

THE BRONZE AGE IN KHORASAN AND TRANSOXANIA¹

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THE transition to a production economy gave decisive impetus to cultural and social progress. The results of this change are particularly clear in the Metal Age, when copper (Eneolithic) and subsequently bronze (Bronze Age) implements heralded major increases in production efficiency. This was paralleled by the further territorial spread of new types of economic activity. Whereas in the Neolithic only a few tribes in the foothill oases of Kopet Dag had switched to agriculture and animal husbandry, in the period in question outward-bound agricultural communes extended more advanced forms of securing a livelihood to regions lying further east, namely to the Murghab valley and later to Transoxania. Gradually the hunters, fishermen and gatherers of the steppes saw the emergence of cattle-raising as a way of life, a complete transition to a cattle-raising and agricultural tribal existence occurring in the course of the second millennium B.C.

Southern Turkmenistan went through the final stages of the formation of an agricultural and cattle-raising economy, coupled with a corresponding type of culture, in the fifth and fourth millennia B.C. Archaic elements still much in evidence in the Jeitun culture now disappear entirely.² Extensive excavations of ancient settlements north of Kopet Dag have made it possible to delimit roughly the periods of development of local society in that period.

The Early Eneolithic (fifth and early fourth millennia B.C.) was marked by a growth in the population of the foothill belt at Kopet Dag. Along with smaller settlements 0.5–1 ha in area (Anau, Dashlyji, Yassy-depe),³ some major centres covering more than 10 ha sprang

¹ See Map 7.

² Korobkova, 1981.

³ Khlopin, 1963; Pumpelly, 1908.

up (Kara-depe, Namazga-depe).⁴ Fanning out over still unsettled areas, the early agrarian tribes wandered eastward as far as the ancient delta of the River Tedzhen (Harirud), the site of the Geoksiur oasis.⁵ The early stage, corresponding to the creation of the archaeological complex of the Anau IA⁶ type, is characterized by the penetration into the oases of southern Turkmenistan of tribal groups from central Iran – a migration accompanied by several cultural and technological innovations, including the advent of metallurgy. However, the newcomers were soon fully assimilated by the descendants of Jeitun tribes; this development is clearly evidenced by the next archaeological complex, namely that of Namazga I. The settlement of related tribal groups over a sizeable territory meant the emergence of certain local cultural differences, particularly marked in the case of ornamental motifs on clay pottery. But by and large the cultural unity of the region remained intact.

The twin pillars of the economy were agriculture and cattle-raising, the latter activity providing over four-fifths of the meat consumed. Along with cattle and sheep, pigs were also domesticated. The soil-working implements of the Anau IA complex include massive stone hoes, while the Namazga I complex contains ring stones once fitted to the ends of digging sticks. At the same time flint implements practically fell into disuse, the Stone Age giving way to the Metal Age. The Anau IA period supplies the first instances of cast copper objects including awls, punches and knives. Among the household crafts, weaving achieved a fairly advanced state of development: excavations of ancient settlement sites have yielded conical terracotta yarn spindles in large numbers.

To judge by their size, the single-chamber houses making up the settlements were built to lodge single small families, which must have represented the primary-level societal unit. At the same time, the collective character of the basically agrarian economy made it necessary to preserve clan groupings. The fully excavated settlement of Dashlyji, whose population must have numbered forty to fifty persons, possibly belonged to just such a single-clan community. The typical ideological centres of these communities were sanctuaries with walls adorned with painted red and black geometric patterns.

The culture of the Early Eneolithic testifies to improved standards of everyday life and well-being. The applied arts underwent considerable development: almost a third of the clay pottery is decorated in black paint against a red or yellowish background. The dominant style is a quiet ornamentation consisting of large geometric elements, mostly triangles. A lively realism finds its reflection in terracotta figurines of stout women. The art of the early agricultural communities was still in its infancy.

⁴ Masson, 1962.

⁵ Khlopin, 1964.

⁶ Khlopin, 1963.

During the Middle Eneolithic dating back to the middle of the fourth millennium B.C., the unitary culture of the early agrarian communities of southern Turkmenistan split into two distinct local variants – the western and the eastern. The western variant is distinguished by its colourful painted pottery vessels decorated with geometric ornaments subdivided into two colours – red and black (Anau, Kara-depe, Namazga-depe). In the east, on the other hand, the ornaments become simpler and more austere, the dominant motifs being straight parallel lines running along the lips of cups and pots (Altyn-depe and settlements of the Geoksiur oasis). This distinction very likely reflects a process of ethno-cultural differentiation with the formation of two tribal groups. The Geoksiur oasis in the ancient delta of the Tedzhen is likewise typified by settlements surrounded by natural brick walls, with the perimeter including circular-plan structures which also served as dwellings (Yalangach-depe, Mullali-depe). This development may have owed much to the location of the oasis, which constituted the easternmost limit of the area peopled by settled agriculturalists whose immediate neighbours by this time would have been Neolithic hunting tribes ranging the steppe and semi-desert regions.

The agriculturalists continued to grow the principal grains already consumed during the Neolithic, namely wheat and barley. But the preferred cereal was certainly the latter: excavations at Mullali-depe⁷ have yielded 9,100 barley seeds as against just 250 seeds of wheat. But the salient fact was the progress achieved in irrigation agriculture. The Geoksiur oasis excavations have exposed a contemporaneous artificial reservoir, while a study of barley seeds from Altyn-depe⁸ has revealed that they had germinated in conditions of multiple-field irrigation. Copper implements were cold-forged and annealed, which improved the durability of the working edge considerably. Also noteworthy are the gold and silver decorative pieces pointing to the further refinement of metallurgy. Finds include decorative items, among them semi-precious stones, such as carnelian, turquoise and lapis lazuli. It was then that the last-named stone came into systematic use, not only by the inhabitants of the oases around Kopet Dag but also throughout the ancient East. Efforts to ensure a regular supply of this beautiful blue stone, whose chief deposits lie in the mountains of north-eastern Afghanistan, played a significant role in the establishment of lasting trading and cultural ties over a large territory. The arts evolved remarkably. In addition to painted vessels, particularly richly decorated in finds of the western group, art works discovered include terracotta statuettes representing the ample-bodied protectress of fertility. In the Geoksiur oasis such figurines are of several types, including massive seated statuettes with arms and shoulders supplanted by plump breasts and thighs bearing various magical

⁷ Khlopin, 1969.

⁸ Masson, 1981a.



FIG. 1. Female figurine from Yalangach-depe (beginning of fourth millenium B.C).

symbols (Fig. 1). In accordance with the principle of *pars pro toto* the sculptors of this period thus emphasized in their representations of the patroness of agriculture features germane to motherhood and fecundity.

The settled communities of southern Turkmenistan achieved a particularly significant level of development in the Late Eneolithic, that is, from the late fourth to the early third millennium B.C. At that time they found themselves included in a system of increasingly close cultural ties and ethnic shifts which encompassed an extensive area in Iran, Afghanistan and north-western India/Pakistan. The Kopet Dag communities continued to migrate eastward, with small settlements appearing in the Murghab delta. On the evidence of discoveries by archaeologists in Tajikistan, the settled agrarian culture had by now reached Transoxania (Sarazm near Pendjikent). At the same time, judging by changes in certain objects of material culture and in the physical type of the population, southern Turkmenistan was penetrated by individual tribal groups coming from Iran. Although they

were assimilated comparatively quickly by the native population, they brought with them certain specific cultural traditions. The Kopet Dag oases bear traces of differentiation into two cultural zones – a western and an eastern. The western zone contains extensive finds of painted pottery in the Kara-depe style, characterized by fine geometric patterning and representations of various animals – goats, spotted snow leopards and birds. To the east we see the formation of a new style of ornamented ceramics, namely the Geoksiur style with its large bright polychrome figures of crosses and half-crosses. On the other hand, other features – house types, statuettes, metal objects, burial rites – clearly indicate that the two groups must have constituted a single cultural entity.

The gradual development of irrigation agriculture is evident from the sizeable and extensive irrigation systems discovered in the Geoksiur oasis. Excavations in the vicinity of the principal settlement of the oasis, Geoksiur I,⁹ have revealed man-made channels approximately 3 km in length and 2.5–5 m in width. These channels were used to irrigate fields, the water being distributed by shallow ditches. By permitting the multiple watering of crops, irrigation agriculture ensured stable harvests and was a major factor in economic and cultural progress.

The camel became domesticated and some small clay wheels found in the excavations possibly belonged to model carts, testifying to the development of transportation and the use of animals for draught purposes. The metallurgical remains reveal a significant variety of technological devices used in the fashioning of various objects, a fact suggesting the existence of permanent metal workshops. Pottery was fired in special furnaces that ensured uniform temperatures and at the same time required considerable technical skill on the potter's part. The fashioning of vessels out of marble-like limestone also required a high level of artistic ability. Very probably by this time the agrarian communes had evolved a special category of professional craftsmen, first and foremost potters and metal workers. These craftsmen laboured to satisfy the needs of their kinsmen not through buying and selling, but rather by virtue of membership in the community, which is why they are referred to as 'communal craftsmen'.

All these developments acted to ramify the social structure, to stimulate differentiation in respect of social status and property. The larger settlements now consisted of multichambered houses of twelve to fifteen rooms, including a kitchen, common grain-storage enclosures and a common household yard. Most likely such houses belonged to multi-family communes in which smaller family units were grouped by family relationship and joint household activity. The multi-family community became the basic unit of society. Parallel to this we have the advent of collective tombs often containing the remains of twelve to

⁹ Sarianidi, 1965; Lisitsyna, 1978.

twenty persons, which probably constituted the family tombs of such multi-family communities. There are also richly furnished graves. Whereas ordinary graves included one or two painted pots, one Kara-depe grave was found to contain eight splendid painted pots and a large, carefully executed terracotta statuette. Another grave, in a very damaged state, may have housed a group of fifteen painted vessels and a terracotta figurine of a standing male with a long beard. Altyn-depe has yielded up the grave of a woman accompanied by five clay and two stone vessels, together with several copper objects, which were particularly prized in Turkmenistan, which has little or no copper. In all probability such burials are to be associated with the upper stratum of Late Eneolithic society – its chiefs, priests and priestesses whose position in society required special distinction in the matter of burial customs. It may be that warlords are represented by the terracotta figurines of warriors in finely wrought helmets with elongated earpieces. The residences of such leaders may well have been situated in major settlements of the Kara-depe¹⁰ or Altyn-depe¹¹ type. The extent of the latter increased considerably at that time, reaching an area of 25 ha. The entire settlement was surrounded by natural brick walls roughly 2 m thick reinforced by rectangular buttresses along the outer perimeter.

Economic prosperity was accompanied by a flowering of culture. An exceptional richness of artistic expression was to be found in the smaller forms, particularly in painted ceramics and small carved objects. The designs on vessels are devoid of the primeval archaism typical of the painted ceramic of the Early Eneolithic. The variegated, carpet-like and strictly symmetrical designs adorning vessels are characterized by a wealth of ornament (Fig. 2), spontaneous decoration, and a symbolism somewhat akin to abstract art. Not infrequently, particularly at Kara-depe, refined ornamentation becomes an end in itself, lending a flavour of festivity and sophistication to the everyday life of the ancient farmers. Certain features in the figurative structure of the ornaments suggest an imitation of carpet or other textile motifs that might have been used on real objects which have not survived, as would be true of many items fashioned from organic materials.

To a certain extent the same features of decorativeness and refinement are evident in the small terracotta sculptures. The stout matrons are supplanted by figurines of more slender shape and smooth, delicate lines. A richly detailed decorative approach characterizes the treatment of hairstyle and head-dress; plaits and S-shaped pendants are meticulously rendered. Some of the material figures carry a child, which points to the further development of the notion of a patroness of fertility, now clearly manifest in images of motherhood. The thigh of another female statuette bears a creeping-snake design. The figurine in question

¹⁰ Masson, 1960.

¹¹ Masson, 1981*a*.

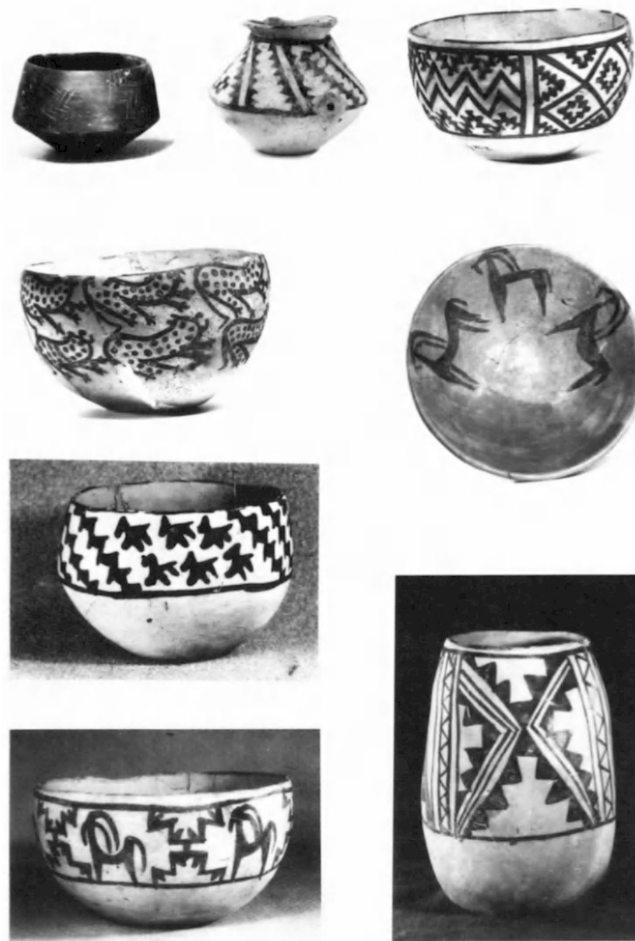


FIG. 2. Painted pottery from Kara-depe (3300–3000 B.C.).

was found next to a collective tomb and may represent a Clithonic deity of the beyond. We likewise witness the emergence of larger sculptural works in mamoreal limestone. The finds in question include a human torso and the figure of a bull. A painted ceramic item features two human figures standing before a similar larger statue placed in a central sanctuary.

The Kopet Dag oases constituted a major centre of ancient cultures whose influence extended far beyond its confines. Moving out from the Geoksiur oasis, a population group entered the Murghab delta, where a recent find exposed several widely scattered settlements with ceramics typical of the Geoksiur style. Still more important is the discovery of a typical Geoksiur ceramic complex in the Zerafshan valley of Transoxania. In the hilly banks of one of its ravines was the site of an ancient settlement with houses of mud-brick.

There was also a sanctuary among the houses, with a centrally located oval altar and walls covered with polychrome paintings. The decorated ceramics of Sarazm with

polychrome ornamentation in the form of crosses and half-crosses are practically identical to the Geoksiur ware, but there are many distinctive features in the culture as a whole. For example, a seashell bracelet was found in one of the burials; this is typical of sites in Baluchistan but not of those in southern Turkmenistan.

Decorated ceramics made on the potter's wheel and clearly following Baluchistan models subsequently appear at Sarazm. This is a remarkable indication of the cultural interaction within Central Asia during the period of the early agriculturalists. It is possible that the upper reaches of the Zerafshan river proved attractive because of their proximity to the ore deposits of Ferghana. At all events, there are quite large quantities of metal artefacts at Sarazm and evidence of the accumulation of wealth is provided by the burial of a woman with many beads of gold, carnelian and lazurite on her neck, arms and legs. Thus, the migration of the Geoksiur communities to the north-east gave an impetus to the formation of a new centre of highly developed culture in Soviet Central Asia.

But along with the eastward and north-eastward migration, which resulted in the gradual colonization of Transoxania by a settled agrarian community yet another line of links extending southward and south-eastward is clearly discernible. Thus, in the Sistani settlement of Shahr-i Sokhta almost a third of the painted pottery in the lowest layers, that is, those corresponding to its foundation, can be classed among the southern Turkmenian specimens.¹² It is likely that people from the Altyn-depe/Geoksiur region accounted for some part of the original population of Shahr-i Sokhta, and at least initially retained their age-old traditions. Such ties with the culture of Kara-depe and Geoksiur, manifested both in the painted ceramics and in the statuette types, are notable in a variety of other remains in southern Afghanistan and Pakistan. This is yet further evidence of the close ties that united the settled agrarian tribes.

Achievements in the cultural and economic domains in large measure opened the way to further progress, which became particularly evident in the middle of the third millennium B.C., when the Kopet Dag oases begin to exhibit complexes of the Namazga IV type, ascribed by scholars to the Early Bronze Age. The subsequent evolution of the culture of that time is best evidenced by the excavations at Altyn-depe,¹³ which even then was a major centre with features of incipient urbanism. It was then that the central gate was conceived in the form of monumental pilaster-adorned pylons. The width of the entryway was approximately 15 m; it was divided by longitudinal walls into two alleyways for pedestrians and a broader central avenue paved with stones and large pottery shards designed to accommodate wheeled traffic. Eastern Altyn-depe exhibits a complex associated with

¹² Biscione, 1973; Lamberg-Karlovsky and Tosi, 1973.

¹³ Masson, 1981a.

religious edifices, with an outer border of natural brick walls roughly 2 m thick. Just outside the walls were sanctuaries and houses possibly belonging to priestly families. Initially the sanctuary constituted a large enclosure with a vestibule. At the centre of the principal chamber was a rectangular hearthstone or podium, while the walls had niches in the shape of small pyramids. Likewise linked with religious rituals were the square-shaped terracotta censers with sides richly embellished with carved ornaments consisting of alternate forms of stepped crosses and little pyramids painted black and red. A later development is evident in the special architectural style of a small temple consisting of a suite of three or four chambers on one side of a long corridor. The traditional hearthstone-podium was situated at the centre of the largest of these chambers.

Camels were already being used as draught animals. This is evidenced by finds of terracotta models of four-wheel carts drawn by camels. In addition to the older crops, the inhabitants of the Kopet Dag oases were by now growing grapes. Particularly significant progress was achieved in metallurgy and pottery production, both of which were advanced by improved technology and implements. The potter's wheel was used on an increasingly wider scale; towards the end of the Early Bronze Age almost all clay pottery was produced with its aid. Casting technique also exhibits a number of innovations, including the early use of artificial alloys and the moulding of hollow items using a mandrel. Settlement sites have yielded the remains of copper-foundry furnaces.

The presence of multichambered houses at both the larger (Hapuz-depe) and smaller (Ak-depe) settlements, together with the preservation of the tradition of collective-tomb burials, suggests that the multi-family commune continued to be the fundamental unit of society.¹⁴ Close to the sanctuary at Altyn-depe we find not only collective graves, but also individual burials distinguished by fairly rich grave-goods, including not only ceramic vessels, but also stoneware, bronze pins and other ornaments. It is possible that such offerings marked the burials of priestly personages, an interesting sidelight in this connection being the predominance of female burials among such tombs. A new custom was the inclusion in the tombs of cylindrical stone lamps. Also characteristic of the Early Bronze Age are bronze and terracotta stamps with a loop eyelet on the reverse side (Fig. 3). The geometric, predominantly cruciform figures carved on the faces of these stamps practically reproduce the ornamentation of the painted-clay vessels and the carving adorning the censers. It is not impossible that the stamps were used by that time not simply as amulets, but also as signs of ownership.

Local differences in the culture of the communes persisted. Ceramic finds enable us to distinguish three distinct cultural provinces in southern Turkmenistan at the time in

¹⁴ Sarianidi, 1976.



FIG. 3. Native and Harappa-like seals from Altyn-depe (2300–2000 B.C.).

question. The westernmost of these is represented by the Parhai II burial excavated near Kara-kala in the Sumbar valley. To judge by the material uncovered, this is closest to the culture of north-eastern Iran, familiar from the Shah-tepe and Tepe Hissar excavations. In the Sumbar valley no actual settlements of the ancient agrarian people of that period have yet come to light; on the other hand, collective tombs have been uncovered in the form of oval graves approximately 2 m across dug in the soil. The entrances to such tombs were often covered with a stone slab. The funerary objects placed in the tombs provide an idea of the material culture of the tribes concerned. Dominant among the finds are hand-made black or grey dishes occasionally ornamented with fine lines applied by carving or even by polishing. One such design constitutes an entire composition, depicting a goat standing among spreading trees. Particularly striking decorative items include large copper pins with multiple-twin double-helical heads. Remarkably original too are the rectangular four-legged vessels with goblets (possibly incense burners) and ram's heads in appliqué on their

sides. Similar material originates from a number of small settlements in the foothill region west of Ashkhabad, where statuettes as well as vessels were commonly executed in black and grey ceramic. The close cultural relationship of remains of this type with material from Hissar, particularly Hissar II, is beyond doubt. Perhaps in Antiquity these were settlements belonging to a single cultural community.

The second cultural province encompasses the central portion of the foothill region, its typical monuments being Ak-depe near Ashkhabad and Namazga-depe. Here we find grey ceramics in relative abundance, but coloured ceramic objects also occur. In particular, there is a ceramic vessel found at Ak-depe on which is depicted a large goat among trees, a direct replica of a similar subject from the Sumbar valley, but here executed in colour. Along with this, terracotta figurines of people and animals, as well as ceramic stamps, are grey. To a lesser extent this is characteristic of Namazga-depe, but here too grey dishes are fairly frequent.

Finally, the third ceramic province of the Early Bronze Age is constituted by eastern monuments where Geoksiur-type ceramics had previously been prevalent (Altyn-depe, Hapuz-depe and others). Here we are clearly faced with a continuance of local traditions: painted pottery is intermingled with, and gradually gives way to, increasingly fine ornamentation retaining the motifs of an earlier period. The same tendency is evident among the terracotta objects which, it must be said, become heavier and clumsier compared with those of the Late Eneolithic. Technical progress and the slow decline of traditional cultural standards were a fundamental feature of the Early Bronze Age.

The establishment of new standards in virtually all realms of culture signified the dawning of a new age in the history of the ancient agrarian population of southern Turkmenistan. This was a middle or advanced Bronze Age period characterized by complexes of the Namazga V type and constituting the pinnacle of local culture. The traditional dating of this complex in the archaeology of Central Asia is from the end of the third to the first quarter of the second millennium B.C., which corresponds to the short chronology of Hissar. However, the recalculation of radiocarbon dates using the MASCA correction enables us not only to revise the traditional Hissar datings¹⁵ but also to refine the chronology of Harappa,¹⁶ which can be synchronized with Altyn-depe on the basis of a variety of objects. This is the reason for suggesting setting the dates of the Namazga V type layers back to 2300 B.C.¹⁷ The centres of cultural and economic progress at that time were the larger settlements, most completely and systematically studied in the case of Altyn-depe.¹⁸ By its

¹⁵ Dyson, 1965; Bovington et al., 1974.

¹⁶ Agrawal, 1971, p. 280.

¹⁷ Masson, 1981a, p. 95.

¹⁸ Masson, 1981b.

structure alone, Altyn-depe differs from earlier settlements. Here we find clear evidence of individual districts or quarters of differing functional significance. Thus to the north we find a specialized craftsmen's quarter occupying an area of nearly 2 ha, where we find no fewer than fifty pottery kilns. Here and in other quarters we see a prevalence of multi-chambered houses separated by narrow curving passageways. Distinguishable from such commonplace structures is the 'quarter of the nobility', which is marked by the regularity of its plan, by its streets intersecting at right angles, and by its spacious, carefully finished houses. An important structural unit was the centre of cult worship consisting of a stepped tower-like building 12 m high, spacious storage areas and household structures, as well as a burial ensemble which apparently was the place of interment of members of a priestly commune, and where many valuable objects were uncovered, including the golden heads of a bull and a wolf (Fig. 4).



FIG. 4. Gold heads of bull and wolf from Altyn-depe (2300–2000 B.C.).

Altyn-depe was situated on high mounds formed by the cultural remains of earlier ages. Its hillsides were faced with mud-brick walls topped by continuous house walls joined in places by additional surrounds. Over certain segments the walls were further reinforced with rectangular tower pylons. The central entry-way was designed with particular care, the surrounding walls being 6 m thick, while the entrance gate proper was flanked by two massive rectangular towers. Clearly, the structure of Namazga-depe was a complex one, its excavation revealing a number of multichambered houses within the residential quarter, as well as several pottery workshops.

A characteristic feature of the developed Bronze Age economy was the considerable variety of its crafts. There are grounds for stating that in the major centres of the time the crafts became distinct from agriculture, and that the social division of labour had progressed significantly. In the realm of metal-working¹⁹ a variety of independent forms of manufacture emerged, including the specialized production of artistic stamps. Finds include maces with sculptured heads in the shape of an animal or animal head. In addition to copper, silver and gold, wide use was made of copper-arsenic and copper-lead alloys, that is, of arsenic and lead bronze. Tin bronze occurs much more rarely. Bronze was used as a material for both weapons and implements: finds include daggers, blowpipe darts, various types of knives and sickles. Silver objects (rings, bracelets, pins, mirrors and even massive adzes) were fairly common. In the production of pottery,²⁰ use was made of a high-speed potter's wheel, which led to the standardization of pot shapes. The standard mass-produced vessels issuing from professional pottery workshops were now entirely devoid of the painted designs applied by the earlier pottery artists. The sheer productivity of the pottery craft increased considerably. Vessels were fired in two-level kilns which made it possible to achieve uniform temperatures. One pottery kiln at Altyn-depe could fire 16,000–20,000 vessels annually, which, given enough workers within the quarter to service several dozen such kilns, affords some idea of the marketability of the wares in question. The range of agricultural crops was augmented by the chick-pea (*Cicer arietinum*). Clay models of four-wheeled vehicles show that some of them were probably intended to carry heavier loads than before and were drawn by a pair of camels.

All these important changes in the economic basis could not fail to influence the social order. The materials excavated at Altyn-depe show how the prior state of primeval equality came to be supplanted by social differentiation entailing the emergence of social groups with distinct living standards and way of life, probably in accordance with their respective status in the system of production. Thus, the multichambered houses in the craftsmen's

¹⁹ Kuz'mina, 1966.

²⁰ Masimov, 1976.

quarter are similar to the houses of multi-family communes discovered in the Late Eneolithic settlements. The collective tombs discovered here contain merely a few clay pots, the deceased having been wrapped in rude cane matting. Those concerned are representatives of a lower social and property group, that is, ordinary members of a commune. The second population group likewise resided in multichambered dwelling units, but these did not form a single household-type entity, but rather were grouped into individual 'apartments' consisting of five or six rooms and a separate kitchen. In tombs situated in the vicinity of these houses we find not only ceramic objects, but also bronze rings, bead necklaces, terracotta statuettes and metal stamps. This was a quarter of well-to-do city-dwellers apparently living in individual families, each with its own household. Finally, the third type of residential area at Altyn-depe consists of large and spacious houses of the 'quarter of the nobility' situated near tombs with particularly rich and varied contents, including stamps, statuettes and many bead bracelets and necklaces. Often the latter were placed not only around the necks of the dead, but encircled their hips as a kind of a belt. The deceased were placed in their graves wrapped in fine woollen shrouds. In addition to rich collective tombs, we also have individual burials remarkable for the outstanding variety of objects accompanying the deceased. Thus, the grave of one man, in addition to the usual beads and vessels, was found to contain a massive 'column' of white marmoreal limestone (an object of undoubted religious significance) and a long carved grey stone staff probably betokening his special social position. In another case, a younger woman of 30 to 35 years had been placed in her grave not only with her jewellery and ornaments, but along with a rich toilet ensemble including, in addition to smaller clay vessels, a double marble dish, a metal awl, a pin, a flat spatula, a short-handled silver mirror, and an ivory stick with an incised circular ornamental motif. No doubt the persons buried in the priests' tomb, whose funerary furnishings were, as already noted, especially opulent, belonged to the same prosperous class. They were most probably members of the lay and sacerdotal aristocracy which gradually became a distinct class within the social structure. It is notable that along with the collective tombs of the 'quarter of the nobility', but outside their confines, we find individual graves completely devoid of any funerary accoutrements. These may represent burials of servants or patriarchal slaves. But whatever the truth of the matter, we are dealing here with a fairly developed society with a complex internal structure.

In Antiquity, Altyn-depe constituted a major central social organism: its population, given the different housing densities of its various quarters, must have numbered 6,000 to 7,500. Its complex structure, the variety of activities engaged in, and the fact of social and property-related differentiation suggest that Altyn-depe must have become something more than just a major agricultural centre. However, given the presence of its religious complex,

it can be described as a proto-urban or early urban organism. Possibly it constituted a temple town where a theocratic form of rule restrained the development of a secular power as such. At present there is no evidence of smaller settlements in the immediate vicinity of Altyn-depe, but these are most probably covered over by alluvial-diluvial sediments which during the period following the fall of the ancient town accumulated to a depth of 2 m. New investigations in the vicinity of another major centre of the Kopet Dag plain, that of Namazga-depe, have revealed a fairly extensive urban area. Namazga-depe was clearly the focus of attraction for three smaller rural settlements situated 40–50 km to the west: Toichnak-depe, Shor-depe and Kosha-depe. It is quite probable that these two formations embracing the Kopet Dag oases, namely Namazga and Altyn, provided the context for the emergence of the city-state which was a feature of Antiquity. However, at the time in question this process had hardly progressed very far. In any event, neither rich princely burials nor any building resembling a palace has been uncovered at either site.

Considerable changes occurred in the ideological sphere as well. During the developed Bronze Age period a female deity was still worshipped widely. Terracotta female figurines were kept in every house and included in collective burials. But now the statuettes displayed symbolic signs scratched on their thighs and shoulders, whereas the figurines themselves differ from one another in various details of hairstyle, head-dress and adornment.²¹ This most likely testifies to the differentiation of a once-unitary image of the female deity. What we see forming is a whole female pantheon, with a special deity of the heavens (the star sign), a water deity (the zigzag), a plant deity (the ear-of-corn or branch sign) and certain others. On the other hand, the religious complex at Altyn-depe did not yield a single female statuette. But here the religious objects of the priests' tomb did include a stone plaquette with astral symbols of the moon and stars; moreover, the golden bull's head exhibits a crescent-shaped turquoise inlay on its forehead. All this leads us to suppose that the religious centre of Altyn-depe was dedicated to the divine patron of the town, probably a moon god, who in ancient Mesopotamia likewise often appears in the guise of a sacred celestial bull. The changes occurring in the realm of ideology are also reflected in the spread of a new style in the production of female terracotta statuettes, that traditional object in the cultures of the early farming communities. The realistic style of the Eneolithic period in regard to volume, notwithstanding its conventionality in the depiction of individual details in accordance with the dictates of a system of magical notions, was on the whole close to that of the initial prototype of the opulent matron. During the developed Bronze Age this manner was supplanted by a conventionally flattened style testifying to the development of abstraction. The flattened clay art on which the statuette was then based had

²¹ Masson and Sarianidi, 1973; Masson, 1976.

nothing in common with three-dimensional modelling. Ressemblance to the female figure was achieved largely through the fashioning of a frontally developed silhouette. Much attention was given to the depiction of the head surmounting a long neck and crowned with an intricate head-dress. Particularly noteworthy are the exaggeratedly large eyes executed in low relief which have a hypnotic all-seeing quality. The new age had brought with it new aesthetic notions (Fig. 5).

On the whole the culture of the Kopet Dag oases of the developed Bronze Age period is characterized by a continuity of cultural and artistic traditions and by the formation of new standards and models using prototypes evolved by the ancient civilizations of Sumer and Elam. The introduction of new models was often linked with advances in technology. Thus, the increasingly wide use of the potter's wheel resulted in a virtually total replacement of the traditional forms of clay vessels. Now it was no longer colourful painting that served to emphasize their aesthetic aspect, but rather the delicacy of refined shape. Continuity is observed in the maintenance of the magical significance of figures executed in stepped crosses and their components. Precisely such figures are most frequently encountered in stamps of the developed Bronze Age. A special group of stamps bear the image of various



FIG. 5. Culture of Altyn-depe (2300–2000 B.C.).

animals – a goat, a snow leopard, a spread eagle – which are likewise encountered in Eneolithic ceramic ornament. However, we also find new images of fantastic monsters clearly suggested by mythological subjects. Such, for example, is the four-legged animal with a bill and a claw on its front paw. Particularly striking is a three-headed dragon with the body of a feline predator, two of whose heads are reptilian, possibly ophidian, and the third that of a bird of prey. There are also crescent-shaped stamps bearing the likeness of a creeping snake.

Considerable advances were achieved in building construction, where architectural canons of sorts begin to appear. Judging by the proportions of buildings and gate towers, the basis of the ancient modulus was a 52×26 cm rectangular brick, which these structures repeat on increased scales. This most probably represents the same unit of linear measurement, the cubit, that we see throughout the ancient East. There is also a tendency to give shape to the space within a settlement, which is evident in the building of the ‘quarter of the nobility’ in regular blocks and in the development of monumental structures (the religious complex, the design of the central entryway). At the same time, the device of enlivening walls with evenly spaced and particularly three-step pilasters is directly related to Mesopotamian architecture. Mesopotamian ziggurats must also have suggested the idea of a stepped tower-like structure. The signs scratched on the statuettes bear a clear parallel to proto-Sumerian, and especially to proto-Elamite writing. A number of details characterizing the terracotta figurines, including the large ‘all-seeing’ eyes, find their analogies in terracotta items from Mesopotamia.

But particularly close are the links with the ancient civilization of Harappa. The influence of Harappa prototypes is evident in a variety of ceramic and metal objects from Altyn-depe.²² Finds even include imported specimens, primarily ivory carvings, invariably occurring in the richer troves or the funerary inventories of wealthier burials. Thus, a treasure found immured in the wall of one of the houses of the ‘quarter of the nobility’ includes divination sticks made of ivory and flat square chips, used in some unknown game, fashioned of the same material. Ivory beads formed part of the offerings found in the priests’ burial-vault. Of particular interest are two Harappa-type stamps found at Altyn-depe – one bearing a swastika, the other two signs of proto-Indus writing regarded by most scholars as appertaining to some proto-Dravidian language. It is well known that there existed a southern sea route linking the Harappan civilization with ancient Mesopotamia. Today there is every reason to posit the existence of another international route, an overland route in this case, leading from the Indus valley to the north and north-east. In addition to the Altyn-depe finds, striking evidence of the existence of such a route is supplied by the discovery

²² Masson, 1981a.

of the Harappan settlement of Shortugai in northern Afghanistan on the banks of the Amu Darya. In all likelihood, at least initially, this settlement existed as a trading station.

Towards the end of the developed Bronze Age period the Kopet Dag oases began to feel the winds of change. At Altyn-depe the settled territory diminished in area, with the abandonment of the major urban formation represented by the religious centre. Concomitantly we see a lively eastward migration of early agrarian tribes into the Murghab valley, attempts at whose colonization had been made by Late Eneolithic communities.²³ By now its settlement had become a well-organized enterprise resulting in the founding of an entire oasis of eleven settlements along one of the arms of the ancient Murghab delta. Its centre was the settlement of Kelleli I covering an area of approximately 8 ha. Here there is as yet no unified mound massif, but component elements include a regularly planned rectangle measuring 280 × 230 m. Most probably this constituted the original fortified core of the newly founded centre. Adjacent to the fortified area was a fairly large plot with numerous remains of pottery production, forming a kind of crafts suburb. The other settlements of the oasis are not large: their overall area generally did not exceed 1 ha, and they were scattered at varying distances about the basic monument, forming a compact cluster. The total population of the oasis has been roughly estimated at 2,900 to 3,600 persons.

The material culture of the Kelleli oasis is practically identical with the culture of the uppermost layers of Altyn-depe. The similar items include ceramics, terracotta statuettes with plant symbols scratched on certain of their parts, and the cloisonné-work stamps. Apart from stamps, metal objects found here include knives, mirrors and pins with double-helical heads.

The origin of the settlers leaves no room for doubt: they arrived with a ready-made culture from the foothill plain, which had entered on a period of stagnation and decline. The very structure of the new oasis seems to replicate the system that had evolved in the mother country: we have here a major centre with developed craft industries surrounded by agrarian suburbs. It appears that the corresponding political organization of this agglomeration of communes assisted it in becoming established at the new site and in turning a new page in the history of the early agricultural tribes.

While settlements in the Kopet Dag oases saw the formation of a local civilization of the ancient eastern type, considerable economic and cultural changes were also taking place in Transoxania. Whereas in the fourth millennia B.C. Sarazm as a settled farming area was a unique focal point for Neolithic hunters and fishermen, by the late third and early second millennia B.C. the situation had radically altered. The formerly primitive tribes intensively developed new ways of securing their food, first and foremost through animal husbandry.

²³ Masimov, 1979; Masson and Sarianidi, 1972; Masson, 1964.

Links were strengthened with the Kopet Dag oases, whose influence became a major stimulus to progressive development. The inhabitants of Altyn-depe and Namazga-depe may well have travelled very far in a north-easterly direction. At any rate the Ferghana valley has yielded up a rich store of bronze and silver objects of clearly southern origin. The trove includes a pin with a double-helical head and a mace with a sculptural group representing the milking of a cow and the suckling of a calf. The residents of the southern oases may have been attracted to the Ferghana valley by its tin deposits so vital for metalworking in the Bronze Age.

Highly representative of the changing culture of the cattle-raisers and agriculturalists of the lower reaches of the Zerafshan was what is known as the Zaman-baba culture, which is dated to the late third and early second millennia B.C.²⁴ Here a zone of small channels and lakes in the delta area of a major water course is the site of an ancient settlement and burial ground. The settlement itself consisted not of the *pisé* houses typical of settled farming communes, but rather of large adobe half-cottages elongated in plan. Situated next to the cottages were two-tier pottery kilns, the entire settlement being surrounded by a *pisé* wall. The pottery was mostly of high quality, but fashioned without the aid of a potter's wheel. Metallurgy had attained a high state of development, all the metal items being of bronze. Agricultural pursuits are evidenced by imprints of wheat and barley seeds, flint sickle inserts, pestles and seed-grinders. Over 80 per cent of the animal bones were those of domesticated species: cows, sheep and goats. Near the settlement was a burial ground in which the dead were placed in small catacombs, mostly individually. Also found were paired burials of men and women, which are generally taken as one of stable marriage, and perhaps the existence of the individual family unit. The male burials usually included flint arrowheads, whereas the female graves were typified by the presence of ornaments and cosmetic items – bits of ochre and antimony hair-dye, beads of turquoise, carnelian and other semi-precious stones, as well as gold. One grave was found to contain a flattened female statuette (Fig. 6).

From all the evidence available, the origin of the Zaman-baba culture was fairly complex. Here we have traces both of traditions attributable to a native Neolithic culture, which probably constituted the original stratum, and of the indisputable influence of the settled farming communes to the south. Thus, the construction of two-tier pottery kilns was clearly of southern origin. It was from the Kopet Dag oases that the lower reaches of the Zerafshan valley received vessels turned with the aid of the potter's wheel, including one specimen bearing a design of the late Namazga IV type; southern traditions too are evident in the terracotta statuettes and certain metal objects. Many of the beads found in the Zaman-baba

²⁴ Gulyamov et al., 1966.

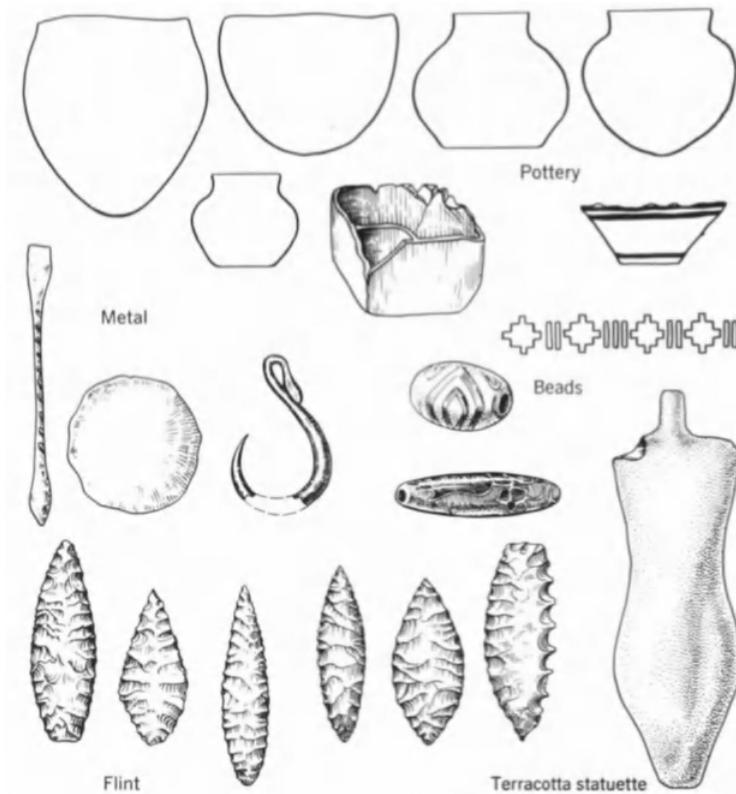


FIG. 6. Culture of Zaman-baba in lower Zerafshan.

burial ground are probably also of southern origin. On the other hand, the highly specific type of grave represented by the catacombs and at least two types of modelled vessels are closely matched in the cultures of the Eurasian steppe. While southern influences can be directly related to the outward migration of settled farming communes then taking over the Murghab delta, the analogies with the steppe regions might serve as evidence of the incipient migration of groups of wandering cattle-raisers. At all events, cultural links and the growth of trade prompted by the need to secure raw materials for more sophisticated metal-working, together with tribal movements, tended to increase the interaction of tribal groups belonging to different cultures. This was the start of an age of active contacts so important in the emergence of the peoples of Central Asia.