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Siba: Bronze Age Culture of the Gansu Corridor

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Siba: Bronze Age Culture of the Gansu Corridor

Jidong Yang

The significance of the Gansu Corridor to China's foreign relation after the second century BCE has long been well-known to scholars all over the world. By contrast, due to the scarcity of relevant historical sources, we still possess very limited information about this area before it became a part of the Han Dynasty and then an important section of the Silk Road. Such a gap in our knowledge has to be filled by archaeological excavations.

Since the late 1940s, a number of archaeological sites bearing similar characteristics and dated to the first half of the second millennium BCE has been discovered and excavated along the Gansu Corridor. Cultural relics from these sites, which belong to what is now called Siba 四壩 Culture by Chinese scholars, have shown many interesting features. Probably due to financial difficulties, however, none of the excavations, except for a relatively minor one (Gansusheng and Jilin 1998), has been reported in detail up to now, though they were carried out more than ten years ago. During the past decade, a few western scholars, including Noel Barnard, Emma C. Bunker and Katheryn M. Linduff, were allowed to examine some Siba artifacts personally in China, but they have not published any photos or detailed reports of what they saw, either.

The lack of detailed reports of excavations, however, does not mean that this culture is less important. As seen from its high frequency of appearance in Chinese archaeological journals and books, Siba culture is apparently considered to be a very important one by Chinese scholars themselves. What I would like to do in this paper, therefore, is to glean as much information as possible which is widely scattered in various sources in order to give a more comprehensive picture of Siba culture and to attract the attention of scholars to it.

1) History of excavations

In 1948, students of a local school at Siba in the eastern Gansu Corridor found a large amount of ancient pottery and a few pieces of gold circles and bronze knives in a construction area. These finds, most of which were fragmentary and gathered from the surface, were reported to the Bureau of Cultural Relics in Beijing in the early 1950s. In 1956, some archaeologists including An Zhimin were sent to Siba and gathered more pottery from the ground (An 1959: 7).

Siba was not the first prehistoric site found in northwest China. As early as the 1920s, J. G. Andersson, a Swedish geographer and the pioneer of modern Chinese archaeology, made a series of field surveys in eastern Gansu and found a number of Neolithic villages and numerous painted ceramics which he distinguished into several prehistoric cultures (Andersson 1925). The pottery discovered at Siba in the 1950s, however, showed some features that could not be connected with any ancient culture found by Andersson and therefore immediately attracted special attention. Based on his observation of the pottery collected in 1956, An Zhimin suggested that it should be seen as belonging to a new archaeological culture which he named Siba culture (An 1956: 17).

However, it was not until 1976 that Huoshaogou 火燒溝, the most important and representative site of Siba culture located in suburban Yumen 玉門 City in the middle Gansu Corridor, was discovered and excavated (Gansusheng 1979: 142). This site has

also become known to Western scholars during recent years through the works of Noel Barnard (1993: 11-13), Emma C. Bunker (1993: 30-31; 1994: 33; 1998: 607-610), and Katheryn M. Linduff (1997: 20; 1998: 626-627). A total of 312 tombs dating from 2000-1800 BCE were excavated at Huoshaogou. In 1986, another important cemetery dating from 1850-1600 BCE was found and excavated at Ganguya 乾骨崖 (Dry Bone Cliffs), about 100 kilometers east of Huoshaogou, where 105 Bronze Age tombs were discovered (Li 1993: 81). Unfortunately, excavations at both of the most important sites of Siba culture have not been fully reported yet.

In addition to these major sites, quite a few Siba communities and cemeteries including some large ones such as Donghuishan 東灰山, Xihuishan 西灰山, Shaguoliang 沙鍋梁 and Yingwoshu 鷹窩樹 were discovered all along the Gansu Corridor during a large-scale archaeological survey in 1986. Most of them yielded the same type of pottery and bronze wares and fell into the period from 2000-1600 BCE (Li 1993: 95-102). It has also been mentioned (Shui 1993: 466; Mei and Shell 1998) that Siba-type objects have recently been found at Hami in eastern Xinjiang, which is the westernmost border of Siba culture known so far.

2) Siba pottery

Siba pottery is first of all characterized by its strikingly poorer quality in comparison with that of preceding and contemporary prehistoric cultures in both Gansu and the Central Plain. Most ceramics unearthed at Huoshaogou, Ganguya and other Siba sites are very coarse, made of clay mixed with sand and gravel. Only a small portion of Siba pottery is painted and these are quite different from their counterparts uncovered throughout northwest and central China, because the pigments on Siba painted pottery, which are usually red or black, are so thick that they appear in strong relief. Moreover, the patterns of Siba painted pottery are much simpler and lack variation. On the unpainted ceramics, which account for the largest proportion of the whole collection, impressed

decorations in N and Z patterns and wedge (cuneiform) shapes are most popular. It is also reported that there are significant differences in size and quality between the pottery used in daily life and that buried with the dead. During the late period of Siba culture, the pottery industry seems to have declined because its typological diversity is noticeably reduced (An 1959: 8-16; Li 1993: 81-105).

Based on the typological and stylistic analyses of painted pottery, Chinese archaeologists have long discussed the origins and successors of Siba culture. A representative opinion is that presented by Yan Wenming (1978: 71-74) who argues that the painted pottery of the Central Plain spread westward to eastern Gansu around 5000 BCE, to central Gansu in about 4000 BCE and finally to the oases along the Gansu Corridor during the 3rd and 2nd millennium BCE, with Siba as the last step in such a long historical and cultural course. Yan has studied a special design on Siba painted pottery which he called the "frog pattern" (*wawen* 蛙紋) and traced it all the way back to the Yangshao 仰韶 culture at Banpo 半坡. This leads him to the conclusion that the Siba people may have shared ethnic affiliation with the prehistoric residents in the Yellow River Valley because, as he understands, the frog was always connected with the moon in archaic Chinese mythology and thus can be seen as the symbol of lunar worship that is a distinctive feature of ancient Chinese culture. Interestingly, Li Shuicheng, a graduate student of Yan Wenming, takes a much more cautious attitude toward the origin of the Siba culture (Li 1993: 106-115) because he finds it difficult to establish direct links of Siba painted pottery even with its neighboring cultures. Although he seems not at odds with his advisor on the eastern origin of Siba culture, Li suggests that an "intermediate type" might have existed between Siba and the preceding painted pottery cultures in Gansu. This hypothesis, however, requires additional evidence from underground for corroboration.

My feeling is that researchers seem to have rushed into conclusions about the origin of Siba culture without having overcome at least two major obstacles which must be taken seriously. First, it has long been a practice for Chinese archaeologists to pay

attention almost exclusively to painted pottery which they consider to be the most important and sometimes the sole means of tracing relationships among prehistoric cultures. Although such an approach seems to work quite well in studying the Neolithic cultures in the Yellow River Valley, for they are impressively characterized by a huge amount of painted pottery full of typological and stylistic variety which makes comparative research possible and fruitful, its applicability in tracing the origin of Siba culture is indeed doubtful because here painted pottery, as mentioned above, is not a predominant feature at all. In fact, the percentage of painted pottery in the entire ceramic collections of prehistoric Gansu cultures kept declining from the 5th to 2nd millennia BCE. Apparently, in order to find the real source of Siba culture, all kinds of excavated objects such as metal artifacts and plain ceramics as well as their relationships with all surrounding cultures — not only those to the east — have to be comprehensively examined, because influence from many other directions is just too obvious to ignore. Actually some researchers have already begun to talk about influence from the "northern zone" (north of the Great Wall) on Siba plain ceramics such as the trellis pattern (Li 1993: 109), but most of them seem still in urgent need of mind-opening. Second, even in the realm of painted pottery, there are big differences between Siba and other known cultures in ancient Gansu and the Yellow River Valley that prevent us from making easy connections among them. For example, geometric patterns, instead of animal and human designs, are the most characteristic decoration on Siba painted pottery (Li 1993: 90). Tripod ceramics (*li* 鬲) which are so popular in the Yellow River Valley can not be found in Siba at all (An 1956: 17), whose representative type of pottery is a flat-bottomed jar with one or two vertical loop handles on the shoulder or belly. Some Siba ceramics such as a "wine-cup" in the shape of human feet is very strange to any other preceding or contemporary culture discovered in China. As for the so-called "frog pattern", which is extremely rarely seen on Siba pottery, I myself doubt Yan Wenming's interpretation very much because it looks quite different from the analogous pattern on Yangshao pottery

wares. And more essential is that the Siba people's method and technique of painting on ceramics are so unique that their equivalent cannot be found anywhere else. In short, the origin of Siba culture is far more obscure than many researchers imagine it to be and thus requires further careful studies.

3) Siba metal artifacts

The most noticeable feature of Siba culture is without doubt its metal artifacts. At Huoshaogou site alone, 106 tombs have yielded more than 200 metal objects including daggers, arrowheads, axes, spoons, rings, ornaments, and ritual implements, which constitute the largest metal collection dating to the pre-Shang period ever found by Chinese archaeologists (Beijing 1981: 289). Among the 45 metal objects from Huoshaogou that have been carefully examined, there are 32 made of various bronze alloys, and the rest are made of almost pure copper (Li 1993: 117). The discovery of stone moulds for arrowhead casting (Beijing 1981: 289) indicates that there might have been a large consumption of metal weapons at the time of the Siba people. As seen from certain complicated ritual implements such as a mace head, the early Huoshaogou inhabitants had already mastered some quite advanced bronze producing techniques like multi-piece casting (Barnard 1993: 12). In addition to copper and bronze, the Siba people were also among the first ancient residents within modern China's borders who used silver and gold to make ornaments such as earrings and nose rings.

The relationships between Siba bronze culture and neighboring areas and its significance to prehistoric cultural exchange are of great interest for scholars. Siba not only precedes level 3 and 4 of Erlitou 二里頭 (1900-1500 BCE), the earliest bronze culture in the Central Plain and so far the only alleged representative of the legendary Xia Dynasty in traditional Chinese historiography, but also shows much more advanced features than the latter in terms of the size and technological level of metal industry. For decades scholars all over the world have discussed the origin of the highly advanced

bronze culture of Shang China which seems to have emerged all of a sudden. As the study on Siba and other bronze cultures in Gansu and Xinjiang goes on, quite a few scholars have now begun to consider cultural influence from the northwest to be one of the major contributors to early Chinese civilization. Based on his analysis of pre-Shang bronze objects, An Zhimin, who used to be a leading opponent of the theory of the western origin of Chinese civilization, has now proposed that the sudden appearance of early bronze culture in the Central Plain was a result of influence from northwest China, and further from Central and West Asia along the prehistoric Silk Road (An 1993: 1117; 1998: 59-60). In his view the bronze cultures in Xinjiang and Gansu were two major steps in the eastward spread of metallurgy.

An Zhimin's hypothesis, however, is still far beyond being widely accepted because what he has outlined so far seems just a rough picture which has many blank sections to be filled in. Instead of making direct connections between the metal cultures in east and west Asia, most researchers are now paying close attention to the Eurasian steppes from the late third to late second millennium BCE and trying to reconstruct the network of prehistoric cultural links in this vast area. Although lots of work still needs to be done, it is more and more clear that Siba was at a pivotal location in that network.

A highly noteworthy phenomenon is that during the first half of the second millennium BCE a number of metal cultures almost simultaneously flourished in the oases, valleys and basins around the Mongolian Steppe, including southern Siberia, Altai, northwestern and eastern Xinjiang, Gansu, Ordos and southwestern Manchuria. Metal weapons, tools and ornaments from these cultures bear striking similarities. In the case of Huoshaogou, its bronze artifacts have reportedly shown a "clear northern steppe style," with its bone-handled bronze awls very similar to their counterparts found in the Okunev culture of the Minusinsk Basin, and its socketed axes also discovered in Ordos and southern Siberia (Li 1993: 105). The bronze and gold earrings from Huoshaogou, as well as the same type of objects found along the Great Wall in north China, can be clearly

associated with Andronovo culture in Siberia (Bunker 1998: 607-611). It is also in this context that Mei Jianjun and Colin Shell, in their recent study (1998), have suggested a quite detailed route of the eastward spread of Andronovo metallurgy through Xinjiang and Gansu.

Moreover, influence from farther west on Siba culture may draw special attention in the future. Emma C. Bunker (1998: 609-610) has related the Huoshaogou macehead decorated with four projecting goat heads with some artifacts in Bactria and the Middle East dating to earlier periods. More interesting finds are from the Donghuishan site where excavation was carried out in 1987 and has been reported (Gansusheng and Jilin 1998: 191-195) very recently. A total of 15 metal objects from the site have been analyzed by Chinese metallurgical historians who concluded that all of the samples are composed of copper containing 2-6% arsenic. According to the report, this kind of alloy is extremely rarely seen in China and is found in large amounts only at Donghuishan and another major Siba site, Ganguya, from where 16 out of a total of 46 analyzed metal objects contain arsenic. Adding arsenic to copper, according to R. F. Tylecote (1992: 7-15 and 18-19), can considerably enhance the hardness of the metal and was an important metallurgical practice before the Bronze Age that spread from Mesopotamia to many parts of the African and Eurasian continents including Tepe Yahya (3800-3500 BCE) in Iran and Harappa (2500-2000 BCE) in the Indus Valley. The Chinese archaeologists who excavated the Donghuishan cemetery, therefore, imply that Siba culture probably developed under influence from the Middle East (Gansusheng and Jilin 1998: 140).

Contacts with the Eurasian Steppes and West Asia, however, do not necessarily mean that the metal culture of Siba was a totally imported one. The direct precursor of Siba bronze culture can most likely be found nowhere else but in Gansu itself where the richest nonferrous metal ore in the territory of modern China is located. Just as with pottery, there was a preexistent local bronze tradition in Gansu. The first bronze culture in this area, namely Qijia 齊家 culture, emerged around 2300 BCE, much earlier than its

counterparts in both Xinjiang and the Central Plain. After Qijia a number of bronze cultures including Xindian 辛店, Machang 馬廠, Siwa 寺窪 and Kayue 卡約 had spread all over eastern Gansu and northeastern Qinghai. Most of them existed simultaneously with Siba. Their relationships have not been well explained yet.

3) Ethnic features

The ethnic affiliation of prehistoric Gansu inhabitants was quite monochromic and underwent little change throughout the long-term history. As early as the 1920s, after having examined the human bones brought from Gansu to Beijing by J. G. Andersson, Davidson Black (1925) had concluded that the early Gansu residents shared many physical features with modern people in north China and thus could be called "proto-Chinese". Down to the 1980s, human bones from Huoshaogou site have been systematically measured and reported to be very close to the Mongoloids of East Asian type (Han and Pan 1984: 255), but detailed data have not been published so far. It has also been reported that tomb occupants of the Ganguya cemetery display physical features of western races (Zheng 1995: 89).

However, there does seem to be a distinction between native Gansu people and the residents of the middle and lower reaches of the Yellow River. Pan Qifeng (1989: 296-297) has compared the human bones from different prehistoric sites in north China and found that the early inhabitants of the Yellow River Valley might be geographically divided into three groups: 1) the people living in the upper Yellow River Valley including Gansu, Qinghai and Ningxia, represented by the human remains from Majiayao 馬家窯, Qijia and Huoshaogou sites; 2) residents in the middle Yellow River Valley, represented by the human bones from Miaodigou 廟底溝 culture in Henan and Shanxi; and 3) the inhabitants of Longshan 龍山 culture in the lower Yellow River Valley, namely Shandong. Measurements of the human bones excavated at Donghuishan site have just become available (Gansusheng and Jilin 1998: 172-183). The researchers have concluded that

most of the physical features of Donghuishan residents match the Mongoloids of East Asian type, though some characteristics such as more tilted forehead, flattened upper face and lower nose show strong influence from Northern Asian Mongoloids. This conclusion once again reminds us of the close relationship between the Siba people and their neighbors to the north.

Most Chinese scholars now hold that the Siba people were related to the Qiang people reported in early Chinese historical writings from the Shang to the Han dynasties. Some of the customs and practices described by early Chinese writers can be verified by archaeological findings at Siba sites. For example, the dominance of sheep herding in Siba economy, as seem from the prevalence of sheep images and motifs in Siba art and the large number of sheep bones in Siba tombs, seems to be in agreement with early Chinese references to the Qiang people as the "shepherds in the West." Actually the Chinese character 羌 (Qiang), as explained in the second-century Chinese lexicon *Shuowen jiezi* (Xu 1963: 78b), is a combination of two characters, 羊 (sheep) and 人 (person, people). In addition, the metal nose-rings unearthed at Huoshaogou and other Siba sites also remind us of the same customs of the Qiang people reported in the Han Dynasty literature (Li 1993: 119).

The Qiang had a long-term relationship with Chinese dynasties in the Central Plain. The oracle bone texts excavated at Anyang 安陽 (Yinxu 殷墟), the capital of the Shang Dynasty, mention the Qiang among a number of neighboring and contributory *fang* 方 (states) in the west, which was often engaged in war with the Shang, and whose people were executed by Shang rulers as sacrifices to the gods. The Zhou Dynasty, which originated in the Wei 渭 valley just next to the territory of the Qiang, had an even closer relationship with the northwestern people as they intermarried with the Qiang people and some of the latter, under the Chinese surname Jiang 姜, became high-ranking nobles in the Zhou court (Gu 1980: 118-123). It is also widely accepted that the Qiang were the ancestors of the Tibetans.

Early Chinese sources, however, do not give a clear geographical definition of where the Qiang were located though we know for sure that eastern Gansu had remained as the traditional territory of the people until the second and third centuries CE. The land of the Siba people, namely the Gansu Corridor, was first known to the Chinese in the late second century BCE and was reportedly occupied by the Xiongnu at that time who had just expelled some Caucasoid peoples such as the Yuezhi-Tocharians and Wusun 烏孫 from that area. What happened to the Siba people who, along with their culture, suddenly disappeared in the middle of the second millennium BCE? What was the history of the Gansu Corridor like during more than a millennium between the fall of Siba culture and its incorporation into the Han empire? When and from where did the Caucasoids come? All of these unsolved mysterious questions will certainly stimulate further archaeological, historical and linguistic studies in the future.

4) Economy and society

Generally speaking, the natural environment of the Gansu Corridor, whose lands are mostly covered by Gobi and deserts, is very harsh for human living. However, the huge glaciers on the Qilian Mountains to the south of the corridor supply the region with a considerable amount of water that forms a number of oases of different sizes and makes agricultural production possible.

When the Gansu Corridor became known to the Chinese during the second century BCE, it was described by the famous explorer Zhang Qian as a fertile grassland of the Xiongnu. According to Chinese sources, agriculture existed in the Gansu Corridor only after it was annexed to the Han Empire and some Chinese colonies were set up in the oases along the corridor. Archaeological excavations at the Siba sites, however, have revealed an agricultural culture more than 3,500 years old. Although detailed information about their settlement patterns is not available yet, apparently the Siba people lived in settled villages where the residences and cemeteries were clearly separated and laid out

according to a certain rule (Li 1993: 118). Their production implements included axes, knives, shovels, millstones, and mortars which were mostly made of stone and a few of bronze (Ibld., 116). Remains of millet contained in pottery jars were unearthed at Huoshaogou (Ibid., 117). The most interesting find is from the Donghuishan site where carbonized wheat, the earliest sample of this kind of grain ever found in China, was uncovered (Gansusheng and Jilin 1998: 187-189). Given the fact that the staple food of northern Chinese people had been limited exclusively to millets for millennia since the Neolithic period, the researchers have immediately linked the wheat-producing agriculture of Donghuishan with West Asia, where wheat was grown as early as 8000-6000 BCE (Ibid., 140-141).

The two biggest settlements of Siba culture, namely Huoshaogou and Ganguya, exhibit significant differences in terms of their economical life (Li 1993: 117). Huoshaogou is located at the northwest corner of the Gansu Corridor where water supply is relatively deficient and the land is more arid. Therefore animal husbandry seems to have been very important for the local people. Animal sacrifices are very popular in Huoshaogou graves. Among buried animals, sheep account for the biggest proportion, but remains of oxen, horses, dogs and pigs have also been discovered. Moreover, many microlithic tools were unearthed at Huoshaogou. They once again remind us of influences from the Mongolian Steppe. Nevertheless, as seen from the considerable depth of its cultural accumulation and a large number of tools that can be used only in agricultural production, Huoshaogou was basically a rural society with a mixed economy of agriculture and animal husbandry. It is also reported that some ceramics from Huoshaogou look like wine cups. That means the ancient people of Huoshaogou might have had some surplus grain to make alcoholic beverages.

At the Ganguya site, by contrast, archaeologists found fewer remains of both livestock and microlithics, which probably tells us that peasants and their families constituted the largest proportion of prehistoric Ganguya population. This is clearly due to

its geographic location at the foot of the Qilian Mountains where the water supply is rather sufficient and stable. Even today the area around Ganguya is one of the most densely populated and important agricultural zones in Gansu.

Highly developed social division and stratification are clearly reflected in Siba burials. At Huoshaogou cemetery, some people were buried with many ceramics, bronze, jade, silver, and gold objects as well as livestock, while others had only one or two ceramics. More striking are the sacrificed human beings who were found in more than twenty Huoshaogou tombs (Gansusheng 1979: 143). They are probably the earliest examples of this kind of burial system which became very popular in the Shang and Western Zhou periods.

5) Other interesting findings

There are many other exciting finds from Siba sites than those we have reviewed above. For instance, more than twenty fish-shaped and triple-holed wind instruments (called *xun* 塤 in Chinese) made of pottery were excavated at Huoshaogou (Lü 1978: 57-60; DeWoskin 1988: 254-257). Musical historians say that these wind instruments can distinguish all seven notes of the scale and modern Chinese folk songs can be played on them. Considering the fact that the Huoshaogou *xun* account for more than two thirds of this type of musical instrument ever found at pre-Shang sites in China, we can conclude that the Huoshaogou people must have played a very important role in the musical history of East and Inner Asia.[1]

Shells are another noteworthy finding from many Siba sites. The excavators of the Donghuishan site report (Gansusheng and Jilin 1998: 186) that they have found both shells of clams that can be found in many parts of China from Canton in the south to Liaoning in the north, and of shellfishes that may have originated from the South China sea. Based on the fact that they are usually put in the mouths of tomb occupants or pottery jars, shells

[1] My gratitude to Bo Lawergren for his correction of my early discussion on this issue.

had most likely functioned as currency during the Siba period. Taking the same kind of burial objects found in Xinjiang and many other places into account, we may have to entertain seriously the possibility of long-distance trade in prehistoric Asia.

Art historians will certainly be interested in the sculptures of sheep-heads and dogs and colored paintings of dogs and horses which are mentioned among the burial objects from Huoshaogou. These art works are described by reporters as "really true to life" (Gansusheng 1979: 143). Unfortunately, neither photos nor drawings are available so far.

6) Conclusion

The thorough study of Siba culture, of course, is dependent upon the publication of full excavation reports and photos. After looking at the overall picture of Siba culture, what we can say here is extremely general. First, from now on, we should avoid seeing the prehistoric Gansu Corridor as merely a grassland of the Xiongnu, a lasting impression made by the official Chinese histories since the Han Dynasty. As early as the first half of the second millennium BCE, the Siba people had already developed a culture which was quite advanced in comparison with its neighboring areas including the Central Plain. Second, the Gansu Corridor became a crossroads of cultural exchange long before the silk trade took place. It was not only a bridge between the east and west, but also an interlink that connected the north and south.

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