

THE BRONZE AGE IN EASTERN PARTS OF CENTRAL ASIA¹

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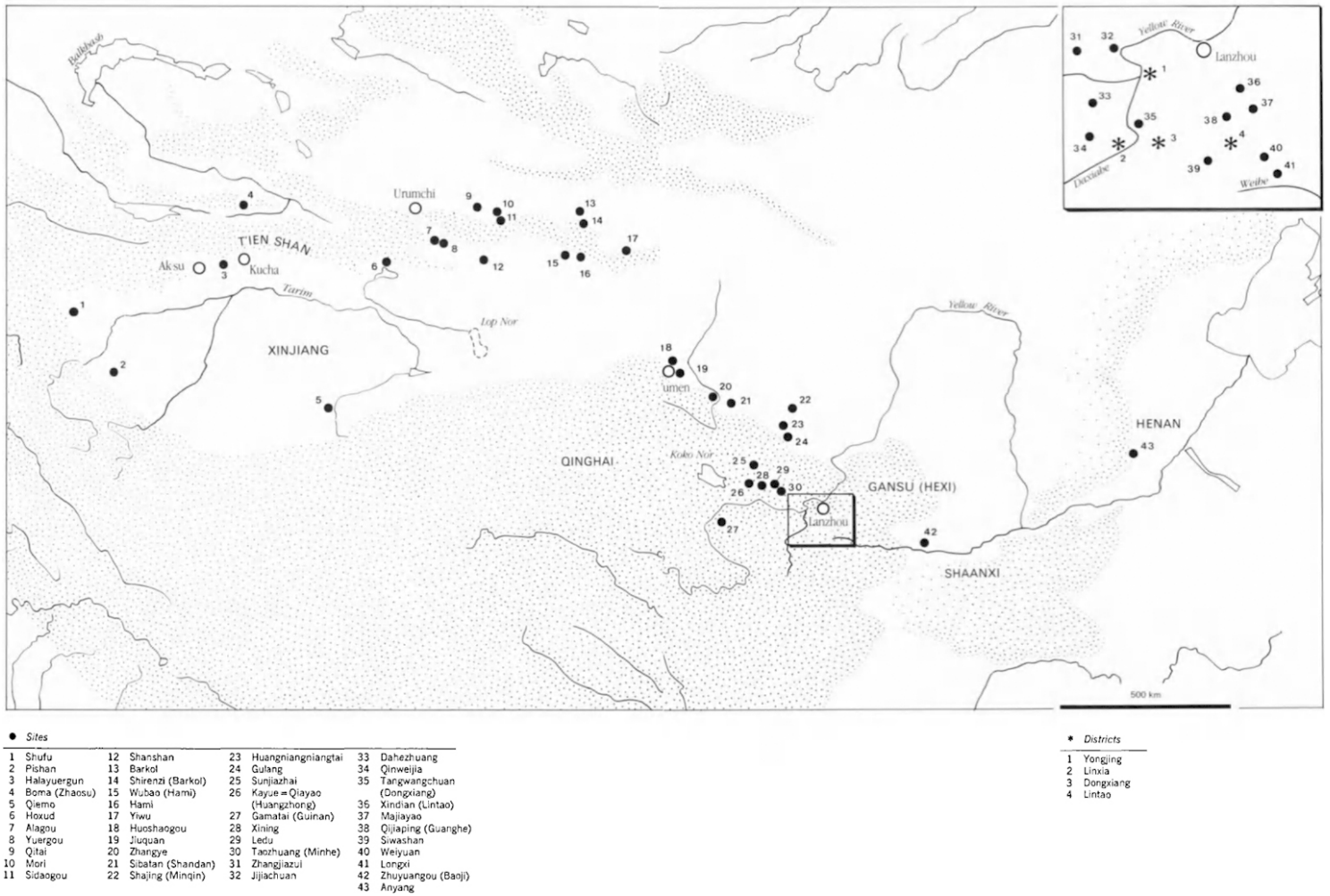
IN contrast to the Neolithic, which is fairly uniform in the whole of western China, Bronze Age cultures show important local variations. There existed an interchange between these cultures which influenced each other and were in contact also with neighbouring regions lying farther east. Because of the wide scope of such cultural exchanges and the influence on them of the nomadic cultures of the steppe, these cultures have often been mentioned in archaeological works. Unfortunately, as a result of an imbalance in archaeological research, there are gaps in our knowledge of the area. Because of this limitation only a brief introduction to the material available can be presented here.

Early cultural remains in Gansu province

THE QIJIA CULTURE

The Qijia culture is so named because it was discovered in 1924 at Qijiaping in Guanghe county, Gansu province. A total of over 350 sites of the Qijia culture have been found superimposed on the Majiayao culture. Moreover, quite a large quantity of metal ware, mostly copper objects, including some bronzes, have been excavated from various sites in

¹ See Map 10.



MAP 10. Bronze Age sites in eastern parts of Central Asia.

Gansu province and at Gamatai in Qinghai province. They belong to the transition period from the Chalcolithic to the Bronze Age. The C14 dates give a range of 2200–1600 B.C. (calculated according to the 5730 half-life, similarly hereinafter, or 2630–1800 B.C. with MASCA calibration). The Qijia culture is contemporary with, or later than, the Longshan culture of the Yellow river. Characterized by painted pottery, it originated possibly from the Longshan culture in Shaanxi province. As the Qijia culture kept expanding westward, it inherited certain features, such as the making of painted pottery of the Majiayao culture.

The emergence of metallurgical technology is an outstanding achievement of the Qijia culture. The remains at Huangniangniangtai, Dahezhuang, Qinweijia, Qijiaping and Xiping in Gansu province and at Gamatai in Qinghai province, have yielded some fifty small pieces of bronze, such as knives, chisels, axes, awls, mirrors, finger-rings and other ornaments. Analysis of twenty-five pieces shows that they differ from each other in terms of

metal elements and metallurgical treatment. Among the twenty-five pieces, those made from copper are the most numerous, accounting for 64 per cent of the total. There are alloys of copper and lead, the lead content being 5 per cent, of copper and tin, the tin content being 10 per cent, and of copper, lead and tin, though the number of artefacts made of these alloys is not great – only three, accounting for 12 per cent of the total. Copper objects such as knives, awls, chisels, finger-rings and round decorative ornaments were forged. Hammering impressions can be clearly seen on these artefacts. Some of the knives and axes were cast in open moulds, while bar-ornaments with designs on them, socketed axes, and mirrors as well as some bronzes were cast in more advanced composite moulds. Forging and open-mould casting are technical features of the copper objects, suggesting that although metallurgical treatment had begun to take shape, it still remained primitive. On the other hand, the socketed axes and mirrors cast with composite moulds – a more advanced technology – might prove that the later period of the Qijia culture had already entered into the Bronze Age. Of particular interest is a bronze mirror from Tomb No. 25 at Gamatai. The mirror was found *in situ* under the chest of a skeleton in a facedown position. The handle of the mirror is incomplete but there are two small holes drilled on its rim; it was probably used as a pendant. The mirror has a diameter of 9 cm, and is 0.4 cm thick. With a smooth and even surface, the mirror has its back mounted within the raised periphery of its concentric circle. The back is decorated with triangular patterns formed by oblique fine threads. The casting, shape and decorative patterns of the mirror are signs of advanced workmanship, bearing a close resemblance to the Shang bronze mirrors unearthed from the Fuaho tomb in Anyang, Henan province.

Techniques of pottery-making are marked by a fine red ware and a coarse reddish-brown ware. There are also a few pieces of grey ware. They are handmade, there being no evidence of wheel-made ware. The surface of most pottery vessels was rubbed smooth by wetted hands and only a small number of pieces were burnished. In some cases, the fine ware has a white slip. Besides undecorated pottery, the decorations mainly include cord and basket-impressions. In a few cases, they are decorated with applied ornaments and comb-marks. Painted pottery is rarely seen. Only the double-handled *guan* vases are painted with triangular designs consisting of lines and checks, which, though plain and simple, retain obvious influence of the Majiayao culture. The shapes include *pen* basin, bowl, cup, stemmed *dou* vessel, double-handled *guan* vase, sometimes with a long neck, and others like *li* tripod and *be* vessel. Though the Qijia culture has its own stylistic characteristics, it has very much in common with the Longshan culture in Shaanxi. For example, the *li* tripod and *be* vessel as well as cord impressions, have basket impressions. The regional features of the Qijia culture, however, followed the elements of the Majiayao culture.

THE SIBA CULTURE

The Siba culture was discovered in 1984 at Sibatan in Shandan county, Gansu province. It is so named because the 'Siba-type' pottery vessels unearthed here are different from those excavated at other sites in Gansu. Pottery of this kind is found mainly to the west of the Gansu corridor, in places like Yongchang, Shandan, Minyue, Zhanye, Jiuquan, and Yumen counties. The area of distribution of the Siba culture is bordered on the east by that of the Qijia culture, identical with the later period of that culture. The Siba culture is a separate entity that developed independently. Only a little excavation of remains of the Siba culture has yet been done, and we may take the site at Huoshaogou in Yumen, particularly grains of millet stored in large pottery jars found in the tombs, and the presence of pigs, all direct proof of activities of agricultural production. Remains of sheep, numerous though they are, among those of domestic animals, suggest a developed animal husbandry but the economy was based on agriculture.

Judging by the features of human skeletons, the population was of Mongoloid race, and similar in physique and build to people of the Neolithic Age in Gansu and Qinghai provinces.

Mortuary objects from the Huoshaogou tombs can be divided into three groups, each belonging to the early, middle or late period, according to their stratigraphic overlaps and pottery styles. The small double-handled *guan* vases of the painted pottery are commonly seen among those of the early period. Big double-handled *guan* vases belong to the middle period and the single-handled painted pottery *guan* vases belong to the late period. The C14 date available indicates that tomb No. 84 dates to 1500 ± 700 B.C. (or 1700 B.C. with MASCA calibration) and House No. 42 to 1390 ± 100 B.C. (or 1600 B.C. with MASCA calibration). Both are contemporaneous with the Shang Dynasty of the central plains. Therefore, exchange between the two cultures cannot be ruled out.

Later cultural remains in Gansu and Qinghai provinces

THE XINDIAN CULTURE

The Xindian culture is so named because of its being discovered in 1924 at Xindian in Lintao county, Gansu province. Soon after its discovery, because of a series of new finds, the Xindian culture was divided into two sections, A and B. These sections differ from each other in cultural style as well as in geographical distribution. Even when they border each other, they show different stylistic features. Of particular interest is that in Section B there are associated pottery vessels of the Tangwang-type. Therefore, Sections A and B do not

seem to be variants of the same culture. The latter should be classified into the Tangwang culture. Our discussions here will only be limited to Section A.

The Xindian culture appears in Gansu in the lower reaches of the Taohe, Daxiahe and Huangshui rivers, all tributaries of the Yellow river. It extends westward to the east of Ledu county, Qinghai province, and its remains are found also in Weiyuan and Longxi counties in the upper reaches of the Weihe river.

Remains of the Xindian culture have been found in eighty to ninety places, but systematic excavations have been conducted only at Jijiachuan in Yongjing county. The site covers an area of about 10,000 m² overlying the Qijia culture. Only one dwelling site has been found. It is a rectangular semi-subterranean structure, with a sloping doorway on the western side and a round fireplace at the centre. The dwelling site is on the whole similar in shape to that of the Qijia culture. A total of forty-one storage pits have been unearthed, most of which are round. An oblong shaft, earthen pit-tomb has also been found. The skeleton, identified as male, lies in a flexed sideways position. Near the head are a pottery *pen* basin, a pottery *guan* vase and the skeleton of a sheep. Tombs have also been excavated with other remains, but the burial rites vary. For instance, there are extended supine and secondary burials.

Pottery vessels are all hand-made and coarse. Most of them consist of reddish-brown ware with sand-powdered potsherds. There are also a few red and grey sherds. The decorations mainly include cord impressions and many sherds are decorated with coloured paintings. However, they are coarsely polished. In some cases, paint is applied directly to the cord impressions. It was a usual practice to apply a white slip to pottery vessels before painting. Most of the vessels are painted black and some are painted in both black and red. Designs commonly used are composed of broad bands, zigzags, double-hooks or meanders. Some vessels were first painted with red bands on which decorations were then applied. In some cases, in between the bands, they were painted with sun patterns, human figures and animals such as dogs and deer. Vessels are characterized by their round concave bases, and include one-eared cups and double-handled *guan* vases as well as *li* tripods and vessel covers with handles. A few double-handled *guan* vases are saddle-shaped, similar to pottery vessels of the Siba culture.

Stone implements have been discovered in large quantities, mostly chipped, including discs, axes, spades, adzes, chisels, knives, mortars and pestels, spindle-whorls, and net weights. Some of these implements are both chipped and polished, most of them being stone knives with notched ends.

Among bone implements, spades made from the shoulder-blades of animals are the most numerous. Others include awls, needles and arrowheads. Most of the above-mentioned

implements are farm tools, indicating that the economy was based on agriculture. Among the bones found, those of sheep are the most numerous, followed by those of pigs. There are also bones of other animals such as oxen and deer. All this, together with arrowheads and net weights, indicates that animal husbandry, fishing and hunting still played a certain role in the overall economy.

Some small bronzes have been discovered at Huizui in Lintao county. They include knives, awls and buttons. The shape and make of the knives has improved, an indication that this culture belongs to the Bronze Age.

Stratigraphic evidence shows that the Xindian culture is preceded by the Qijia culture. Its pottery *li* tripods and bronze knives are very similar, in shape and make, to implements of the Western Zhou dynasty. The meanders on the painted pottery of the Xindian culture bear a close resemblance to the decoration of the bronzes of the Western Zhou dynasty. As for the pottery with a dropping mouth, it might have been influenced by the Siba culture, whereas the shape of other vessels and the decorative patterns on the painted pottery reveal correlations with the Tangwang culture (for example, Section B of the Xindian culture). All these cultures belong almost to the same period. In short, the remains represented by the Xindian culture are those of a minor group who might have been the descendants of a branch of the ancient Qiang people, who lived in Gansu and Qinghai at the time of the Western Zhou and with whom they entertained relations.

THE TANGWANG CULTURE

The Tangwang culture was discovered in 1956 at Tangwangchuan in Dongxiang autonomous county, Gansu province. Pottery first discovered here falls into two groups. One is marked by the painted pottery with a purplish-red slip and whorl patterns, known as the Tangwang-type pottery. The other is painted with a white slip and with decorations similar to those of the Xindian culture. Similarities between the two types of vessel were noticed at the time of their discovery. Because of the lack of stratigraphic evidence, for a time the two were treated differently, as if they belonged to two different cultures. The Tangwang-type pottery was first discovered as early as the 1920s, but it was at that time mistakenly regarded as belonging to the Machang-type pottery of the Majiayao culture and was not recognized as of special significance.

The Tangwang culture is distributed mainly along the Yellow river where Gansu and Qinghai provinces meet, along the Huangshui river and on the lower reaches of the Daxiahe and Taohe rivers. Specifically, its range of distribution extends to the Dongxiang autonomous county and westward to Ledu county, Qinghai province. Within this area, the Tangwang-type pottery appeared associated with Section-B pottery of the Xindian

culture. In the area between the west of Ledu county and Xining, Tangwang is found associated with pottery of the Kayue type, thus creating a new complex. The two might be two different types of the same culture and could be named Zhangjiazui-type and upper Sun-jiazhai-type respectively.

Stratigraphic evidence obtained at Zhangjiazui in Yongjing county, Gansu province, reveals that the Tangwang culture is later than the Qijia culture. Tomb No. 333 at upper Sunjiazhai has yielded a C14 date indicating that the Tangwang culture dates back to 990 ± 90 B.C. (or 1110 B.C. with MASCA calibration), the time of the Western Zhou dynasty. This has also been proved by a number of cultural relics.

Dwelling sites can be represented by the Zhangjiazui remains, covering an area of 10,000 m². The cultural deposits are more than 1 m thick. A total of 165 storage pits have been unearthed, all crowded together suggesting a stable settlement. A large quantity of farming implements made of stone or bone; bones of sheep, oxen, pigs, dogs, horses and other animals have been discovered. All this indicates that the economy was one based on agriculture. The presence of bones of deer show that the animal was intensively hunted. Tombs are represented by those unearthed at upper Sunjiazhai. Of all the 200-odd tombs excavated here, most are shaft earthen pits. There are also some catacombs. Large tombs are over 3 m long. There are morticed wooden coffins, rectangular and trapezoidal in shape. Secondary burials are commonly seen, skeletons being put together at one side of the tomb. Only a few of the dead lie in an extended, supine position. Mortuary objects are mainly pottery, but include stone and bone implements and bronze. Relics unearthed also include gold ear-rings, gold and stone replicas of cowrie shells, agate and turquoise beads. Tombs of the Zhangjiazui-type were unearthed at Taozhuang in Minhe county, Qinghai province. They are similar in structure to those at upper Sunjiazhai, but extended supine burials predominate, while secondary burials are quite rare. Burial objects consist mainly of pottery, but also include a few stone tools and bone implements. The four tombs unearthed at Yatou in Dongxiang autonomous county, Gansu province, are also of extended supine burials.

Among vessels, painted pottery is the most distinctive, being mostly coarse red ware with powdered sherds as a temper. They have a burnished surface and a slip. They are classified into two different kinds according to their decoration and shape. One is known as the Tangwang-type pottery, which is coated with a purplish-red slip, painted in black, and decorated mainly with spirals, occasionally interspersed with S-, N- or X-shaped designs, as well as parallel lines on the belly. The forms of these decorations are peculiar to this group and are rarely seen in other cultures. The other type is known as Section-B pottery of the Xindian culture. Vessels of this group are made from fine paste, and their surface is not glossy, though burnished. Some of the cord impressions are not even rubbed smooth. The

vessels are generally coated with a white slip. Decorations are basically painted in black – sometimes in black and red – and are simple, consisting of bands, hyperbola patterns, N- and X-shape motifs, suns and crosses. The decorations and shapes of this type of pottery are in a way similar to those of the Xindian culture.

Chipped-stone implements include discs and knives. Polished implements include axes, knives, sickles, mortars, pestles and spindle-whorls. The T-shaped stone axe with a raised ridge, in particular, is typical. Bone implements include arrowheads, awls, needles, chisels, spades and combs. The spades are made of shoulder blades or mandibles of oxen or horses. Bone tubes carved with exquisite designs and bone plates marked with circlets have been found, but their usage is still unknown.

Bronze casting was quite developed. Archaeologists have found at Zhangjiazui fragments of the mouth and belly of a bronze container, an incomplete spearhead with an oblong socket, as well as some slag, which has been identified as bronze with a content of tin and lead.

Prismatic *ge* daggers, mirrors and animal-shaped castings have been unearthed at upper Sunjiazhai. An intact bronze *li* tripod has been found at Baojiazhai in Xining city, Qinghai province. It might have been cast during this phase of the Tangwang culture.

The formation of the Tangwang culture is indeed a new discovery. Further studies are needed to determine its character and category. But it is evident that it is closely related with the Xindian and Kayue cultures. As tombs of the Tangwang culture have been excavated above those of the Kayue culture, and its pottery vessels absorbed certain elements of the latter, the Tangwang culture is probably posterior to the early period of the Kayue culture. The fact that the areas of the Tangwang and Xindian cultures overlap and that pottery vessels of both bear certain similarities, suggests either the correlation or the coexistence of the two. The decorations on the Tangwang-type painted pottery exerted certain influence on the painted pottery in Xinjiang.

THE SIWA CULTURE

The Siwa culture, discovered in 1924 at Siwa Shan in Lintao county, Gansu province, is divided into two types – Siwa and Anguo. The former is distributed along the Taohe river and the latter along the Weihe river. Apart from the difference in their geographical location the two might also represent different time-spans, the Siwa-type identical with or being slightly earlier than the Western Zhou dynasty while the Anguo-type being more or less contemporaneous with it. Archaeological investigations are confined only to the excavation of large sites covering an area of 30,000 to 40,000 m². The cultural layer is over 3 m deep at its thickest point. Of the relics collected, chipped-stone implements are

predominant. Axes and knives are similar to those of the Xindian culture. The settlements seem to have been stable, their economy based on agriculture. Sheep bones unearthed from tombs show the importance of animal husbandry in the overall economy.

Excavated tombs are quite numerous, totalling more than 120. Most are small-sized shaft-pit graves, some provided with niches. There are also vestiges of outer coffins in a few large tombs. The tombs contain extended supine burials, secondary burials and cremation burials.

As far as cremation is concerned, the ashes of the dead are contained in pottery urns covered with stone slabs. Traces of human sacrifice have been found in a few large tombs. Burial objects are mainly pottery vessels, varying in number from one or two to four or five and even to as many as over seventy pieces in a few instances. Some tombs have no mortuary objects at all. In small tombs, there are stone axes, stone knives, pottery spindle-whorls and bronze bracelets. In large tombs, there are also bronze weapons and ornaments, and turquoise and agate beads. Most of the pottery is of coarse red ware. Powdered sherds are frequently used as the temper for paste. There are also a few pieces of coarse grey ware. Pottery of the Siwa-type is marked by its plain surface and poor burnish, some vessels being decorated with applied ornaments. No painted pottery has yet been discovered. Pottery of the Anguo-type is also marked by its plain surface, some being burnished, some with cord impressions or traces of flattened cord impressions. The shapes of pottery vessels of both the Siwa- and Anguo-types are plain and simple, but differ from each other. For instance, *ding* tripods and lids for vessels of the Siwa type are not found among the vessels of the Anguo type; while *gui* vessels and stemmed *dou* vessels of the Anguo type are not seen among vessels of the Siwa type. Again the double-handled *guan* vases with drooping mouths, *bu* vases and *li* tripods, which are shared by both types, are not exactly the same as regards shape. Therefore, it is likely that pottery vessels of the two types belong to two different cultures; further study is needed.

The only bronze artefacts of the Siwa-type are bracelets made of long thin strips of sheet bronze. Bronze artefacts of the Anguo-type are quite numerous. They include *ge* daggers, spears, arrowheads, knives, bells and buttons. Weapons are identical in shape with those of the Western Zhou dynasty, from whence indeed some might have been imported directly.

The Siwa culture is distributed across an area bordering both the Xindian culture and the Western Zhou culture, thus facilitating cultural interflow between the three. For example, the stone implements and pottery vessels with drooping mouths of the Xindian culture are quite similar in shape to those of the Siwa-type, suggesting that they should belong to the remains of the two coexisting cultures. The discovery of pottery of the Anguo-type in the tombs at Zhuyuangou in Baoji city, Shaanxi province, and of bronze weapons in

tombs of the Anguo-type at Xujianian in Zhuanglang county, Gansu province, not only reveals the close ties between the two cultures, but also provides convincing evidence for the determination of the date of the Siwa culture.

The practice of cremation in the Siwa culture is a notable phenomenon. Literary records of the pre-Qin period all refer to such a practice by the Qiang. Considering the geographical distribution of the Siwa culture, we may infer that it had some connections with the Qiang.

THE KAYUE CULTURE

The Kayue culture discovered in 1924 in Huangzhong county, Qinghai province, was once classified under the Siwa culture. But new finds have identified it as a separate cultural system. Its remains are centred on the middle and lower reaches of the Huangshui river, extending eastward to the banks of the Yellow river in the border region of Gansu and Qinghai provinces. They have been found even around Lake Qinghai in the west. Over 200 early dwelling sites have been discovered in this area. Most have not yet been excavated. The basic conditions of Kayue culture are similar to other bronze cultures in Gansu province. Over 600 tombs have been excavated. That at Sunjiashai in Datong county, Qinghai province, is the richest in finds. Most of the tombs are oblong shaft-pit graves. Some are shaft catacombs. Burial rites vary, including extended supine burials, secondary burials, prone burials and joint burials of mother and child, as well as children's urn burials. The sizes of the tombs vary. The shaft catacombs are big and rich in mortuary objects, and wooden poles were used to seal up the entrance. The ordinary tombs are small with a few narrow chambers and a few mortuary objects. The difference between rich and poor is distinct.

Among burial pottery, coarse grey ware predominates while red ware made of fine clay is rare. As for the coarse ware, powdered sherds were frequently used as a temper. Most have red slip on the outside surface and inside the neck. Painted vessels are few. The decorations are simple and include stripes, meanders and triangles, all in red colour. They mostly have a small concave base with a ring-foot. It is assumed that the base was made first and the ring-foot attached later. This is a prominent characteristic of the Kayue culture. The pottery consists mainly of double-handled *guan* vases, but also some with two or four large handles. The *guan* vases with two large handles clearly show the influence of the Qijia culture.

Stone tools are mostly polished, including axes, knives, pestles and mortars. The bone implements include spades, needles, tubes, arrowheads and spindle-whorls. The bronzes include *ge* daggers, axes, knives, awls, arrowheads, rings, bells and buttons. Among the *ge* daggers with a socket, the two-winged arrowheads, and the plain-surface mirrors are

similar to their Western Zhou counterparts. Buttons have distinct characteristics, some are round and others are in clusters. They were probably used for decoration on clothes. Buttons are also found in the Shajing culture along the Gansu corridor. Other ornaments include turquoise, agate and amber beads, cowrie shells, stone and bone replicas of cowrie shells.

The remains of the Kayue culture are often superimposed on the Majiayao or Qijia cultures. This indicates its more recent date. Its bronzes are reminiscent of the Western Zhou, and provide good evidence of dating. Its relations with the Xindian and Tangwang cultures are not clear.

Kayue culture was probably contemporary with the later two. Since its duration was relatively long, they may not be similar in date and geographical distribution. For instance, at upper Sunjiashai, tombs of the Kayue culture are overlain by those of the Tangwang culture, showing their sequent relations. The Kayue culture, therefore, appears to be slightly earlier, being identical roughly with a period between the Western Zhou and Shang dynasties on the central plains. As far as the people living here are concerned, they also belonged to the ancient Qiang people.

THE SHAJING CULTURE

The Shajing culture discovered in 1923 at Minqin, Gansu province, is confined to an area from Gulang, Minqin, Yongchang to Zhangye in the Gansu corridor. Its remains are superimposed on those of the Machang type of the Majiayao culture. Red pottery is rare and stone tools are found to be associated with bronzes.

Remains and tombs are all found in the desert. Because of drifting sand, relics are mostly exposed above the ground. Liuhudong site in Minqin can be regarded as representative of this culture. Very little of the ash stratum is left. At some places, the ash layer exposed is 30 cm deep. Few tombs have been found. At this site, there is a citadel with an area of 50 × 50 m. Sandstone rocks were used for the foundation of the wall above which earthen walls were built. The height of the surviving walls is 1.5 m.

At Liuhudong forty-seven shaft-pit tombs have been found. Most contain extended supine burials. In some cases, the dead are found lying sideways in a flexed position with the head pointing to the north. Only one or two pieces of funerary pottery were found. Other burial objects include bronze knives and stone rings, turquoise pendants, cowrie shells and gold ear-rings. In one of the tombs a bronze arrowhead was found stuck into a vertebra showing that its owner died from battle wounds. Not far from the cemetery are the remains of a triangular citadel, with walls built of heavy sandstone rocks, in which Shajing relics were discovered. It is clear that the cemetery is close to the dwelling site. Among the

pottery, coarse red ware predominates. Some vessels are burnished on the surface, but traces of cord impressions and cloth patterns are still visible on the lower parts. Cord impressions are most commonly seen. There are also comb marks and incised impressions. As for painted pottery, vessels are generally coated with a red slip first and then painted in red. The decorations are simple, consisting mainly of parallel or criss-cross stripes and vertical triangles. There are also designs of diamonds, zigzags and birds. The typical vessels are round-bottomed *guan* vases with one or two handles and cylindrical mugs. There are also flat-bottomed *guan* vases and *li* tripods.

Stone tools, both chipped and polished, are roughly made. Stone axes, knives and arrowheads are also found. Bronze objects have been discovered in great number. The bronze ornaments, buttons with decorations, ornamental plates and tubes bear a close resemblance to their counterparts, characteristic of the nomadic population of the Inner Mongolian grasslands, a clear distinction of the cultural interflow and relations between the peoples of Shajing and the steppe. The relics collected also include axes, knives, two-winged arrowheads, prismatic arrowheads and undecorated mirrors.

The cultural characterization of the Shajing and Siwa cultures is similar, but the former is quite late in date. It is C14 dated to 560 ± 90 B.C. (780 B.C. with MASCA calibration), indicating that its absolute date as the lower limit is rather late, and this has been roughly born out by its relics. The citadel, used for defence, shows that the people of Shajing lead a sedentary life. The discovery of an oblong perforated stone knife fits in with the agricultural settlements of the time, at least suggesting that an agrarian economy already existed. Essentially agricultural, animal husbandry was still an important part of the economy. Skeleton identification demonstrates that the Shajing people were Mongoloid.

Cultural remains of Xinjiang

Cultural remains of the Bronze Age distributed in Xinjiang are divided into two groups: one is represented by pebble tools, the other by painted pottery, which mistakenly used to be ascribed to the Neolithic. Remains of the two groups may probably belong to different cultural systems and should be dated differently.

Remains of the pebble-stone culture are mainly distributed at the eastern foot of the Congling mountains in western Xinjiang, and around the area of Shufu and Aksu south of the T'ien Shan mountains. Rivers once flowed by the area, which now has been turned into a wasteland of sand-dunes. Because of wind erosion, stone tools and potsherds are mostly exposed on the ground. Occasionally a cultural layer of about 1 m deep can be found. This shows that the sites belong to settlements. Moreover, the natural environment of that time



FIG. 1. stone sickle from Aktala in Shufu Country, Xinjiang.

may have been superior to that of today. Thus agriculture was the main form of production, supplemented by fishing and hunting. Stone tools are mostly made from pebbles. The chipped stone tools are rather coarse and simple in shape, including discs and net weights with notches on both ends. Polished stone implements, exquisitely made, are found in great numbers. Among them, sickles (Fig. 1) and crescent knives used for cutting crops are most common. The crescent-shaped knives without any perforations show regional characteristics. Objects of this kind are seldom seen in other parts of Xinjiang. Although only one battle-axe has been found, its significance should not be overlooked. Mortars and pestles, balls and spindle-whorls have also been found. Only one bone arrowhead was found, finely made and with a sharp blade. The sites at Aksu, Shufu and Halayuergun have yielded copper objects – a knife and a circlet respectively. The pottery is of coarse sandy ware. Most vessels are undecorated, but in some cases they are decorated with incising, applied ornaments and basket impressions and, usually round the rim of the vessel, is a cluster of small holes. Pottery includes examples of *guan* vase, *fu* cauldron, *pen* basin, *pan* plate, bowl and cup, of which the round-bottomed vessels are most common, while flat-bottomed and ring-footed vessels are seldom seen. As sites of this type are rare it is very difficult to determine their date. Considering the discovery of copper objects, the similarities to stone tools of Shang and Zhou times and the lack of painted pottery, the objects in question probably belong to the tenth century B.C.

Cultural remains represented by the painted pottery have a wide distribution. They are centred on northern Xinjiang, for instance, the counties of Yiwu, Barkol, Mori, Qitai and around the cities of Urumchi and Yining at the northern foot of the T'ien Shan and in the counties of Hami, Shanshan, Hoxud and Kucha at the southern foot of the T'ien Shan; they are even found in south Xianjiang's Qiemo, Pishan, and around Lop Nor in the Tarim basin. Basically these remains belong to Bronze Age. In view of their wide distribution in space and time, Xinjiang's cultural remains probably comprise different cultural systems. But the lack of research and the fact that most data have not yet been published, prevent further analysis.



FIG. 2. Stone hoe from Kuktala in Shufu Country, Xinjiang.

The excavated sites and cemeteries are divided into two groups. Dwelling sites are generally located on mounds close to rivers. Several sites north of the T'ien Shan are located on terraces halfway up the hillsides or on hilltops. Usually, a river or a dried-up river bed can be found near by. Generally, each site is around 10,000 m² in area. The thickness of the cultural layers ranges from 1 to 2 m. Some foundations are found to be built of rocks or mud-bricks. Buildings were usually square. A large quantity of stone tools, pottery and small quantity of bronze objects have been unearthed at the sites. A large metre-long stone mortar has been found not far from the dwelling sites. Carbonized wheat grains have been found at Shirentzi in Barkol, showing that these were sedentary settlements and that the inhabitants engaged mainly in agriculture. Stone tools are mostly polished, including axes, battle-axes, adzes, pestles and mortars. Of particular interest is a heavy axe with a perforation. When fixed to a handle, it was probably used as a hoe (Fig. 2). Also found are bowls, mugs and other stone containers. Chipped tools, such as discs and choppers, exquisitely made, are often seen. Typical micro-blades have been found at Sidaogou in Mori county, indicating that some micro-liths must have remained in use during that period. Bronze socketed axes, knives, awls, arrowheads and ornaments are all of quite advanced quality.

On the whole the pottery is sandy-red coarse ware. Black ware is rarely found. Pottery vessels usually have a plain surface and rough burnish. Their colours in the patterns are quite noticeable. Incised impressions and comb marks are rarely seen. It is notable that there are also clusters of holes along the rims of some vessels, closely resembling those found at Shufu county in western Xinjiang. Vessels of painted pottery were first coated with red slip, then painted in black or red. Usually the two colours were not used together, and the decorations are not clear. The designs are quite simple, including triangles, stripes, zigzags, wavy lines, impressed checks and whorls. Triangles or triangular designs predominate. The rim or the belly of the vessel is often decorated with designs and interspersed with multiple zigzags and wavy lines between parallel stripes, used as ornamental bands. The inside of the rim is decorated with triangles, a unique stylistic feature of these vessels, with parallels in the Shajing culture of Gansu. The whorl pattern is similar to that of the



FIG. 3. A tomb unearthed at Wubao in Hami County, Xinjiang.

Tangwang culture. The handles, especially of the painted pottery unearthed at Sidaogou in Mori, are decorated with a stylized S-motif, almost the same as that appearing in the Tangwang culture. The shapes are simple, consisting mainly of *guan* vase, *hu* vase, *fu* cauldron, *pen* basin, *pan* plate, bowl and mug. Most vessels have one or two handles, many of them having a round base. The paste and decoration of the painted pottery fully show that the Xinjiang material is closely related to the bronze cultures of the Gansu-Qinghai region.

Cemeteries of this period can be represented by those found at Wubao in Hami and at Yuergou and Alagou in Urumchi. The latter include some tombs of a later date. Twenty-nine closely clustered oblong, round-cornered, shaft-pit tombs have been excavated at Wubao (Fig. 3) in Hami. They are 1.4 m long, 0.8 m wide and about 1 m deep. The bodies lying on their side in a flexed position were covered with wood or mud-bricks. Apart from a few personal belongings made of leather and wool, mortuary objects are quite poor.

In the areas of Yuergou and Alagou in the city of Urumchi seventy-eight tombs have been discovered. All are shaft pits with stone chamber walls built of pebbles and covered with poles. The number of skeletons in each tomb varies from a few to dozens. They lie layer upon layer. Sometimes there are three or four layers of skeletons. Both extended supine burials and fractional burials are found in the tombs, together with bones of horses and sheep. The people buried had long hair coiled and put in silk hair-nets. The skeletons

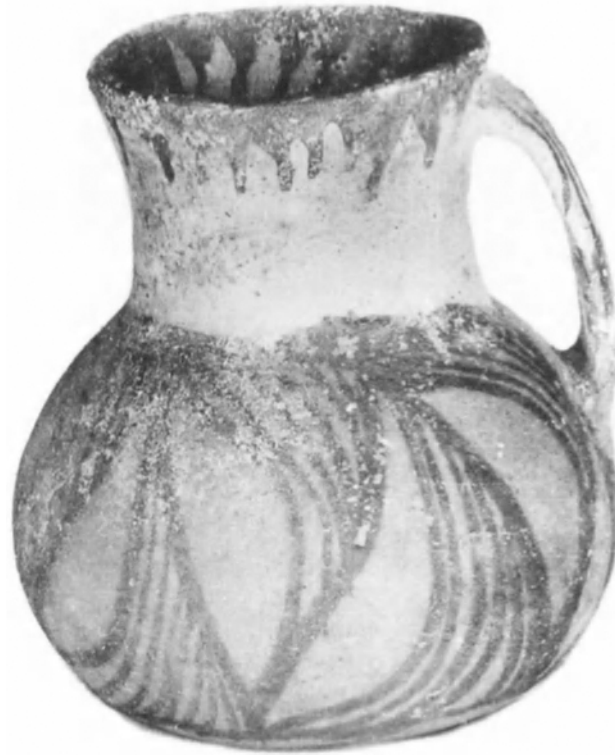


FIG. 4. Painted pottery *guan* vase from Yuergou in Urumchi County, Xinjiang.

are partly Mongoloid and partly Caucasian. However, further study is needed to discover the relationship between them. Among the mortuary objects pottery, mostly of the painted type, predominates (Fig. 4). Most vessels were first coated with a red slip and then painted in black or red. Their designs include triangles, triangular checkers and whorls, also geometrical designs made up of parallel vertical lines or parallel slanted short lines. There are also stone tools, cowrie shells, bone carvings, strings of stone and bone beads and small bronze articles. A few later tombs have yielded small iron objects. The mortuary objects vary greatly in composition and shape. For instance, painted pottery is seldom or not at all found in the later tombs. Instead, there appear stemmed pottery *dou* vessels, lacquer-ware, and silk articles originating in the central plains. The early tombs are contemporary with the Spring and Autumn period, while the later tombs are contemporary with the Warring States period.

Remains represented by painted pottery can be further confirmed by C14 dating. For instance, the two C14 dates available for the Sidaogou finds at Mori give a range of about 900–600 B.C. (or 950–740 B.C. with MASCA calibration). The five C14 dates for the Wubao cemetery in Hami range between 1200–900 B.C. (1380–950 B.C. with MASCA calibration). The two C14 dates available for the two early tombs of Yuergou in Urumchi indicate a date

of 700 B.C. (800 B.C. with MASCA calibration). But the absolute date for the lower limit of Xinjiang's painted pottery is quite late. Vessels of painted pottery appear not only in tombs at Yuergou and Alagou during the Warring States period, but extended to early Han times, as in the tombs of Wu-sun at Boma in Zhaosu county. It is evident that the painted pottery in Xinjiang was in use for a long time and is shared by different cultural systems. The tombs reveal distinctly different burial rites and mortuary objects. By no means can they be totally defined by means of painted pottery. The different physical features of the human skeletons show a rather complex racial situation in Xinjiang.

The Bronze Age in the western parts of China has been illustrated by the above-mentioned finds in Gansu, Qinghai and Xinjiang. Owing to lack of sufficient finds belonging to this period, the cases of Tibet and the western part of Inner Mongolia had to be omitted here. The archaeological data available have fully proved that during the period from the Chalcolithic Age to the Bronze Age, different cultures in this area possessed their own characteristics. They too had contacts with and influence upon one another.

The Bronze Age in the western regions was first represented by the Qijia culture. A great number of primitive copper articles have been found there. The upper limit of the absolute date is roughly identical with that of the late Long-shan culture of the central plains. This can be confirmed directly by its characteristics and C14 dates. However, the Qijia culture lasted a long time. Thus a bronze mirror unearthed at Gamatai in Guinan, Qinghai province, closely resembles in shape and decoration its Shang counterparts from the Fu Hao Tomb in Anyang, Henan province. This shows that they are not only identical in date, but also constitute direct evidence of cultural interflow. The Siba culture is contemporary with the Qijia culture, but slightly later, being a regional culture. Other cultures such as Xindian, Tangwang, Siwa, Kayue and Shajing, all represent tribal variants in different areas. Whether early or late, they belong intrinsically to the same stage of development and are identical with, or slightly later than, the Western Zhou of the central plains. The bronze weapons, such as knives, *ge* daggers and arrowheads are similar in shape to those of the Western Zhou. The typical *li* tripods of the central plains culture have also been discovered among other cultures. A primitive bronze tripod has been unearthed at Xining in Qinghai province. It shows that the bronze culture in the Gansu-Qinghai region is closely connected with that of the central plains area. Remains found in Xinjiang possess an outstanding regional style. But the prevalent painted pottery had close links with the Gansu-Qinghai region.

The cremation rites of the Siwa culture are similar to those of the ancient Qiang people. Other cultures in the Gansu-Qinghai region may also be related to the Qiang people. The young woman with golden hair, discovered in the tomb at Wubao in Hami county in

Xinjiang, obviously suggests a Caucasian origin. The discovery of Mongolian and Caucasian skeletons in the same cemetery at Alagou in Urumchi city demonstrates the complexity of the racial situation in Xinjiang from earliest times. As noted in historical records, the tribes of Xinjiang were often on the move and were subject to dramatic changes. For instance, the nomadic tribes of the Ta Yüeh-chih and Wu-sun, who used to live in the Gansu corridor prior to the Qin and Han dynasties, under pressure by the Hsiung-nu moved to Xinjiang and farther west.

Archaeological research has proved that the peoples of Qijia, Siba and Shajing enjoyed a settled life, with agriculture as their main economic basis obviously different from the nomadic life of the Ta Yüeh-chih and the Wu-sun. Nevertheless the reliability of the historical records needs to be confirmed by future work in archaeology.