangxi Qingjiang Wuching Shangdai yizhi disici fajue de zhuyao shouhuo 江西清江吳城商代遺址第四次發掘的主要收穫。” *Wenwu ziliao congkan* 2 ( 1978 ) , pp.1-13.
- WWZLCK1980 “Shanxi Changzixian beijiao faxian Shangdai tongqi 山西長子縣北郊發現商代銅器”  
*Wenwu ziliao congkan* 3 ( 1980 ) pp.198-201
- Wu Dacheng Wu Dacheng 吳大澂. *Heng Xuan suojian suocang jijin lu* 恒軒所見所藏吉金錄. 1885. (Rong Geng & Zhang Weichi 1958, p. 142.)
- Wu En 1978 Wu En 烏恩. “Guanyu woguo beifang de qingtong duanjian” 關於我國北方的青銅短劍. *Kaogu* 1978.5, pp.324-31.
- Wu En 1984 Wu En 烏恩. “Lun woguo beifang gudai dongwu wenshi de yuanyuan” 論我國北方古代動物紋飾的淵源. *Kaogu yu Wenwu* 1984.4, pp.46-59.
- Wu Kaisheng Wu Kaisheng 吳闡生. *Jijin wen lu* 吉金文錄. Wushi ziji nangong Xingshicanben 吳氏自記南宮邢氏藏本, 1925.
- Wu Lan Wu Lan 吳蘭. “Shan-bei faxian Shang Zhou qingtongqi” 陝北發現商周青銅器.  
*Kaogu* 1988.10, p.955-7.
- Wu Rongguang Wu Rongguang 吳榮光. *Yun Qing Guan Jinwen* 筠清館金文. 1842, (Rong Geng & Zhang Weichi 1958, p. 148.)

- Wu Shifen n.d. Wu shifen 吳式芬. *Jun gu lu* 攔古錄. Guangxu reign period(1875-1908). Records the ownership of bronzes whose inscriptions are reproduced in Wu Shifen 1895.
- Wu Shifen 1895 Wu Shifen 吳式芬. *Jun gu lu jinwen* 攔古錄金文. 1895. (Rong Geng & Zhang Weichi 1958, p. 148.)
- Wu Yun Wu Yun 吳雲. *Liang Lei Xuan yiqi tushi* 兩壘軒彝器圖釋.1872. (Rong Geng & Zhang Weichi 1958, p. 142.)
- Wu Zhenlu Wu Zhenlu 吳振泉. “Baodexian xin faxian de Yindai qingtongqi” 保德縣新發現的殷代青銅器. *Wenwu* 1972.4, pp.62-6.
- Xi'an 1973 *Wenhua da geming qijian Shanxi chutu wenwu* 文化大革命期間陝西出土文物. Xi'an: Shanxi Renmin Chubanshe, 1973.
- Xi'an 1995 *Gaojiabao Geguo mudi*高家堡戈國墓地 Xian: Shanxi Renmin Chubanshe,1995.
- Xi Hong 1980 Xi Hong 希宏. “Yongfeng Yinjiaping yizhi” 永豐尹家坪遺址. *Jiangxi Lishi Wenwu* 1980.3.
- Xi Qing gu jian* Liang Shizheng 梁詩正 et al. *Xi Qing gu jian* 西清古鑑. 1755. Illustrated catalogue of bronzes in the Qing imperial collection. (Rong Geng & Zhang Weichi 1958, p. 141.)
- Xi Qing xu jian jia bian* Wang Jie 王杰 et al. *Xi Qing xu jian jia bian* 西清續鑑甲編. 1910. A supplement to *Xi Qing gu jian* compiled in 1781. (Rong Geng & Zhang Weichi 1958, p. 141.)
- Xi Qing xu jian yi bian* Wang Jie 王杰 et al. *Xi Qing xu jian yi bian* 西清續鑑乙編. Beijing: 1931. A supplement to *Xi Qing gu jian* compiled in 1781. (Rong Geng & Zhang Weichi 1958, p. 144.)
- Xiao Menglong Xiao Menglong 蕭夢龍. “Wuguo qingtong bingqi yanjiu” 吳國青銅兵器研究 *Kaogu xuebao*1991.2, pp.141-165.

- Xiao Nan1976 Xiao Nan肖楠. "Anyang Xiaotun nandi faxian de fuzu bujia—jianlun fuzu buci de shidai ji qi xiangguan wenti" 安陽小屯南地發現的阜組卜甲—兼論阜組卜辭的時代及其相關問題 *Kaogu* 1976.4, pp.234-241.
- Xiao Nan1980 "Lun Wuyi Wending Buci 論武乙文丁卜辭" *Guwenzi yanjiu* 古文字研究 3 (1980) pp.43-79.
- Xiao Nan1984 "Zailun Wuyi Wending buci" 再論武乙文丁卜辭 *Guwenzi yanjiu* 古文字研究 9 (1984) pp.155-188.
- Xie Xigong 1957 Xie Xigong 解希恭 "Sanxi Hongzhao Yuongningdongbao chutu de qingtongqi" 山西洪趙永寧堡出土的青銅器 *wenwu* 1957.8, pp.42-4.
- Xie Qingshan & Yangshaoshun 1960 Xie Qingshan 謝青山 and Yang shaoshun 楊紹舜. "Shanxi Luliangxian Shilouzhen you faxian tongqi" 山西呂梁縣石樓鎮又發現銅器. *Wenwu* 1960.7, pp.52-3.
- Xiong Bufa Xiong Bufa 熊卜發 "Hubei Xiaogan diqu Shang Zhou gu wenhua diaocha" 湖北孝感地區商周古文化調查 *Kaogu* 1988.4, pp.300-6.
- Xu Pengzhang Xu Pengzhang 徐鵬章. "Chengdu Sandongqiao Qingyang xiaoku Zhanguo mu" 成都三洞橋青羊小區戰國墓 *Wenwu* 1989.5, pp. 31-5.
- Xu Jinxiong Xu Jinxiong 許進雄. *Yin puci zhong wu zhong jisi de yanjiu* 殷卜辭中五種祭祀的研究 (A Study of the Five Rituals in the Oracle Bone Inscriptions of the Yin Dynasty). Taipei: Guoli Taiwan Daxue Wenxueyuan, 1968.
- Xu Kaogu tu* *Xu Kaogu tu* 續考古圖. Song period; after 1162. (Rong Geng & Zhang Weichi 1958, p. 141.)
- Xu Yi 1957 Xu Yi 許益, "Shanxi Huaxian Yidai Yizhi diaocha baogao" 陝西華縣殷代遺址調查報告, *Wenwu cankao zilao* 1957.3, p.64.
- Xue Shangong Xue Shangong 薛尙功. *Lidai zhong ding yiqi kuan shi fa tie* 歷代鐘鼎彝器款識法帖. 1144. (Rong Geng1941, vol. 1, p. 272; Rong Geng & Zhang Weichi 1958, p. 147.)

- Yan Wenming1984      Yan Wenming 嚴文明. "Lun Zhongguo de tongshi bingyuong shidai論中國的銅石并用時代" *Shiqian yanjiu*史前研究1984.1,pp.36-44.
- Yan Wenming1987      -----, "Zhonggou shiqian wenhua de tongxing yu duoyangxing中國史前文化的統一性與多樣性" *Wenwu*1987.3, pp.38-50.
- Yan Yiping            Yan Yiping 嚴一萍. "Fuhao liezhuan 婦好列傳." *Zhongguo Wenzì* 中國文字no. 3, pp.1-103.
- Yan Yiping1978      -----, *Jiagu xue*甲骨學.Taipei : Yiwen yinshuguan 1978.
- Yang Hong 1980      Yang Hong 楊泓. *Zhongguo bingqi luncong*中國兵器論叢.Beijing: Wenwu Chubanshe, 1980.
- Yang Shaoshun 1979    Yang Shaoshun 楊紹舜, "Shanxi Shilou Yidie you faxian Shangdai tongqi" 山西石樓義牒又發現商代銅器. *Wenwu ziliao congkan*, 1979.3, p.202.
- Yang Shaoshun 1981a    -----, "Shanxi Liulin Gaohong faxian Shangdai tongqi" 山西柳林高紅發現商代銅器. *Kaogu* 1981.3, pp.211-2.
- or KG1981.3
- Yang Shaoshun 1981b    -----, "Shanxi Shilou Chujiayu, Caojiayuan faxian Shangdai tongqi" 山西石樓褚家峪, 曹家垣發現商代銅器. *Wenwu* 1981.8, pp. 49-53.
- or WW1981.8
- Yang Shingnan        Yang Shengnan楊升南. "Luelun Shangdai de jundui略論商代的軍隊" 胡厚宣等, *Jiaguxue tanshi lu* 甲骨探史錄, Beijing: Sanlian shudian, 1982, pp.340-399.
- Yang Shengmin        Yang Shengmin 姚生民. "Shanxi Chunhuaxian chutu de Shang Zhou qingtongqi" 陝西淳化縣出土的商周青銅器. *Kaogu yu Wenwu* 1986.5, pp.12-22.
- Yang Ximei            Yang Ximei 楊希枚. "Henan Anyang Yinxu muzangzhong rentigu ge de zhengli han yan jiu" 河南安陽殷墟墓葬中人體骨骼的整理和研究. *Bulletin of the Institute of History and Philology*, 42, no.2 (1970) pp.231-266.
- Yang Xizhang 1977      Yang Xizhang 楊錫璋. et al. "Cong Shang dai jisikeng kan Shang dai nuli shehui de ren shen" 從商代祭祀坑看商代奴隸社會的人牲. *Kaogu* 1977.1, pp.13-19.

- Yang Xizhang & Yang Baocheng 1979 Yang Xizhang 楊錫璋 and Yang Baocheng 楊寶成 . "1969-1977 nian Yinxu xiqu muzang fajue baogao" 1969-1977年殷墟西區墓葬發掘報告. *Kaogu xuebao* 1979.1, pp.27-146.
- Yang Xizhang 1981 -----, "Anyang Yinxu Xibeigang damu de fenqi ji youguan wenti" 安陽殷墟西北崗大墓的分期及有關問題 *Zhongyan wenwu* 1981.3, pp.47-52.
- Yang Xizhang 1983a -----, "Anyang Yinxu Sanjiazhuang dong de fajue" 安陽殷墟三家莊東的發掘 *Kaogu* 1983.2, pp.126-32.
- Yang Xizhang 1983b -----, "Yinxu qingtong rongqi de fenqi" 殷墟青銅容器的分期 *Zhongyan wenwu* 1983.3, pp.48-55.
- Yang Xizhang 1983c -----, "Shang dai de mu di zhidu" 商代的墓地制度 *Kaogu* 1983.10, pp. 929-934.
- Yang Xizhang & Yang Baocheng 1985a -----, and Yang Baocheng 楊寶成 . "Yinxu qingtongqi liqi de fenqi yu zuhe" 殷墟青銅器禮器的分期與組合. Beijing: 1985, pp.79-102.
- Yang Xizhang & Chen Zhida 1985b -----, and Chen Zhida 陳志達. "Yinxu qingtongqi de fenqi yu niandai" 殷墟青銅器的分期與年代. Beijing: 1985, pp.27-75.
- Yang Xizhang 1986a -----, "Guanyu Shang dai qingtong ge mao de yi xie wenti" 關於商代青銅矛的一些問題. *Kaogu yu Wenwu* 1986.3, pp. 64-71.
- Yang Xizhang & Yang Baocheng 1986 b -----, and Yang Baocheng 楊寶成 . "Anyang Yinxu Xichu 1713 hao mu de fajue" 安陽殷墟西區一七一三號墓的發掘. *Kaogu* 1986.8, pp.703-712.
- Yang Xizhang 1986c -----, "Guanyu Shangdai qingtong ge mao de yixie wenti" 關於商代青銅戈、矛的一些問題 *Kaogu yu wenwu* 1986.3, pp.65-8.
- Yang Xizhang 1987 -----, "Shangdai de qingtong yue" 商代的青銅鉞 *Zhongguo Kaoguxue yanjiu lunji* — *jinian Xia Nai xiansheng kaogu wu shi zhounian*. 中國考古學研究論集—紀念夏鼐先生考古五十周年. 1987, pp.128-138.

- Yang Xizhang & Liu Yiman 1988 -----, and Liu Yiman 劉一曼. “Anyang Guojiazhuang xinan Yindai chema keng” 安陽郭家莊西南殷代車馬坑 *Kaogu* 1988.10, pp.882-3.
- Yang Xizhang 1991 -----, “Anyang Guojiazhuang 160 hao mu” 安陽郭家莊160號墓 *Kaogu* 1991.5, pp.390-391.
- Yao Xiaosui 1960 Yao Xiaosui 姚孝遂. “Renshen yu renxun” 人牲與人殉. *Shihuo yuekan* 食貨月刊 1960.9, pp. 31-35.
- Yao Xiaosui 1989 -----, *Yinxu jiagu keci leizhuan* 殷墟甲骨刻辭類纂. Beijing : Zhonghua shuju 1989.
- Ye Shi Ye Shi 葉史. “Gaocheng Shangdai tieren tongyue ji qi yiyi ” 藁城商代鐵刀銅鉞及其意義. *Wenwu* 1976.11, pp.56-59.
- Yibian 1959 Dong Zuobin 董作賓 *Yinxu wenci jibian* 殷墟文字乙編, Zhongyang Yanjiuyuan Li shi Ynyan Yanjiusuo, 1959.
- Yili *Yi li* 儀禮
- Yin Zhiyi Yin Zhiyi 殷之彝. “Shandong Yidu Sufutun mudi han 'Ya chou' tongqi” 山東益都蘇埠屯墓地和「亞醜」銅器 *Kaogu xuebao* 1977.2, pp. 23-34.
- Yue Jue Shu Chang Kang 長康, *Yu Jue Shu* 越絕書, Taipei Shangwu chubanshe, 1966.
- Yu Haiguang 1982 Yu Haiguang 于海廣. “Shandong Sishui Yinjiachen yizhi disanci fajue jianjie” 山東泗水尹家城遺址第三次發掘簡介. *Wenshizhe* 文史哲 1982.2, p.79.
- Yu Weichao 1978 Yu Weichao 俞偉超 and Gao Ming 高明. “Zhou dai yong ding zhidu yanjiu 周代用鼎制度研究.” *Beijing Daxue Xuebao (zhexue shehui kexue ban)* 北京大學學報(哲學社會科學) 1978.1, pp. 84-98(part1); 1978.2, pp. 84-97(part2); 1979.1, pp. 83-96. (part3).
- Yu Weichao 1980 -----, “Xian Chu yu Sanmiao wenhua de kaoguxue tuice” 先楚與三苗文化的考古學推測. *Wenwu* 1980.10, pp.1-12.

- Yu Xingwu 1934 Yu Xingwu 于省吾. *Shuang Jian Chi jijin tulu* 雙劍詒吉金圖錄. 1934. (Rong Geng & Zhang Weichi 1958, p. 144.)
- Yu Xingwu 1940 -----, *Shuang Jian Chi gu qiwu tulu* 雙劍詒古器物圖錄. Beijing: 1940. (Rong Geng & Zhang Weichi 1958, p. 146.)
- Yu Xingwu 1943 -----, *Yin qi pian zhi san bian* 殷契駢枝三編. Haicheng Yushi shiyinben 海城于氏石印本, 1943.
- Yu Xingwu 1957 -----, *Shang Zhou jinwen luyi* 商周金文錄遺. Beijing: Xinhua Shudian, 1957.
- Yu Xingwu 1960 -----, "Yao xiaosui 'Chugong ge' bianwei" 姚孝遂, 「楚公冢戈」辨偽. *Wenwu* 1960.3, p.85.
- Yu Xingwu 1964 -----, "Si Mu Wu ding de zhuzao han niandai wenti" 司母戊鼎的鑄造和年代問題. *Wenwu jinghua* 3, 1964, pp. 39-40.
- Zeng Fan Zeng Fan 曾凡 "Guanyu Fujian yu zhongyuan Shang Zhou wenhua guanxi wenti—cong chutu de shi ge tanqi 關於福建與中原商周文化關係問題—從出土的石戈談起" Beijing 1983b, pp. 146-151.
- Zeng Yigong Zeng Yigong 曾毅公. *Shandong jinwen jicun* 山東金文集存. Jilu Daxue Guoxue Yanjiusuo 齊魯大學國學研究所, 1940. (Taipei: Tailian Guofeng Chubanshe, 1980)
- Zhai Defang Zhai Defang 翟德芳. "Zhongguo beifang diqu qingtong duan jian fenqun yanjiu" 中國北方地區青銅短劍分群研究" *Kaogu Xuebao* 1988.3, pp.277-300.
- Zhang Changshou 1979a Zhang Changshou 張長壽, "Yinxu qingtong rongqi" 殷墟青銅容器 *Kaogu Xuebao* 1979.3, pp.20-9.
- Zhang Changshou 1979b -----, "Yin Shang shidai de qingtong rongqi" 殷商時代的青銅容器 *Kaogu Xuebao* 考古學報 1979.3, pp.271-300.
- Zhang Guangming Zhang Guangming 張光明. "Shandong Zibo Nanyangcun faxian yi zuo Zhou mu" 山東淄博南陽村發現一座周墓. *Kaogu* 1986.4, pp. 386-9.

- Zhang Guangyuan      Zhang Guangyuan 張光遠. “Sanqian nian qian rongshi zhi zun 三千年前融氏之尊”  
*Gugong Wenwu yuekan* 1992.10.9, p. 66-75.
- Zhang Minghua      Zhang Minghua 張明華, “Liangzhu yuqi yanjiu” 良渚玉戚研究, *KG* 1989.7, pp.624-635.
- Zhang Yachu      Zhang Yachu 張亞初. “Yinxu ducheng yu Shanxi fangguo kaolue 殷墟都城與山西方國考略.” *Guwenzi yanjiu* 10 (1983) pp.388-405.
- Zhang Yongshan & Luo Kun      Zhang Yongshan 張永山、Luo Kun 羅琨. “Lun lizi bucide niandai” 論歷組卜辭的年代  
Guwenzi yanjiu 3 (1980) pp.80-103.
- Zhang Zongpei      Zhang Zongpei 張忠培. “Zhongguo zaoqi tongqi de faxian yu yanjiu” 中國早期銅器的發現與研究. *Zhongguo Beifang Kaogu Wenji* 中國北方考古文集 (1990) pp. 231-9.
- Zhao Zhiquan 1986      Zhao Zhiquan 趙芝荃. “Shilun Erlitou wenhua de yuanliu” 試論二里頭文化的源流.  
*Kaogu xuebao* 1986.1, pp. 1-18.
- Zhao Zongxiu      Zhao Zongxiu 趙宗秀. “Shandong Sishui faxian Shangdai qingtongqi” 山東泗水發現商代青銅器 *Kaogu* 1988.3, p.284.
- Zheng Boqing      Zheng Boqing 鄭伯清. “Sichuan Xinfan Guanyin yizhi shijue jianbao” 四川新繁觀音遺址試掘簡報. *Kaogu* 1959.8, pp.404-410.
- Zheng Shaozong 1962      Zheng Shaozong 鄭紹宗. “Hebei Qinglong Chaodaogou faxian yi pi qingtongqi” 河北青龍縣抄道溝發現一批青銅器. *Kaogu* 1962.12, pp.644-5.
- Zheng Shaozong 1984      -----, “Zhongguo Beifang qingtong duanjian de fenqi ji xingzhi yanjiu” 中國北方青銅短劍的分期及形制研究. *Wenwu* 1984.2, pp.37-49.
- Zheng Yan et al.      Zheng Yan, 鄭岩. “Shandong Anjiu Laotongwu yizhi zai diaocha” 山東安丘老峒峪遺址再調查. *Kaogu* 1992.9, pp. 778-790.
- Zheng Zhenxiang & Chen Zhida 1977      Zheng Zhenxiang 鄭振香 and Chen Zhida 陳志達. “Anyang Yinxu wu hao mu de fajue 安陽殷墟五號墓的發掘.” *Kaogu xuebao* 1977.2, pp. 57-98.

- Zhong Shaoyi                      Zhong Shaoyi 鍾少異. "Shilun ji de jige wenti" 試論戟的幾個問題 *Wenwu* 1995.11, pp.54-60.
- Zhongguo Wenwu bao*              *Zhongguo Wenwu bao* 中國文物報
- Zhongguo Wenwu bao*              *Zhongguo Wenwu bao* 中國文物報. "Chenjiadun yizhi kaogu qyude xin shouhuo" 陳家墩遺址考古取得新收穫. *Zhongguo Wenwu bao* 1995.4.22.
- Zhongguo Wenwu bao*              *Zhongguo Wenwu bao* 中國文物報. "Chenjiadun yizhi kaogu qyude xin shouhuo" 陳家墩遺址考古取得新收穫. *Zhongguo Wenwu bao* 1995.4.22.
- Zhongguo Kaoguxue yanjiu lunji—jinian Xia Nai xiansheng kaogu wu shi zhounian* 中國考古學研究論文集 — 紀念夏鼐先生考古五十周年, Xian: Sanqin Chubanshe, 1987.
- Xia Nai xiansheng kaogu wu shi zhounian*
- Zhongguo Kaoguxuebao*              *Zhongguo Kaogu xuebao* 中國考古學報.
- Zhou Dao & Liu Yadong              Zhou Dao 周到 and Liu Yadong 劉亞東. "1957 Qiu Anyang Gaolouzhuang Yindai yizhi fajue 1957" 秋安陽高樓庄殷代遺址發掘. *Kaogu* 1963.4, pp.213-216.
- 1963
- Zhou Fagao 1974                      Zhou Fagao 周法高, Zhang Risheng 張日昇, Xu Zhiyi 徐芷儀, and Lin Jieming 林潔明. *Jinwen gu lin* 金文詁林. 16 vols. Hong Kong: 1974-75. Entries with numbers above 2000 appear in the supplement volume published in 1977: Zhou Fagao, Li Xiaoding 李孝定, and Zhang Risheng, *Jinwen gu lin fulu* 金文詁林附錄 (Hong Kong: The Chinese University of Hong Kong, 1977)
- Zhou Fagao 1977                      -----, Zhang Risheng, and Huang Qiuyue 黃秋月. *Sandai jijin wen cun zhulu biao* 三代吉金文存著錄表. Taipei: Xuesheng Shuju, 1977.
- Zhou Fagao 1980                      Zhou Fagao 周法高. *Sandai jijin wen cun bu* 三代吉金文存補 Taipei: Tailian Guofeng Chubanshe, 1980.
- Zhou Wei                              Zhou Wei 周緯. *Zhongguo bingqi shi gao* 中國兵器史稿. Beijing: Sanliang Shudain, 1957.
- Zhu Sihanqi 1908                      Zhu Shanqi 朱善旂. *Jing Wu Xin Shi yiqi kuan shi* 敬吾心室彝器款識. 1908. (Rong Geng 1941, vol.1, p. 275.)

- Zeng Yigong                      Zeng Yigong 曾毅公. *Shandong jinwen jicun · xian qin ban xia* 山東金文集存·先秦編下. Jilu Daxue Guoxue Yanjiusuo, 1940.
- Zou An 1916                      Zou An 鄒安. *Zhou jinwen cun* 周金文存. 1916. (Rong Geng & Zhang Weichi 1958, p. 149.)
- Zou Heng 1964                      Zou Heng 鄒衡. "Shi lun Yinxu wenhua fenqi" 試論殷墟文化分期. *Beijing Daxue xuebao (renwen kexue ban)* 北京大學學報(人文科學版) 1964.4, pp.37-58; 1964.5, pp. 63-90. Deissued separately by the History Department of Beijing University. A revised edition appears as chapter 2 in Zou Heng 1980.
- Zou Heng 1980                      -----, *Xia Shang Zhou Kaoguxue lunwen ji* 夏商周考古學論文集. Beijing: Wenwu Chubanshe, 1980.
- Zou Heng 1990                      -----, "You guan Xingan chutu qingtongqi de ji ge wenti" 有關新淦出土青銅器幾個問題 *Zhongguo Wenwu bao* 1990.12.6.
- ZYWW                              *Zhongyuan Wenwu* 中原文物. Zhengzhou.
- ZYWW1981.6                      *Zhongyuan Wenwu* 中原文物. "Jianlun Shangdai qingtongdao" 簡論商代青銅刀 *Zhongyuan Wenwu* 1981.6, p.556.

#### AIDDENDA TO BIBLIOGRAPHY

*Lao Tzu*. Text, notes and comments by Chen Ku-ying. Translated and adapted by Rhett, Y., W. Young and Roger T. Ames. Taipei: Chinese Materials Center, 1981.

Gao Xisheng, "Lun Zhouyuan diqu chutu de jizhong yixing qingtong bingqi: jianlun Xin'gan damu de niandai," *Wenbo* (1994) no.1, pp.28-37.

