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A Discussion of Sino-Western Cultural Contacts
and Exchange in the Second Millennium B.C.
Based on Recent Archaeological Discoveries

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A Discussion of Sino-Western Cultural Contact and Exchange in the Second Millennium BC Based on Recent Archeological Discoveries

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ABSTRACT

The late nineteenth century to the early twentieth century was a period when a number of foreign scholars and explorers came to Western China for investigation and exploration. During this period, there were some important archeological discoveries, and the study of Western-Chinese cultural contact and exchange soon became the focus of archeology, history, anthropology and Sinology. For a long time, because of limited data, discussions on the exchange between the East and the West focused on the period after Zhang Qian's first visit to the Western Regions in the latter part of the second century BC. Therefore, it remained an open question whether there had been contact between the East and the West in the pre-Qin period and the even earlier prehistoric Bronze Age. If there had been, where did these encounters take place? And by what means did exchange occur? There has been little discussion on these matters. In this paper, I would like to discuss the above questions on the basis of new archeological discoveries in recent decades.

In 1921, modern archeology was introduced to China by the Swede, Dr. J. G. Andersson with the excavation at Yangshao Village, and the debate about cultural exchange between the East and the West became more intense. Some Western scholars, among whom Andersson was representative, hypothesized that Chinese painted pottery cultures in the Yellow River Valley during the prehistoric period originated from the region of Central Asia and spread into China through the Central Asian grasslands. Some foreign scholars even conjectured that the shape and pattern of painted pottery in Henan had the same origin as that dating to the Chalcolithic Age in the Near East.

From the beginning, Chinese archeologists objected to the theory that painted pottery in Yangshao came from the West. More and more archeological materials have been discovered in recent decades, and we are now clearer about the cultural system of western China from the prehistoric period to the Bronze Age. New discoveries not only deny the theory that Chinese culture came from the West, but also prove with plentiful evidence that the prehistoric cultures in western China advanced westward and spread gradually. The achievements of physical anthropology confirm this trend of westward advance evidenced by the archeological

discoveries. In Gansu and Qinghai, the local inhabitants' physical characteristics in the prehistoric Bronze Age had not changed markedly through time. Indeed, they played an important role in the process of forming the physical characteristics of the modern inhabitants of North China.

The overall terrain of China is high in the northwest and low in the southeast. It forms three big terraces from west to east. The first terrace is in the west, with an average altitude of 3,000-4,000 meters; the second terrace is in the middle, with an average altitude of around 1,000 meters; the third terrace is in the southeast, with an average altitude below 200 meters. This geographical structure causes China to be relatively open facing the ocean, but relatively closed away from it. Furthermore, this structure has had a great influence on the formation and development of Chinese ancient culture. Three points can be confirmed: 1. the geographical location and structure caused ancient Chinese culture to have strong native characteristics; 2. primitive Chinese culture in the west advanced westward and spread continuously from the early to the late periods; 3. the primitive inhabitants' physical characteristics in Gansu, Qinghai, and elsewhere in the western part of China belonged to the Eastern Asiatic type of Mongoloid race.

From the point of view of Western-Chinese cultural exchange, China's northwest was situated at the crossroads of Central Asian culture and regional cultures of the Yellow River Valley, which was a sensitive and key area of cultural contact. Xinjiang was particularly important, both for its special location and vast area. It can be thought of as a frontier zone of cultural contact between the East and the West. Many cultural relics, including microliths, have been discovered there. Although there are materials that certify human activity in the eastern part of Xinjiang dating back to about 10,000 BP, we do not know much about the prehistoric cultures and racial types in this region.

In 1979, some tombs were excavated beside the Kōnchi River (Kongquehe), near Lopnur in eastern Xinjiang, that dated to about 3800 BP. The human bones excavated from the site were concluded to be of the Caucasoid race. According to presently available data, these are the earliest Europoid type skeletal remains to have survived so far to the east. In the mid-1980s, there were excavations at Yanbulaq cemetery in Qumul (Hami), Xinjiang. Among the twenty-nine skulls examined, twenty-one were Mongoloid and eight were Europoid. This proved that Europoid people had advanced eastward into the Hami Oasis by 1300 BC, where they met with Mongoloid people.

At the end of 1980s, excavations were carried out at the Linya cemetery in Hami. Because of the few published materials, it is difficult to certify the cultural nature of this cemetery. But there is one point that can be ascertained, namely, that these relics were distributed in the same region as the Yanbulaq Culture but had different dates compared to it.

The ceramics in the Linya cemetery can be divided into Group A and Group B. The shapes and decorations of ceramics in Group A were similar to those of the Siba Culture, and some were nearly identical. If we compare the Linya ceramics to those of the Siba cultural period, ceramics in Group A in the Linya cemetery were similar to those of the middle and late period of the Siba culture. So we can confirm that the upper time limit of this cemetery may be dated back to about 3700 BP. The representative pottery forms of Group B are a jar with an oval belly and a jar with ball-shaped belly. The body of these forms was painted with a parallel water pattern and shaft-indented line pattern. These ceramics have not been found in the Gansu Corridor region and it is not clear whether they are native to the Hami region. Through comparative study, we find that the characteristics of Group B ceramics approach those of the ceramics and stone tools of the Shāmirshāk (Qiemuerqieke) Culture near Altay, Xinjiang. But the original place of Shāmirshāk Culture was in Southern Siberia, Russia. We need to undertake deeper study of the relations between these cultures. According to the cultural system of Hami region as we now know it, we can infer that it is very possible that the culture represented at the Linya cemetery developed into the Yanbulaq Culture. For example, both used adobe chambers and the custom of contracted (flexed) burials was very popular in both.

The discovery of the Linya cemetery had great significance. First, it has the earliest known painted pottery in eastern Xinjiang at present; second, the dates of relics from the Linya cemetery fill the time gap between Siba Culture and Yanbulaq Culture; third, the ceramics in Group A show strong characteristics of Siba Culture, which can prove that quite a few of its inhabitants came from the Siba Culture. These inhabitants must have been of the Eastern Asiatic type of the Mongoloid race. The ceramics in Group B came from the Altay region and the residents were probably of the Caucasoid race from Eastern Kazakhstan and southern Siberia. The Kōnchi River cemetery proves that this was not an isolated cultural phenomenon. So we can infer that there may have been two races represented in the Linya cemetery, just as in the Yanbulaq cemetery. But the quantity of ceramics in Group B was relatively small, and it is estimated that the percentage of the Caucasoid population was also low. Considering that the quantity of ceramics in Group B was relatively small, we inferred that the racial rate of the Linya cemetery was similar to that of the Yanbulaq tombs. However, while these conclusions are based on the analysis of cultural factors, the exact results await the certification of physical anthropology.

Through the above analysis and previous discoveries, a picture of the cultural exchange between the East and the West has become clearer. At the beginning of the second millennium BCE, some people of the Eastern Asiatic Mongoloid race, who lived at the western end of the Gansu Corridor, crossed the Gobi Desert and emigrated into the Hami Oasis. At the same time, some members of the primitive Europoid race crossed the Altai Mountains, followed the

Ertish River Valley, and passed through the Altay Grasslands. Some of them continued to advance southward and entered into eastern Xinjiang, where they then contacted and mixed with the Eastern Asiatic Mongoloid race in Hami. The archeological materials show that some of the Mongoloid race in eastern Xinjiang who made Hami their base proceeded to enter the Barköl Grasslands in the north, then migrated to Ürümchi in the west along the Tängri Tagh (Tianshan); others migrated into the Turpan, Pichan (Shanshan), and Toqsun basins in the west, and had a cultural effect on the Qarashähär (Yanqi) Basin and the valleys of the Tängri Tagh. During the Western Zhou to the Spring and Autumn Period, Ancient Mediterranean peoples crossed the Pamir Plateau, travelled along the northern and southern edges of the Tarim Basin, and then advanced into Lopnur and the eastern Tängri Tagh. During these waves of emigration, eastern culture coming from the Gansu Corridor met western culture which was advancing eastward into the eastern and central parts of Xinjiang. The different races made frequent contact and stimulated the change and development of various cultures. All these led to the special cultures of central Xinjiang and "the mixing of the races."

The cultural contact and mixing between the East and the West since around 2000 BC prepared the foundation for many small oasis states in this area and it led to the formal birth of the "Silk Roads" which connected Europe with Asia. Undoubtedly all these events had important effects on world history. Also, there were other significant, related archeological discoveries in the Gansu Corridor and eastern Xinjiang. For example, common wheat dating to the early third millennium BC has been found in the central part of the Gansu Corridor and jade materials dating to the late third millennium BC have been found in the eastern part of the Gansu Corridor. All this evidence suggests that the formation of this trade channel can be traced back to the prehistoric period.

A Discussion of Sino-Western Cultural Contact and Exchange in the Second Millennium BC Based on Recent Archeological Discoveries

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From the late nineteenth century to the early twentieth century, more and more foreign scholars and explorers came to western China to travel, explore, and investigate. During this period, many important archeological relics were discovered and some of them were illegally excavated and taken out of China. All of these events stimulated studies on the "Silk Roads" and Sino-Western exchange, and this field increasingly became the focus of archeology, history, linguistics, physical anthropology, and Sinology. Because of the limited materials, however, the field of study has focused mainly on the historical period since Zhang Qian's first visit to the Western Regions in the latter part of the second century BC. So, in the pre-Qin period or even during the earlier period from prehistoric times to the Bronze Age, were there any cultural contacts between the East and the West? Where did the earliest cultural contact take place? And how did it happen? Unfortunately, there has been little discussion on these topics. In this article, I would like to address the above questions based on archeological discoveries in recent decades.

I

In December, 1921, modern archeology was introduced into China with the discovery of the Yangshao Culture, first found at Mianchi, Henan Province. This discovery disproved the opinion that China had no Neolithic Age. In the meantime, it also brought about the discussion of cultural contact and exchange between the East and the West. At first, Dr. J. G. Andersson, the director of the excavation of the first Yangshao sites discovered, regarded Yangshao Culture as representative of "ancient Chinese civilization." But at last Andersson came to a deadlock on the question of whether Chinese culture was native or derived from outside. Confronted with the painted pottery of Yangshao Culture and that from Tripolje sites in southeastern Europe and of Anau in Central Asia, he reflected, "Comparing the vessels of Henan and Anau, the similarities of their shape and ornamentation are so numerous and so striking that one cannot help but think that they have derived from the same source. Yet it is not known how the art of these two places was transmitted. Henan is indeed quite far from Anau, yet routes of communication between them are not lacking."¹ In order to confirm his

conjecture, Andersson came to northwest China to carry out long-term and large-scale investigations. He then drew the following conclusion: "It is generally recognized by scholars that the original home of painted pottery is to be found at various sites in the Near East. I am of the firm opinion that the technology for making fine pottery with painted decorations first arrived in Gansu and only after that reached Henan. This explanation would appear to be indubitable."² At the same time, some foreign scholars even put forward the arbitrary conclusion that "the painted pottery of Henan belongs to the same family of ware, form, and design as the painted pottery of the Neolithic sites of the Near East."³ These opinions fostered the mistaken understanding that "Chinese culture came from the Western world."

As soon as the theory that "Chinese culture came from the Western world" was formulated, it met with suspicion and objection on the part of young Chinese archeologists. In 1926, Li Ji pointed out, "Considering all the available archeological materials, we still do not have completely reliable evidence to confirm that the painted pottery found in China originated from the Western world."⁴ In 1946, Pei Wenzhong expressed, "In order to find the origin of Chinese painted pottery culture, we must make adequate study on the other painted pottery cultures in the world. In the meantime, we have to do deeper research work on Chinese painted pottery culture, then deduce its absolute date. If the absolute date is earlier than that of other regions, painted pottery originated from China, then disseminated elsewhere; if not, Chinese painted pottery culture came from elsewhere. Before the research is completed, any conjecture is premature."⁵

In order to answer the question whether Chinese prehistoric culture was indigenous or borrowed from abroad, Xinjiang undoubtedly is the key place. In 1924, Andersson declared, "This analysis of the geographical milieu points decidedly to Turkestan as the territory where we shall have the greatest chance of finding a final solution to the Yangshao problem. Possibly we shall be able to identify there the region where, in Neolithic times, a group of the Mongoloid (Yellow) race, under strong cultural and perhaps also racial influence from the West, while settling down gradually to stationary agriculture, developed the civilization which was to be the beginning of the historical Chinese culture. The exact location of this earliest Proto-Chinese civilization can be ascertained only by future researches in Chinese Turkestan, but already, on the basis of our finds in Henan, it seems highly probable that waves of migration passed along the route of communication between the two mountain chains of Peishan (North Mountain) and Nanshan (South Mountain), leading from the eastern part of Turkestan in a southeasterly direction to the Yellow River at Lanchou, the provincial capital of the present Kansu."⁶ After that, the plan to investigate Central Asian relics made by Andersson and others was suspended due to circumstances beyond their control, and Andersson's quest for the origins of Yangshao culture went unfulfilled.

In the early forties, Pei Wenzhong researched a few painted pots collected from Xinjiang and pointed out: "Andersson and others were of the opinion that Chinese painted pottery culture must have come from the Western world; but Li Ji and others thought that the painted pottery culture should be a Chinese native culture originating from the Central Plains of China (Henan, Shanxi, and Gansu provinces) rather than stemming from foreigners. Considering the materials now available that are relevant to the distribution of Xinjiang painted pottery relics, I think Mr. Li's opinion seems to be closer to the truth for the following reasons: 1. the painted pottery culture in Xinjiang seems to belong to the late period of Chinese native painted pottery culture; 2. painted pottery cultures were found to the north and south of the Tianshan [Tängri Tagh, Heavenly Mountains] at the same time. It could be divided into two branches, a northern and a southern, at Hami. According to geography, its route of dissemination seems to have started from Gansu, reached Hami, and turned to the north and south upon encountering the obstacle of the Tängri Tagh (Tianshan). On the other hand, if the culture had originated in the West, it could only have come from north of the Tängri Tagh (Tianshan) and may not have reached south of the Tängri Tagh (Tianshan)."⁷ Therefore, Pei Wenzhong argued, "the painted pottery culture of Xinjiang is later than that of the Yellow River, so it is necessary to correct the opinion that the culture was disseminated from western Asia."⁸

Yan Wenming has said, "Before the discovery of Yangshao culture, some foreign scholars and missionaries expressed the opinion that Chinese culture came from the West. They thought that China did not have her own prehistoric culture and Neolithic Age, and that Chinese culture as well as the ancient Chinese people were diffused from the West. The discovery of the Yangshao site irrefutably proved that China not only had a Neolithic Age culture, but it was fairly well developed."⁹ Viewed historically, the theory that Chinese culture came from the West had a rather wide philosophical basis among Western scholars. Although Andersson's theory that "Chinese culture came from the West" was incorrect, after all, what he was faced with were previously unknown archeological materials that had been excavated and it was unavoidable that he would be subject to the limitations of historical understanding. Compared with other conjectures of the time that lacked such new materials, it was more advanced.

The archeological discoveries in the following decades proved that the young Chinese archeologists were prescient. However, at the same time, although it must be recognized that the theory of Chinese culture coming from the West had been criticized, no one could answer the questions of where the Chinese prehistoric culture had come from and how it had developed. In order to resolve these problems, we will need to depend on still more recent archeological discoveries and improvements in our comprehensive research ability.

II

China lies in eastern Eurasia and occupies a vast territory. There are great differences of natural environment between south and north, east and west. Overall, China's terrain slopes from high altitudes in the northwest to low altitudes in the southeast. It forms three large "terraces" that are at different levels. The first terrace includes the Himalaya Mountains, the Qinghai (Kokonor)-Tibet Plateau, the Pamir Plateau, the Altai Mountains, and so forth, with an average altitude of 3,000-4,000 meters; the second terrace includes the Mogolian Plateau, the loess plateau, and the Yunnan-Guizhou Plateau, adjoins the Gobi Desert in the north, connecting with Daxing'anling and Changbaishan ranges in the northeast, with an average altitude of about 1,000 meters; the third terrace includes the Northeast Plain, North China Plain, the lower reaches of the Yangtze, and the Pearl River Delta, with an average altitude of less than 200 meters. To the east and south of the third terrace is the vast Pacific Ocean. These special environmental conditions make China a relatively closed geographical unit. Considering cultural geography, this structure has had a deep influence on the dawn, formation, and development of ancient Chinese civilization, and has caused Chinese culture to be relatively open where it faces the ocean, but relatively closed as the culture is farther away from the sea. Chinese culture has obvious native characteristics, and has had an independent route of development over a long period of time.

The northwest region is an even more closed environment than the other parts of China. But it is also located at the crossroads of the civilizations of the Yellow River and Central Asia. Thus it is a sensitive zone where different cultures made contact and absorbed new cultural elements, and it is a key area for studying cultural contact and exchange between the East and the West. Through decades of accumulated archeological discoveries, the spatial and temporal framework of the region's ancient cultures has emerged. These archeological discoveries have confirmed that the theory of "Chinese culture coming from the West" is untenable.

Already in the middle of the Paleolithic Age, there was human activity in the Qingyang, Gansu region (Xie Junyi *et al.*, 1983). In the late Paleolithic, the range of the human activities in this region expanded. Ancient sites and plenty of stone artifacts were successively found in the entire eastern Gansu region and within the bend of the Yellow River (Gansu Museum, 1979; Ningxia Museum, 1987).

The earliest Neolithic settlements in the region, dating back to 8000 BP, were found in the upper reaches of the Wei River. The excavated materials indicate that the sites belonging to the Laoguantai culture¹⁰ in the Wei River Valley are sparsely distributed, small in scale, and have thin strata of cultural deposits. However, during this period, agriculture and animal

domestication had come into being and ceramics had advanced beyond the primitive stage (Li Fei, *et al.*, 1993). It is obvious that there must have been an initial stage of development before this period. At the Layihai site, Guinan County, Qinghai and at Little Tsaidam Lake, Tsaidam Basin, both being located more to the west and having poorer natural environments, Paleolithic sites dating to 10,000-6700 BP (Gai Pei, Wang Guodao, 1983; Qinghai Cultural Relics and Archeology Research Institute, 1990). Microlithic artifacts were widely used, but there was no pottery, no agriculture, and no animal husbandry. During this period, human groups living in different environments of the northwest chose different forms of economies in order to adapt to nature. In the plateau region, the climate was very cold and the soil was comparatively barren. People there mainly took up hunting and gathering; in valleys and basins, with fertile soils and good climates, people mainly took up agriculture and the raising of domesticated animals.

By 7000 BP, late period Yangshao culture located in the area within the passes of Shaanxi and eastern Gansu had gradually extended westward to the eastern part of Qinghai (Kokonor) in Minhe County of Huangshui Valley (Qinghai Cultural and Archeological Team, 1984; Qinghai Cultural Relics and Archeology Research Institute, 1993), and in Xunhua County on the upper reaches of the Yellow River (Qinghai Cultural Relics and Archeology Research Institute, 1990). By around 5000 BP, the late period of Yangshao Culture had spread farther west in Gansu and developed into the Majiayao Culture.¹¹ This culture was centered in the Yao River-Lanzhou-Huangshui region and its people were dispersed in the vast region of middle western Gansu and eastern Qinghai. At the end of the early period of Majiayao Culture (the Xiaopingzi period), its "vanguard" had reached the area of present Jiuquan City toward the west of the Gansu Corridor (Li Shuicheng, 1990); in the late period of Majiayao Culture (Machang Type), most of the Gansu Corridor was controlled by this culture (Li Shuicheng, 1998). By 4000 BP, the Machang Type of the Majiayao Culture in the region of the Gansu Corridor had developed into the Siba Culture of the early Bronze Age. This culture was situated in the vast middle and western regions of the Gansu Corridor (Li Shuicheng, 1993; Jidong Yang, 1998).

The results of physical anthropological studies are identical with the prehistoric cultural sequence of northwest China. In the 1920s, Davidson Black, a Canadian anatomist, pointed out that the prehistoric inhabitants of this region shared a number of physical characteristics with the modern people of North China, according to his research on the ancient races of Gansu. In addition, he called them "Proto-Chinese."¹² Examination of the skeletal remains of the prehistoric inhabitants of Gansu and Qinghai, along the upper reaches of the Yellow River, revealed that they had medium length heads, hypsocrany, hyperleptoprosomy, mesoconchy, leptorrhiny, and orthognathy. This racial type is close to that of North China Man, who

belongs to the East Asiatic type of the Mongoloid race.¹³ In a study of the human bones of the Liuwan site, Ledu, eastern Qinghai, which is classified as belonging to the Machang Type of Majiyao Culture, and those of Qijia Culture, physical anthropologists conclude that the prehistoric inhabitants of the Gansu and Qinghai regions share many of the same physical characteristics. They are closest to the Eastern Asiatic race among the branches of the Modern Mongoloid race.¹⁴ Research on the human bones of Siba culture in Huoshaogou (Yumen), Ganguya (Jiuquan), and Donghuishan (Minle) in Gansu Province showed that the inhabitants of this culture were similar to the prehistoric people in Gansu that were examined by Black, and were even more similar to the groups in the middle and small-sized tombs of Yinxu (Wastes of Yin), Anyang. The conclusions above illustrate that in the Gansu and Qinghai region, from the prehistoric period to the Bronze Age, the inhabitants' physical characteristics did not change very much, and they played an important role on the formation and development of the modern people of North China.¹⁵

Summarizing the above makes clear the following three points: 1. the geographical location and structure of the terrain led to the strong native characteristics of ancient Chinese culture; 2. the original culture of western China continuously advanced and extended westward from the early period to the late period; 3. the inhabitants' physical characteristics in the prehistoric period through the Bronze Age in the Gansu-Qinghai region of northwest China belonged to the Eastern Asiatic type of the Mongoloid race.

III

The Xinjiang Uyghur Autonomous Region is the largest province of China, with an area one sixth of the entire country. Because of Xinjiang's unique location in the extreme northwest (i.e., in East Central Asia), already from the prehistoric period to the Bronze Age, it had become an important region for cultural contact between the East and the West. It also constituted an important component of ancient Chinese culture, especially in the Hami (Qumul) region of eastern Xinjiang. Hami is situated in a vital place; on the north, it is adjacent to the Peoples' Republic of Mongolia; to the northwest, it adjoins Shanshan (Pichan) and Mulei (Muri) counties; to the south lies Ruoqiang (Charqilik) County; in the southeast, it is adjacent to the Gansu Corridor. It ranges from E91°08' to 96°23' and from N40°43' to 45°5'19". It is the frontier for cultural contact between the East and the West.

Archeological work in eastern Xinjiang could be traced back to the end of the nineteenth century. This early work was carried out almost entirely by foreign explorers and visitors. Archeological work conducted by Chinese scholars in Xinjiang includes: the 1927 archeological investigation in Hami by Huang Wenbi and the 1933 discovery of Qiaojing site

by Professor Yang Zhongjian in Hami.¹⁷ In 1942, Pei Wenzhong did research on the painted pottery collected in eastern Xinjiang and pointed out in his monograph: "The painted pottery in Xinjiang seems to belong to the late period of painted pottery culture in China proper."¹⁸ This opinion was maintained until around the 1980s.¹⁹ Later, some scholars began to realize that the cultural content of the archeological sites containing painted pottery factors in eastern Xinjiang were very complex and their dates were, in general, slightly late. For example, not only painted pottery but also bronze and even iron burial goods were recovered from many sites. In other words, these sites belonged to the Bronze Age, and some had already entered the early Iron Age.²⁰

Previously, it was commonly accepted in academia that the archeological sites containing evidence of painted pottery in eastern Xinjiang had a close relationship with the prehistoric and Bronze Age cultures of the Gansu and Qinghai regions. Certain scholars surmised: "A part of the painted pottery culture from the western end of the Gansu Corridor advanced westward and first came to Turpan.... At the same time or slightly later, some painted pottery probably directly reached the Hami and Lopnor regions, because these two places were nearest to the Gansu Corridor."²¹ In 1986, through archeological excavation in the Gansu Corridor, we realized that "eastern Xinjiang was contiguous with the Gansu Corridor and the natural environments of the two places were almost the same. The primitive cultures of this region that possessed painted pottery lasted a long time and their regional characteristics were very strong. The dates from these sites were determined to be roughly comparable to the early period of the Western Zhou to the Warring States period of the Central Plains, or even later. There is a considerable gap between this culture and the Siba culture in the Gansu region, thus they lack basic points for comparison. However, this does not mean that the two regions were isolated manifestations of the same culture. On the contrary, the contiguity of the two regions must have led to cultural contact, cultural influence, and even cultural infiltration. The key problem now is that the excavated materials from eastern Xinjiang cannot be chronologically linked with Siba Culture. We hope to find earlier archeological sites in eastern Xinjiang, which at least have dates that approach the later period of Siba Culture. Only in this way can we obtain a more accurate understanding [of the true relationship between the archeological cultures of eastern Xinjiang and those of the Gansu Corridor]."²²

In 1995, the Xinjiang Cultural Relics and Archeology Research Institute collected two human-made stone implements from the late Pleistocene strata section of Jiaohu Gucheng (ancient city of Yarghul) outside Turpan City. These artifacts provide material evidence proving the existence of Paleolithic cultures in the Pleistocene stratum in eastern Xinjiang. They illustrate that in the late Paleolithic Age at about 10,000 BP there was human activity in

this region.²³ Regrettably, however, on the basis of present evidence, we do not have a good grasp of the Neolithic sites and racial types that date back to 4000 BP in Xinjiang.

In the mid-1980s, Yanbulaq (Yanbulake) Culture was considered to be the earliest representative of the eastern Xinjiang cultures containing painted pottery. This culture was found at a site just to the west of Yanbulaq Village (in Chinese Liushuquan [Willow Spring]), Hami City.²⁴ In 1958, Huang Wenbi excavated fourteen tombs here and found a fortification with an area of about 3,000 square meters.²⁵ In 1986, 76 tombs were excavated by a team from Xinjiang University. The culture found at this site therefore was named Yanbulaq Culture.²⁶ The officially excavated sites that are known to belong to this culture are: the Qaradöwä (Wupu) Cemetery in Hami,²⁷ the Lapchuq Cemetery of Tört Döng (Sipu),²⁸ and the Hanqigou (Cold Air Gully) Cemetery in Aqtash (Baishitou [White Stone]) Village.²⁹

Based on preliminary study, the burials of Yanbulaq Cemetery can be divided into three groups. The tombs of the first group are shaft tombs with a second-tier platform. The second-tier platform can be unworked ("raw") soil, adobe, or unworked soil with adobe. Most of the tombs are rectangular pits, relatively large in scale, and well-built. The majority of the tombs contain multiple burials, although a few contain only a single burial. Several of the burials are secondary burials. Contracted (fixed, flexed) burials with the individuals positioned on their right side are common, and most of the individuals' heads point to the southeast. The tombs of the second group are shaft tombs. They are simple and small in scale. The tomb pits are mainly oval or rectangular; a small quantity of the tombs was built with adobe or unworked soil mixed with adobe. The majority of these tombs contain single burials while a few contain multiple or secondary burials. Although all tombs contain flexed burials, more of the burials of this type are positioned on their left sides than on their right sides. There is no particular pattern of head orientation in these tombs. The tombs of the third group are lined with adobe (Fig. 1). These tombs are concentrated in the southern part of the excavated area, and they were built by piling up adobe bricks into rectangular, square, and irregular chambers of different sizes. Flexed burials are common, and right or left side burial positions are represented in about equal number. Head orientation has no particular pattern in this type of tomb. On the basis of the stratigraphy, the excavators concluded that the tombs of the first group were the earliest; those of the third group were the latest; and those of the second group were between these two periods. All together, twelve C14 specimens were examined. Among them five had upper limits of about 1700 BC (with tree ring calibration); four centered around 1300 BC, and another three dated to about 700 BC.³⁰ The first five dates were determined to be slightly early. Therefore, the dates of the Yanbulaq Cemetery were determined to be roughly equal to the period from the late Shang Dynasty to the Spring and Autumn period of the Central Plains (i.e., c. 1100-700 BC).

The artifacts excavated from Yanbulaq Cemetery include ceramics, bronzes, and wood products, along with a small quantity of iron, gold, stone implements, bone tools, and textiles. The ceramics were all made by hand, with undecorated, red sandy ware dominating. It was common for the surface of the vessel to have a red slip, and there was a small quantity of sand-tempered grey pottery and sand-tempered black pottery. Vessel shapes included single-earred *guan*-jars, *bei*-cups, *bo*-bowls, pedestal *dou*-plates, and double-earred *hu*-bottles, double-earred *guan*-jars, *wan*-bowls, and spindle whorls. The painted pottery composed 36% of the ceramic assemblage, and shapes included *hu*-bottles, pedestal *dou*-plates, *bo*-bowls, and *bei*-cups. Most of these vessels had a red slip with black designs, and only a few were painted with yellow and white colors. Water-wave designs, comb-indented patterns, and S-shape designs were popular. Pedestal *dou*-plates were generally painted inside, with a "+" symbol design. The bronzes were mainly small implements, weapons, ornaments, including knives, projectile points, awls, needles, ornamental plaque-shaped pieces, mirrors, rings, and earrings. The wood products included male and female figurines, plates, bowls, buckets, shovels, awls, spindle whorls, and combs (Fig. 2).

Yanbulaq Cemetery is significant because it confirms for the first time that during this period a minority of the branch of the Europoid (Caucasoid) race existed at the Hami Oasis about 1300 BC and made some degree of contact with the Eastern Asiatic Mongoloid race of Hami. Among the 29 skulls of the Yanbulaq cemetery that were examined, 21 had a preponderance of Mongoloid traits (11 male and 10 female) and 8 had Caucasoid traits (all male). According to the periodization of Yanbulaq Cemetery, physical anthropologists have pointed out that, during the early period of Yanbulaq Cemetery, the majority of the burials had Mongoloid traits and a minority had Europoid traits; in the middle and late periods of Yanbulaq Cemetery, the percentage of burials with Europoid traits increased slightly.³¹ These discoveries may be compared with the 42 ancient tombs excavated by the Xinjiang Cultural Relics and Archeology Research Institute in 1979 at Qäwrighul (Gumugou), located on the north bank of the lower reaches of the Kōnchi (Kongque) River near Lopnur.³² All of the 18 skulls collected from these tombs had very obvious Caucasoid physical characteristics (11 male, 7 female). There were eight C14 dates taken at the Qäwrighul (Gumugou) tombs. Most of these dates fall between 1535 to 1710 BC (uncalibrated and with a half-life of 5,730). Although there is debate on certain points among scholars, all evidence indicates that these finds are the earliest Europoid remains located so far to the east.³³ Because no ceramics were found in these tombs and the burial customs were greatly different from those at Yanbulaq, it was very difficult to decide the cultural relations between the two. But it is necessary to point out that Qäwrighul (Gumugou) is only three hundred kilometers away from Wupu, Hami, and a small number of the Caucasoid skeletons in the Yanbulaq Cemetery had the same physical

characteristics as those of the tomb owners at Qäwrighul (Gumugou), so the possibility of some cultural relations between the two cannot be excluded.

At present, when discussing the origins of Yanbulaq Culture, attention is often given to the eastern region of Xinjiang, and it is commonly thought that the Yanbulaq Culture had a close relationship with the painted pottery Bronze Age cultures in the Gansu and Qinghai region. However, opinions differ on which specific culture Yanbulaq Culture descended from.³⁴ The cultures in the Gansu and Qinghai region, which are closest in period to the Yanbulaq Culture, are the Xindian, Kayue, and Siba cultures. The former two were located in the Hehuang region, at the crossroads of Gansu and Qinghai, over one thousand kilometers away from eastern Xinjiang. Thus, they should not be considered as the origin of the Yanbulaq Culture because the channel by which cultural dissemination occurred has not yet been found. As for the other possibility, the Siba Culture was situated in the Gansu Corridor, east of, but adjacent to, Hami. Cultural contact between these two places was quite possible. It is known that the lower time limit of Siba Culture was about 1600 BC and the upper time limit of Yanbulaq Culture was 1300 BC. But there is still a 300 year gap between the two cultures. It seems, therefore, that Yanbulaq Culture did not develop directly from the Siba Culture in the Gansu Corridor. This is apparent when looking at the cultural content of the two cultures. For example, tombs built of adobe brick were not found in the Siba Culture, and neither was the custom of contracted (flexed) burials. There were no iron or wood artifacts, and the shape and type of ceramics were also different from those belonging to Yanbulaq Culture. On the other hand, while emphasizing the differences, the similar factors between the two cultures should be noted. For example, eared *guan*-jars, *hu*-bottles, and cup-shaped vessels were the typical ceramics, and painted pottery occurred in high percentages in both cultures. Ceramics painted red with black designs were very popular, along with a small number of vessels painted yellow and white color. The bronzes of both cultures were primarily small implements, weapons, and ornaments. Both cultures had the custom of secondary burials. Aside from these examples, in the Siba Culture a small quantity of adobe bricks with similar thickness and width to those of the Yanbulaq Cemetery is found; they differ only in length.³⁵ These similar cultural factors illustrate that there probably exists a certain indirect relationship between the two cultures, but more supporting evidence is needed to explain the connection.

IV

On the basis of archeological survey and excavation concluded between 1986 and 1987 in the Gansu Corridor,³⁶ we put forward the following hypothesis: "If Siba Culture could

have gotten across Xingxingxia (Starry Defile) and colonized eastern Xinjiang, then the Hami Oasis was undoubtedly its first foothold. Therefore, we are expecting new discoveries in Xinjiang."³⁷

From 1988 to 1989, a large-scale cemetery was found at Linchang (Forestry Office), five hundred meters away from the Hami railway station, and at Yamansu Mine in Hami (the "Linya Cemetery"). All together, two hundred and fifty tombs were excavated. These tombs can be divided into two kinds: rectangular earthen shaft tombs and adobe brick shaft tombs. The majority of the tombs were single contracted (flexed) burials, generally 1-2 meters in length and 0.6-1 meter in width. Head orientation was either northeast or southwest. Burial accessories included ceramics, bronzes, bone tools, silver, gold, seashells (cowries), stone beads, and unarticulated goat bones. The ceramics were all hand-made and usually sand-tempered. Most of the pottery was red in color with some grey pottery. The shapes include *guan*-jars, *bei*-cups, *bo*-bowls, and *hu*-bottles; some of these had red and purple-red slips. Bowstring patterns and stamped designs were common (Fig. 3). Painted pottery composed part of the ceramic assemblage, with both black and purplish red colors being employed. The patterns included triangles, vertical lines, floral line designs, whorl designs, baton-shaped designs and "Z"-shaped designs, botanical designs, zigzags, and so forth (Fig. 4). The bronzes were all small implements or ornaments including adzes, mirrors, sickles, buttons, tubes, knives, awls, ornamental plaques, bracelets, and earrings. There are also ornamental bone plaques, gold and silver earrings, hairpins, stone beads, stone mortars, but no iron artifacts. The stratigraphic relationships within the cemetery were complex, and it had been used for a long time. The excavators proposed that the Linya Cemetery was the earliest Bronze Age culture site in the Hami region. The most typical pottery was the double-eared *guan*-jar, which was similar to the same type of the middle and late periods of the Siba Culture. However, there are some differences in types that might reflect the differences in region and cultural nature.³⁸

According to our preliminary study, the ceramics of Linya Cemetery can be divided into two groups. Group A is composed mainly of single-eared *guan*-jars, double-eared *guan*-jars, and double-eared basins. Painted pottery was very common, all of which had black drawing. Bands of vertical lines, hand-shaped patterns, triangles, bands of narrow triangles, water-wave patterns, and plant patterns were popular designs (Fig. 4: left). Group B included only one vessel type: the *guan*-jar with two lugs on the rim. This type can be divided into oval *guan*-jars with deep bellies and ball-shaped jars with round bellies. The shape was very particular, with two lugs on the rim through which a strap or rope could be passed for carrying. The body of the vessel was painted red or black. The black vessels commonly had horizontal and vertical indented lines. Some had water-wave patterns between

two groups of indented lines. The red vessels had parallel water-wave patterns only (Fig. 4: right). Because only a minority of the Linya Cemetery relics have been published, at present it is not very clear if the Group A and Group B ceramics had a chronological relation .

Given the limitations of the data, the precise nature of the Linya Cemetery cannot be determined, but at least we can confirm the following points. First, the Linya Cemetery and the Yanbulaq Culture belonged to two culture systems which were different in nature and time. Second, we have noticed that Group A ceramics from the Linya Cemetery share many identical cultural factors with those of the Siba Culture. Shapes and patterns of many ceramics from the two cultures were similar, and some were almost the same; for example, the painted pottery double-earred *guan*-jar, the undecorated double-earred *guan*-jar, the *guan*-jar with four rings, the single-handled *bei*-cup (or *zun*-shaped vessel), and the double-earred basin (Fig. 5). The absolute age of Siba Culture was 1950-1600 BC.³⁹ According to the periodization of the Siba Culture,⁴⁰ most Group B ceramics from the Linya Graveyard resemble those of the middle period of the Siba Culture, and only a few are similar to those of the late period of the Siba Culture. Therefore, we estimate that the absolute age falls between 1800 to 1600 BC. This phenomenon illustrates that the Siba Culture in the region of the Gansu Corridor started to advance westward around 1800 BC, crossed 300 kilometers of Gobi Desert, and then reached the Hami Oasis. Third, initial comparison indicates that one major difference between the two cultures is the absence of the spouted *guan*-jar and the *guan*-jar with two lugs at the rim in Siba Culture, and that the Linya Cemetery painted pottery was relatively simple compared with that of the Siba Culture. Fourth, the discovery of the Linya Cemetery has provided important materials to solve the question of the origin of the Yanbulaq Culture. According to what is known of the cultural development sequence in the Hami region, the Linya Cemetery probably falls between the Siba Culture and the Yanbulaq Culture. Specific evidence includes adobe-brick chamber tombs and the flexed burial customs that were popular at both the Linya Cemetery and the Yanbulaq Cemetery. We have already seen that the upper time limit of the Yanbulaq tombs was 1300 BC. Along with the similarities in ceramic shapes, materials, and painted pottery decorations, this data helps to determine the lower time limit of the Linya Cemetery.

The importance of the discovery of Linya Cemetery is, first of all, that this graveyard is the earliest Bronze Age site in eastern Xinjiang (earlier than Yanbulaq Culture) and has an abundant cultural content. It fills a gap in the cultural sequence in the Hami region. Second, according to physical anthropology investigations to date, Caucasoid skeletal remains have not been found in sites of the Siba Culture in the Gansu Corridor.⁴¹ The Group A ceramics of the Linya Cemetery possess strong characteristics of Siba Culture. The inhabitants who made and used these ceramics and implements must have come from the Gansu Corridor, and their racial

affiliation should be the Eastern Asiatic branch of Mongoloid race, the same as that of the Siba Culture. Third, Group B ceramics of the Linya Cemetery were unique and have not been found in the region of the Gansu Corridor, nor near Hami. They seemed to have been influenced by foreign cultures. In the Altay Shämirshäk (Qiemuerqieke) Culture of northern Xinjiang,⁴² we find oval-bodied, round-bottomed ceramic vessels along with stone vessels,⁴³ but there were neither painted pottery nor ceramics with lugs on the rims. Researchers pointed out that "Shämirshäk Culture has relatively numerous cultural similarities with the Bronze Age cultures in South Siberia and western Mongolia. For example, the structure of the burials and the shapes of ceramics are very similar. This illustrates that their cultural relationships were quite close, and that they may even have had the same origins."⁴⁴ According to our analysis, the cultural content of the archeological sites which belonged to the Shämirshäk Culture is rather complex. The ceramic shapes and decorations are obviously different. Whether these differences are related to time or region can only be answered through further study. But, what is relative to this study is how we should understand the Group B ceramics of Linya Cemetery which are similar to those of Shämirshäk Culture. Preliminary analysis indicates that there are two possibilities. One possibility is that these cultural factors came about through the influences of the Bronze cultures of the Altai mountains and grasslands in northern Xinjiang. The other possibility is that the Group B ceramics of the Linya Cemetery were indigenous to the Hami region and that they influenced the cultures of the Altay Grasslands region. According to preliminary analysis, the first inference is more probable. If this inference is not wrong, the ceramics in Group B should be representative of another group which was different from the group that is represented by the ceramics in Group A. The ancestors represented by Group B ceramics were Caucasoids living in the South Siberian region of Russia, western Mongolia, or Eastern Kazakhstan. They entered the Altay Grasslands from the north and moved to the south. A part of this group went on immigrating south to the Hami Oasis. The existence of the Qäwrighul (Gumugou) tombs near the Könchi (Kongque) River prove that this was not an isolated phenomenon. Therefore, the racial make-up of the Linya Cemetery was probably the same as that of the Yanbulaq Cemetery. Both cemeteries contained remains belonging to the two races, with Group A ceramics associated with Mongoloid remains and Group B ceramics associated with Caucasoid remains. Considering that the Group B ceramics from the Linya Cemetery were fewer than those of Group A, we estimated that the racial make-up of the cemetery was predominantly Mongoloid. However, the above is only a preliminary decision based on limited materials from the Linya Cemetery. The results should be confirmed by physical anthropology studies. In fact, archeological cultures and race are not absolute opposites. The same races could have different cultures, and different races could have the same archeological culture. There are many archeological facts to prove this.

Another point we can confirm is that, in the Hami region, the Mongoloid race seemed to be always in the majority. The Yanbulaq Cemetery provides evidence that this situation was maintained until at least the end of the Western Zhou Period.

This paper emphasizes that eastern Xinjiang was an important region where initial cultural contacts and exchange between the East and the West occurred. At present, we don't know much about the Neolithic sites dating to the fourth millennium BP and the physical characteristics of the races in this region. Physical anthropologists have inferred from the archeological data of Central Asia that if the Sone Age inhabitants of Xinjiang are found in the future, they will be from the two racial types which have already been found in Central Asia (the Caucasoid race and the dolichocranial type of the Mediterranean race). Data currently available illustrate that, before the Han dynasty, the Mongoloid race in the Xinjiang region advanced westward sporadically, yet not as frequently as the Caucasoid race in the West advanced eastward.⁴⁵ But, as was pointed out above, the historical information conveyed by the cultural factors in many sites in eastern Xinjiang indicates that, already before the Western Zhou Dynasty, the Eastern Asiatic Mongoloid race had advanced westward comparatively frequently, at least in the Hami region. The results of examining human bones at Qäwrighul (Gumugou) tombs along the Könchi (Kongque) River show that this site's human bones can be divided into two groups: one group is similar to the skulls of the Andronovo Culture in southern Siberia and eastern Kazakhstan, which dates to 2000-1000 BC; the other group is similar to the skulls of the Afanasyevo Culture, also located in this region, which dates to 2500-2000 BC. In the Qäwrighul (Gumugou) tombs, burials containing the first group of skulls overlaid burials containing the second group of skulls. This may indicate that, since around 1800 BC, the Caucasoid race from southern Siberia and neighboring regions entered into the eastern Xinjiang region in successive, scattered migrations.⁴⁶

Through the above analysis, a picture of the cultural contact and exchange between the West and the East has emerged. Around the beginning of the second millennium BC, the Eastern Asiatic Mongoloid race was not content with their narrow living space within the Gansu Corridor. A portion of this group of people crossed the Gobi Desert, then entered the Hami Oasis. At the same time, a group of the Caucasoid race living in southern Siberia and neighboring regions crossed the Altai Mountains, or followed the Ertish River and emigrated into the Altay Grasslands; some of these people continued southward to eastern Xinjiang. The different races from different areas made contact in the Hami region and cultural exchange between the two groups took place. In the western Gansu Corridor, Caucasoid remains have not been found to date. Considering the spacial distribution of different races in the Bronze Age in what is now the Peoples' Republic of Mongolia,⁴⁷ it is reasonable to infer that the East

Asian Mongoloid race's migration westward in the Gansu Corridor prevented Caucasoids from migrating eastward.

Archeological data also shows that the East Asiatic Mongoloid race, after entering eastern Xinjiang, did not stop migrating westward. Using the Hami Oasis as their base, they went on advancing westward along the northern or southern routes around the Tängri Tagh (Tianshan). Following the northern route, they entered the Barköl (Balikun) Grasslands, then advanced westward following the Tängri Tagh (Tianshan) to Ürümchi. Along the southern route, they went westward and entered the Turpan, Pichan (Shanshan), and Toqsun basins, and then divided into two parts. One part went northwest and entered the Tängri Tagh (Tianshan) valleys. The other part went southwest and entered the Qarashähär Basin. From the opposite direction, people of the Caucasoid race entered eastern Xinjiang around 1800 BC, coming from the north and going south. During what would in the Central Plains of China have been the Western Zhou and through the Spring and Autumn period, ancient Mediterranean peoples of Western Central Asia crossed the Pamir Plateau, advanced eastward along the southern and northern edges of the Tarim Basin, and then entered the areas around Lopnur and the eastern Tängri Tagh (Tianshan). As a result of these migrations, the eastern cultures from the Gansu Corridor made contact and continuously mixed with the Western cultures, which were advancing both southward and eastward. This contact and mixing fostered change in the cultural characteristics of the different groups, causing the mixture of races and the unique cultures of central Xinjiang. The attenuation of the physical characteristics of the ancient Mediterranean race⁴⁸ that can be seen at sites in the eastern Tängri Tagh (Tianshan) must have been the result of this cultural contact and blending.

The cultural contact between the West and the East which began in the early centuries of the second millennium BC created the basis for the establishment of many small oasis countries in eastern Xinjiang. Moreover, this contact led to the emergence of the trade channel that connected Europe and Asia. Undoubtedly, this was an important and far-reaching event in world history. A great deal of jade-ware made of jade from Khotan was found in Shang tomb No. 5, Xiaotun, Anyang;⁴⁹ a figurine made from shell with typical Europoid features was found in Zhouyuan (the Western Zhou capital), Shaanxi Province.⁵⁰ All of these phenomena suggest that, in the pre-Qin period, cultural contact and trade between the East and the West were very frequent, and provided the foundation for the flourishing "Silk Roads" of the Han through Tang periods.

V

Data from some of the other relevant archeological discoveries in eastern Xinjiang and the Gansu Corridor help to prove that cultural contact between the East and the West had been going on for a long time before the formal opening of the Silk Road during the latter part of the second century BC.

1. Several specimens of carbonized common wheat found at the Donghuishan site in Minle, Gansu Province were confirmed as domesticated⁵¹ and were dated by C14 to 3000-2500 BC.⁵² Scholars are cautious about this discovery because the date of the wheat was not consistent with that of the site.⁵³ Archeological discoveries in the Gansu Corridor indicate that the early period of the Majiayao Culture (Majiayao Type, Xiaopingzi Period) had already deeply entered into the area around Jiuquan City in the western Gansu Corridor in its early stage (Li Shuicheng, 1990); many sites of Majiayao Type have been found in the area around Wuwei, not far from the Donghuishan site.⁵⁴ It is obvious that this wheat should be the remains of the Majiayao Culture inhabitants. The study of the geography of domestication has confirmed that the origin of wheat was in Western Asia (Ri Zhi, 1982). In the Central Plains of China, the wheat found by archeologists dates to no earlier than 2000 BC and is very rare (corresponding to what would be the Xia Dynasty).⁵⁵ Thus, the carbonized wheat from the Donghuishan site, Minle was probably spread there along the trade channel from Central Asia to Xinjiang and thence to Gansu. The discovery of this wheat pushes back the date of cultural contact between the East and the West to as early as 3000 BC. There is no doubt that there were people living in the Xinjiang region at this period.

2. From 1983 to 1985, the Qijia Culture site on the bank of Haizang River, Wuwei City, in the eastern end of the Gansu Corridor, yielded a batch of Late Neolithic jade ware (around 2000 BC). The types included *bi*-disks, bracelets, adzes, chisels, axes, and knives, as well as raw material, debitage, blanks, and semifinished pieces, totaling 161 artifacts. The raw material for these jade artifacts was all nephrite, including white jade, grey jade, and jasper. The excavator decided that these jade wares were perhaps of Khotan jade material coming from the Qurum (Kunlun) Mountains in the "Western Regions" (Eastern Central Asia).⁵⁶ This discovery extends the birth of the "Silk Roads" back into the prehistoric period.

3. Xinjiang and the Gansu Corridor, in a broad sense, belong to the Western Regions. This part of Central Asia is an important area to the study of the development and spread of ancient Chinese metallurgy. At present, the earliest bronze in eastern Xinjiang dates to 1800-1700

BC,⁵⁷ not a particularly early date. Nevertheless, the most abundant finds of early Chinese bronzes are from western and central Gansu Province. In the early stage of Majiayao Culture (Majiayao Type, 5000 BP), people could make bronze knives,⁵⁸ which are the earliest among the alloy bronzes. In the late stage of Majiayao Culture (Machang Type, 4300-4000 BP), bronze knives, awls, and bronze pieces are often found.⁵⁹ The Qijia Culture (4000 BP) has yielded abundant quantities of bronzes, the most for any culture existing at the same time period in East Central Asia, and these bronzes have many unique types.⁶⁰ In the Siba Culture period (3950-3600 BP), bronzes became even more common, and gold and silver ornaments began to be made and used. In Huoshaogou Cemetery, the burial accessories included a bronze mace-head that represents authority and stone moulds used to cast bronze arrowheads. These finds show that the casting technology was comparatively advanced by this time.⁶¹ The above archeological cultures were all distributed in western China. Does this distribution suggest that the West influenced the early bronze industry in this region? This is a worthy subject for future research. In recent years, several finds of arsenic bronzes have been discovered.⁶² This kind of bronze alloy has been found in the region of Central Asia, both in abundant quantities and with relatively earlier date (Tylecote, 1979). On the question whether the arsenic bronzes were produced locally or came from the West, there is as yet no agreement among scholars.⁶³ But, no matter what is said, Xinjiang is invariably the key region for unraveling the problem.

4. The situation for iron is the same as that for bronze. Many iron artifacts dating to 1000 BC have been found in Xinjiang, and the few pieces found in the period 1 tombs at the Yanbulaq Cemetery are, to date, the earliest iron artifacts recovered in China. In the region of the Central Plains, iron artifacts were commonly used in the late Spring and Autumn and early Warring States periods. It is interesting that iron artifacts dating to the early Spring and Autumn period or to the late Western Zhou have all been found in the region from western Shaanxi Province to eastern Gansu Province (Zhao Huacheng, 1996). In the eastern Gansu Corridor, iron artifacts were also found in the tombs of the Shajing Culture, which was similarly contemporaneous with the Spring and Autumn period (Li Shuicheng, 1994). This phenomenon merits our attention and investigation.

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NOTES

1. J. G. Andersson, "Zhonghua yuangu zhi wenhua (Ancient Chinese Civilization)," tr. Yuan Fuli, *Dizhi huibao (Collected Papers in Geology)*, 5.1 (Beijing: Jinghua Publishing House, 1923), 23-24.
2. J. G. Andersson, "Gansu kaogu ji (Archeological Research in Gansu)," tr. Le Sen, *Dizhi zhuanbao (Specialized Papers in Geology)*, 1.5 (Beijing: 1925), 42.
3. J. G. Andersson, "Gansu kaogu ji (Archeological Research in Gansu)," tr. Le Sen, *Dizhi zhuanbao (Specialized Papers in Geology)*, 1.5 (Beijing: 1925), 35.
4. Li Ji, *Xiyincun shiqian yizhi (The Prehistoric Site of Xiyincun)* (Beijing: Tsinghua Research Institute, 1927), pp. 28-29.
5. Pei Wenzhong, "Zhongguo zhi caitao wenhua (Chinese Painted Pottery Culture)," *Lishi yu kaogu (History and Archeology)*, Shenyang Bowuguan Zhuankan (Specialized Journal of Shenyang Museum), 1 (1946), 9.
6. J. G. Andersson, "Gansu kaogu ji (Archeological Research in Gansu)," tr. Le Sen, *Dizhi zhuanbao (Specialized Papers in Geology)*, 1.5 (Beijing: 1925), 36-37.
- 7., 8., and 18. Pei Wenzhong, "Xinjiang zhi shiqian kaogu (Xinjiang Prehistoric Archeology)," *Zhongyang Yaxiya (Central Asia)*, 1.1 (Beijing, 1942), 37.
8. *Ibid.*
9. Yan Wenming, "Jinian Yangshaocun yizhi faxian liushiwu zhounian (Sixty-fifth Anniversary of the Discovery of the Yangshaocun Site)," *Yangshao wenhua yanjiu (Studies on Yangshao Culture)* (Beijing: Cultural Relics Publishing House, 1989), p. 330.
10. Laoguantai Culture, which was found at the Laoguantai site, Huaxian, Shaanxi Province for the first time in the 1950s, dates to 8500-7000 BP.

11. Majiayao Culture, which was found at the Majiayao site, Linyao, Gansu Province for the first time in the 1920s, dates to 5300-4000 BP. This culture can be divided into three types: Majiayao Type, Banshan Type, and Machang Type.

12. Davdison Black, "Gansu shiqian renzhong shuolüe (The Prehistoric Races in Gansu)," tr. Li Ji, *Dizhi zhuanbao (Specialized Papers in Geology)*, 1.5 (Beijing: 1925).

13. Yan Yan, "Gansu Qijia wenhua muzang zhong tougu de chubu yanjiu (Preliminary Study on the Skulls of Qijia Culture Tombs in Gansu)", *Kaogu xuebao (Journal of Archeology)*, 9 (1955).

14. Pan Qifeng and Han Kangxin, "Liuwan mudi de rengu yanjiu (A Study on the Human Bones in Liuwan Cemetery)," *Qinghai Liuwan (The Liuwan Site in Qinghai [Kokonor])* (Beijing: Cultural Relics Publishing House, 1985), Appendix 1, pp. 261-303.

15. and 41. refer to the following papers:

Han Kangxin and Pan Qifeng, "Gudai Zhongguo renzhong chengfen yanjiu (A Study of the Composition of the Ancient Chinese Races)," *Kaogu xuebao (Journal of Archeology)*, 2 (1984)

Pan Qifeng and Han Kangxin, "Woguo xinshiqi shidai jumin zhongxi fenbu yanjiu (A Distributional Study of the Races of the Neolithic Inhabitants in China)," *Kaogu yu Wenwu (Archeology and Cultural Relics)*, 2 (1980).

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17. *Ibid.*

18. See note 7.

19. The sites containing painted pottery in eastern Xinjiang are regarded as late Neolithic sites or Neolithic and Chalcolithic sites. See Xinjiang wenwu kaogu yanjiusuo (Xinjiang Institute of Archeology and Cultural Relics), "Xinjiang wenwu kaogu gongzuo de xin fazhan (New Developments in Xinjiang Archeological Work)," *Wenwu kaogu gongzuo shi nian: 1979-89 (Ten Years of Work on Archeology and Cultural Relics: 1979-89)* (Beijing: Cultural Relics Publishing House, 1990).

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22., 37., and 40. Li Shuicheng, "Siba wenhua yanjiu (A Study of Siba Culture)," in Su Bingqi, ed., *Kaoguxue wenhua lunji (Selected Works on Archeological Culture)*, vol. 3 (Beijing: Cultural Relics Publishing House, 1993).

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31. Han Kangxin, "Xinjiang Hami Yanbulake gumu rengu zhongxi chengfen zhi yanjiu (Studies on the Racial Elements of the Human Bones from the Yanbulaq Cemetery in Hami, Xinjiang)," *Kaogu xuebao (Journal of Archeology)*, 3 (1990).

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33. and 46. Han Kangxin, "Xinjiang Kongquehe Gumugou mudi rengu yanjiu (Anthropological Studies on the Human Bones from Qäwrighul [Gumugou] on the Könchi [Kongque] River, Xinjiang)," *Kaogu xuebao (Journal of Archeology)*, 3 (1986).

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37. See note 22.

38. There has been a small quantity of materials published about the Linya Cemetery, for which see the following items:

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39. C14 dates for sites belonging to Siba Culture include the following:

<u>Specimen Number</u>	<u>C14 Dates</u>	<u>Calibrated</u>
ZK-408	3300±85 BP	1710±135 BC
ZK-409	3485±100 BP	1940±120 BC
BK-77008	3245±100 BP	1630±145 BC
BK-77010	3350±100 BP	1770±145 BC
BK-87059	3550±40 BP	1895±100 BC
BK-87060	3490±70 BP	1820±125 BC
BK-87063	3300±80 BP	1580±130 BC
BK-89028	3220±60 BP	
WB89-7	3490±100 BP	1820±145 BC

40. See note 22.

41. See note 15.

42. See Xinjiang Weiwuer Zizhiqu Cehuiju (Xinjiang Autonomous Region Survey Bureau), ed., *Zhonghua Renmin Gongheguo Xinjiang Weiwuer Zizhiqu dituji (The People's Republic of China Xinjiang Autonomous Region Atlas)* (1995).

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48. See note 45.

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50. Yin Shengping, "Xi Zhou bang diao rentou zhongzu tansuo (Investigation Concerning the Race of Two Western Zhou Human Heads Carved out of Clam Shell)," *Wenwu (Cultural Relics)*, 2 (1986), 46-49; Victor H. Mair, "Old Sinitic *mʷag, Old Persian *magus*, and English 'Magician'," *Early China*, 15 (1990), 27-47.

51. Li Pan, "Gansu Minle Xian Donghuishan xinshiqi yizhi gu nongye yicun xin faxian (New Discoveries Concerning Ancient Agriculture at the Neolithic Site of Donghuishan, Minle, Gansu)," *Nongye kaogu (Agricultural Archeology)*, 1 (1989), 56-65.

52. C14 dates associated with wheat from Donghuishan:

a. (black carbonized soil from the site) 3050±159 BC (calibrated); cf. Li Pan: "Gansu Minle Xian Donghuishan xinshiqi yizhi gu nongye yicun xin faxian (New Discoveries Concerning Ancient Agriculture at the Neolithic Site of Donghuishan, Minle, Gansu)," *Nongye kaogu (Agricultural Archeology)*, 1 (1989), 56-65.

b. (carbonized wheat) 2280±250 BC (uncalibrated); source: Chronology Lab of the Department of Archeology at Peking University.

c. (carbonized stems) 4740±155 BP (calibrated); samples taken in 1990 by Wang Yiman of the Institute of Geography of the Chinese Academy of Social Sciences. See Wang Yiman, "Donghuishan yizhi de huanjing yiyi yu Hexi Zoulang shiqian wenhua xingshuai (The Significance of the Environment at the Donghuishan Site and the Rise and Fall of Prehistoric Cultures in the Gansu Corridor)," in Yin Zesheng, Yang Yichou, Wang Shouchun, ed., *Xibei ganhan diqu quanxinshi huanjing bianqian yu renlei wenming xingshuai (Environmental Transformations of the Arid Regions in the Northwest during the Holocene Epoch and the Rise and Fall of Human Civilization)* (Beijing: Geology Publishing House, 1992).

53. The characteristics of the Donghuishan site (cemetery) indicate that it belonged to the Siba Culture. Its absolute age is 1820±145 BC, but the absolute age of the wheat collected at this site is 3000-2500 BC.

54. Many sites of Majiayao Type were found in the eastern part of the Gansu Corridor in the area around Wuwei City at Wangjingzhai, Mozuizi, Wubashan, and so forth.

55. The Henan Province Luoyang cultural relics team found specimens of wheat at the Zaojiaoshu site, Luoyang, which belongs to the Erlitou Culture. Its absolute age is roughly comparable to the Xia Dynasty (I am grateful to Zhao Chuqing for providing this information).

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60. *Ibid.*

61. *Ibid.*

62. *Ibid.*

63. See the following articles:

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FIGURES

__Figure 1: Group 3 Tomb at Yanbulaq

__Figure 2: Relics of Yanbulaq Culture

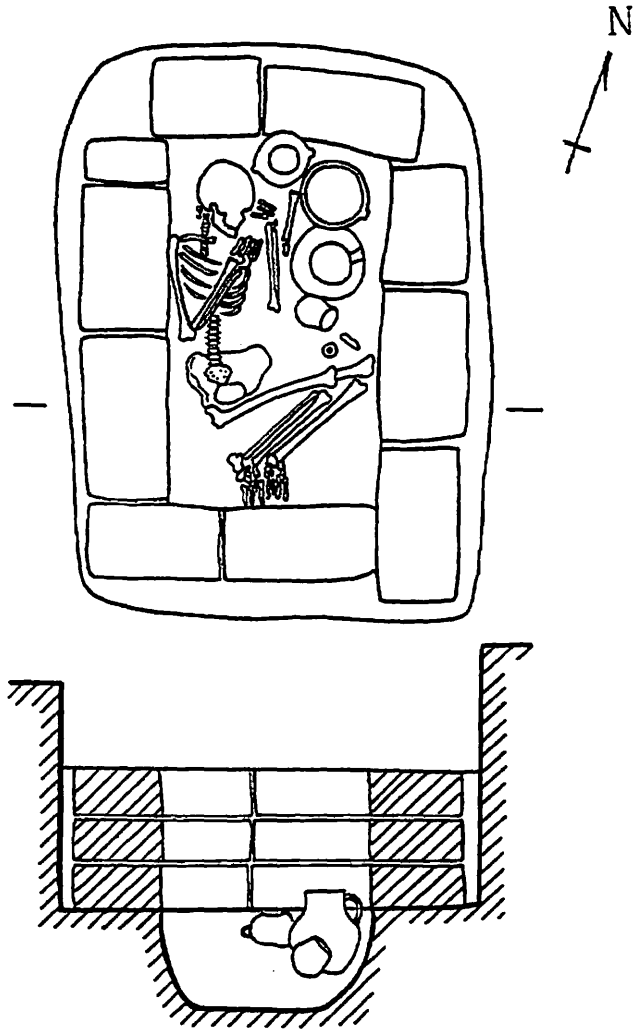
__Figure 3: Ceramics from Linya Cemetery

__Figure 4: Painted Pottery from Linya Cemetery

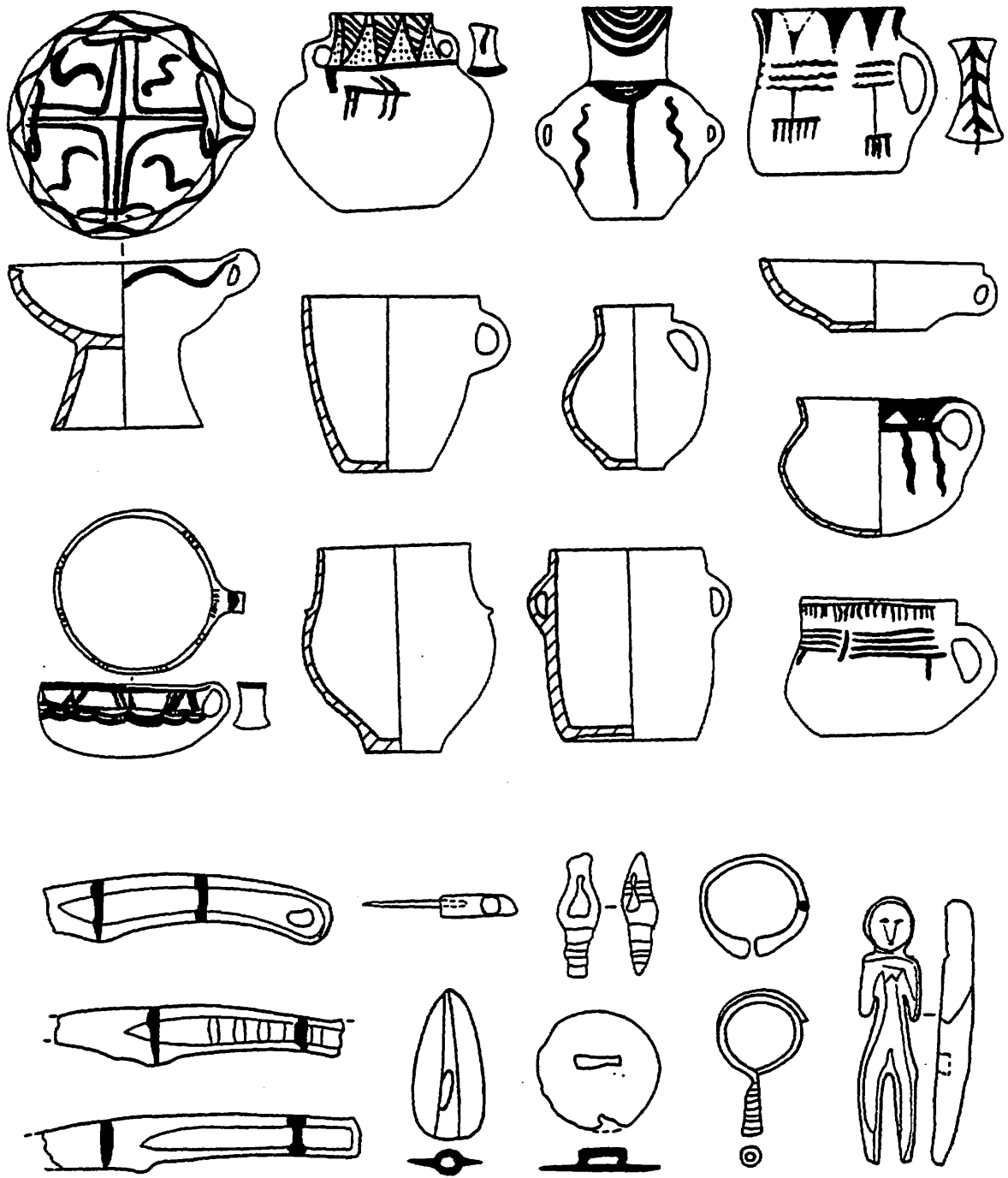
__Figure 5: Comparison of Typical Ceramics of the Siba Culture (rows 1 and 3) and from the Linya Cemetery (rows 2 and 4). The last item is a golden earring.

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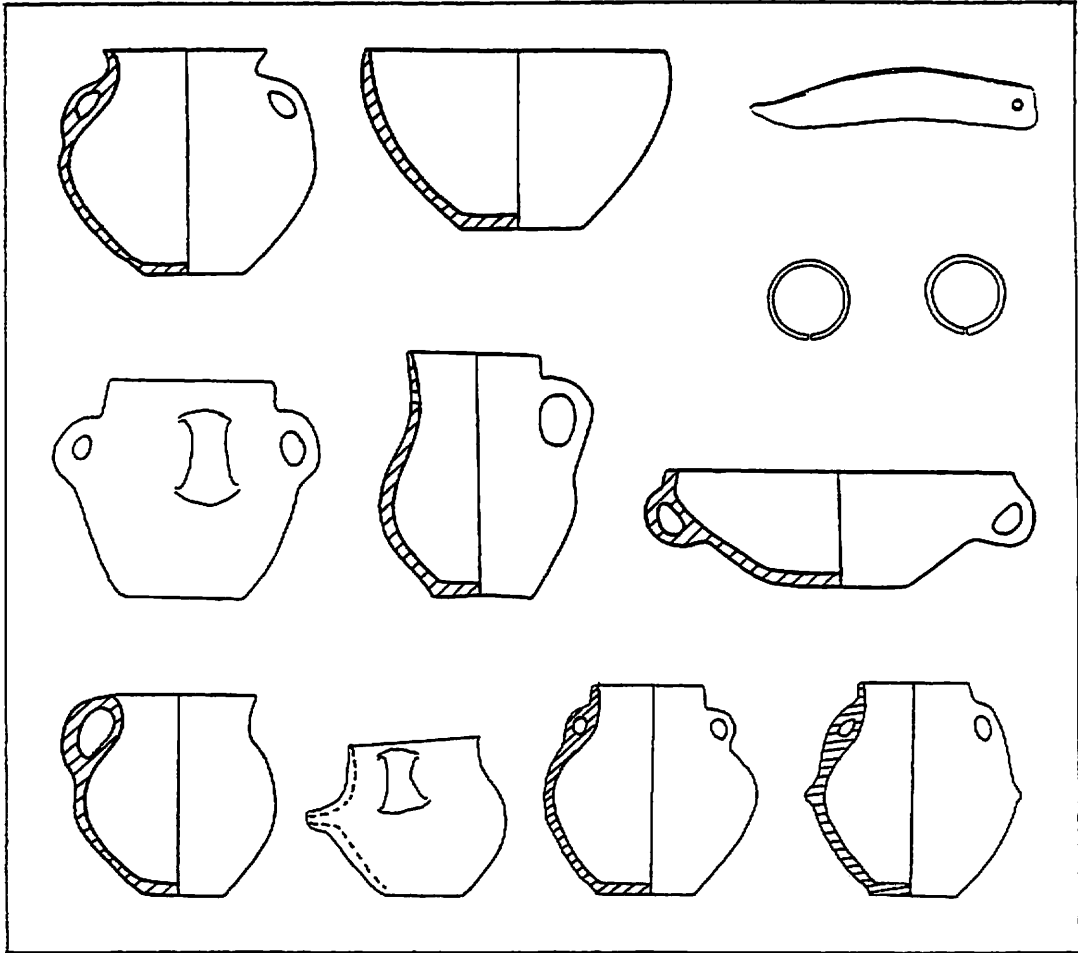
This research was supported by funds from the National Natural Sciences Foundation (Project Number: 49771014).



图一
Fig. 1

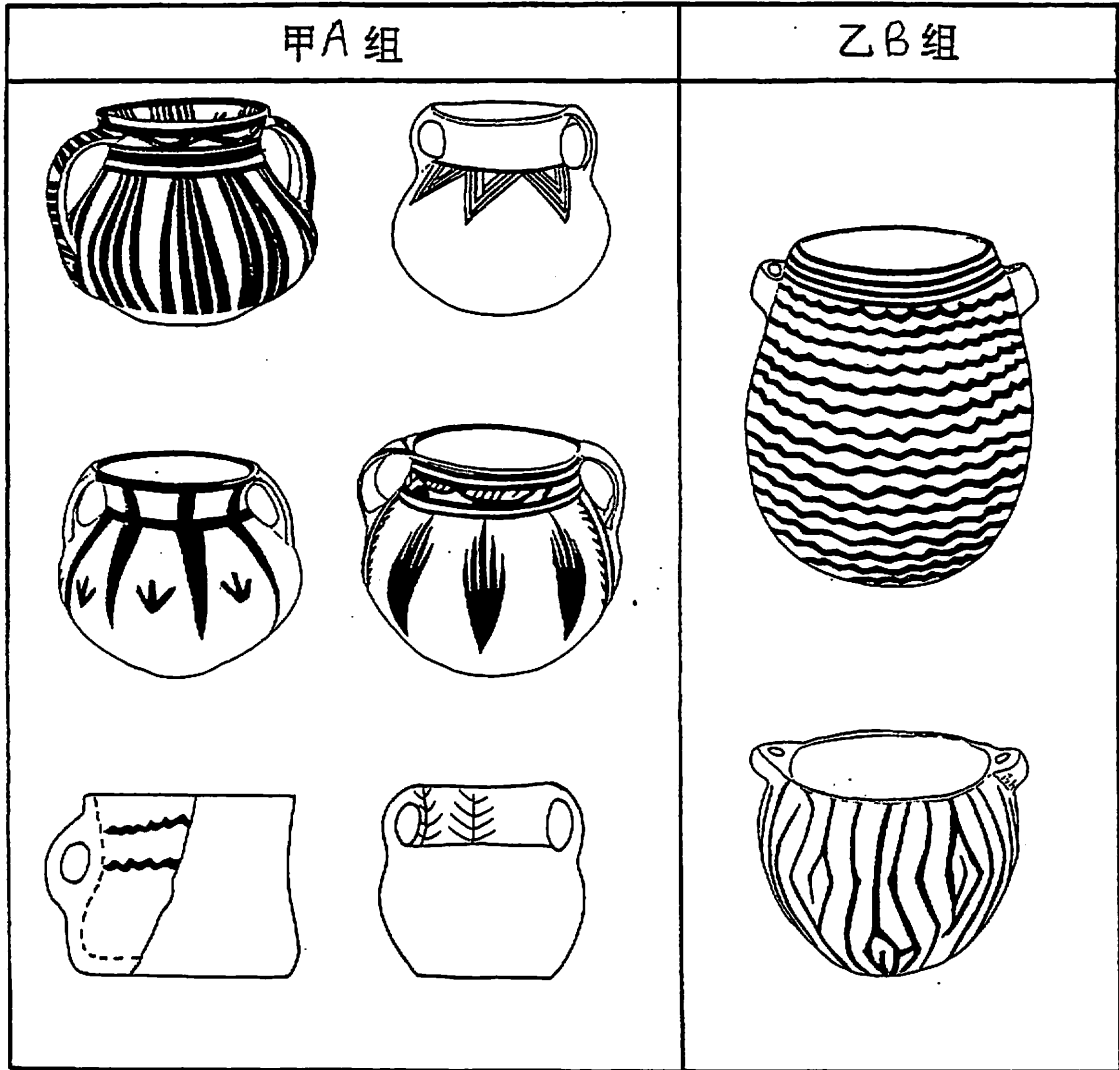


图二： 焉不拉克文化遗物
Fig. 2



图三： 林雅墓地出土陶器

Fig. 3



图四： 林雅墓地出土彩陶
Fig. 4

	彩陶双耳罐	彩陶双耳罐	四系罐	双耳罐	
四坝文化					
林雅墓地					
	尊形器 (杯)	双耳盆		单耳罐	金耳环
四坝文化					
林雅墓地					

图五：四坝文化与林雅墓地典型器比较

Fig. 5

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