

# On the Characteristic of Temple Complexes in the Near East in the 4<sup>th</sup> – 3<sup>rd</sup> Millennia BC

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## Abstract

Investigation of metal is important for understanding relationship between production and ideology in ancient Near East. Metal production in the Eneolithic and Early Bronze Age stimulated transformation of egalitarian society into stratified one. The author traces relation of objects of social and religious significance (interior decorations, anthropo- and zoomorphic sculpture, symbolic weapons and implements) with certain types of sites. From the Neolithic onward metal was used in mortuary practice. In the Early Bronze Age metal production shows relationship with the process of urbanization and formation of early polities. The Middle Bronze Age sees dramatic rise of metal production; valuable and symbolically important finds originate from royal tombs, temples, and treasures. When considering metal finds' context, the author concludes that in the Near East in the late prehistory, urban civilization, and early states metal actively functioned in sacral sphere. Moreover, ideology to a great extent determined development of metal production.

**Keywords:** Near East, archaeology, metal production, urbanization, early polities, temple economy, exchange

## 1. Introduction

The Early Metal Age implies archaeological epochs of the Eneolithic and Bronze Age. In the vast region of Eastern and South-eastern Anatolia, North Syria, and Mesopotamia the period in question was marked by development of social-economic models of protourban and early state civilizations of Near Eastern type. Their constituent parts were sanctuaries and temples that functioned both as specifically religious centres and important subjects of administrative and economic activity. Therefore, when discussing the Mesopotamian materials the term "temple economy" is often applied. For the first time it was used by A. Deimel (Deimel, 1931). Later on investigations of corresponding written sources let I.M. Dyakonov and I. Gelb state that in the 3<sup>rd</sup> and 2<sup>nd</sup> millennia BC a significant part of surplus product was produced on the temple lands and redistributed by exchange operations organized by temples, palace estates, and some families (Dyakonov, 1949, 19; 1959, 145; Gelb, 1969). In the documents dating back to the Jamdat Nasr period (3100–2900 BC) temple estates are clearly represented as significant holdings allocated by the community (Dyakonov, 1983, 111). Temple administration employed numerous workers: written sources mention herdsmen, smiths, carpenters, builders and trade agents, all organized in groups headed by headmen (Dyakonov, 1983, 121, 126).

In the preceding Uruk period, mostly on its late stage (34<sup>th</sup> to 32<sup>nd</sup> centuries BC) exchange was practiced mostly by temple estates, since only temples had got real possibilities for accumulation, securing, consumption, and redistribution of products by implementing long-distance exchange (Makkay, 1983). In that period are well documented archaeologically not only temples proper, but whole religious and administrative complexes including both sanctuaries and related workshops and storehouses. Thus in the Early Bronze Age Near Eastern temples functioned also as organizing centres of economy, and their developed spatial structure corresponded to the variety of purposes they served.

How did the temple organizations become important subjects of economic processes and principal landowners? Opinions as to the point are different. No doubt, of great significance was the breakup of tribal structure, population growth and developing exchange (Gibson, 1973). I.M. Dyakonov paid much attention to

non-economic factors, such as the necessity of saving foodstuffs for sacrifices in communal sanctuaries, and also primitive coercion (Dyakonov, 1983, 46 ff.). J. Makkay in a special article discussed formation of temple estates in Mesopotamia in the light of archaeological evidence. He pointed out that as early as the Neolithic there existed specialized communal storehouses for accumulation not only necessary foodstuffs, but also surplus saved for exchange. To assure safety of goods religious ceremonies were enacted, and the communal storehouses were located close to sanctuaries within special spots of the settlement (Makkay, 1983, 3). J. Makkay considers ideological factors secondary, when compared to the economic ones. At the same time he admits that since sanctuaries (and then temples) functioned starting from the Early Neolithic, they had got at least a chronological priority in the field of economic activity, while state-like administrative structures came into existence much later (Makkay, 1983, 2).

## 2. Material Evidence

Already at the Early Neolithic settlement of Umm Dabaghiyah there was located a special area where storage constructions concentrated; these were used not by single families, but the whole community (Kirkbride, 1974). At Çatal Hüyük the relationship between storage pits and ritual activity is well documented by the anthropomorphic figurines often discovered in grain pits (Mellaart, 1965). The phenomenon of accounting products is well documented since the Neolithic by so-called calculi, or small chips of various shape used for marking different sorts of commodities. They are rather numerous at the settlements of Mesopotamia proper and culturally related regions (Antonova, 1998, 193-197).

Important materials come from the sites investigated by the Russian archaeological expedition in Northern Iraq. At the settlements of Yarym Tepe II and III in the Halaf period circular constructions (*tholoi*) are regularly combined with rectangular multichamber structures; the excavators consider the former as dwellings and the latter as household facilities. In some circular constructions the remains of ritual ceremonies were documented. Thus, in tholos 67 at Yarym Tepe II among the foundation offerings painted vessels and obsidian tools were discovered together with a unique copper pendant seal decorated with incised lines (Munchaev & Merpert, 1981, 178, Figure 51, 3). As T. Kornienko stresses, functionally such sacred areas in many aspects should be regarded as the earliest prototypes of monumental temple complexes that served not only for religious practices, but functioned as centres of organized economic activity and administration of the first city-states in Mesopotamia (Kornienko, 2006, 131).

We must seriously take into account the environmental characteristics of the region to understand the origins of the temple economy. In the arid zone repeated draughts caused strict control over organized labour and accumulation, storage, and distribution of foodstuffs and other commodities. As early as the Late Ubaid period we meet with the evidences of such control exercised by the social elite, which is confirmed by monumental constructions of social importance and sanctuaries. In North Mesopotamia at Tepe Gawra in the Ubaid layers XVI and XV communal grain storage constructions concentrated within a single area at the northern part of the settlement (Speiser, 1935, 31).

A detailed review of the constructions dating from the Jamdat Nasr and Early Dynastic (henceforward ED) periods was published by Sh. Amirov. The materials originate mostly from Jesira and are interpreted as private and communal grain storage facilities (Amirov, 2010, 150-170). Thus, well-preserved construction 110 at the sacral area (*temenos*) of the settlement Tell Hazna 1 in North-eastern Syria represented a communal grain storehouse capable to preserve over 30 tons of grain, which is sufficient for survival of a community numbering around 100 people during one year (Amirov, 2010, 153). In Palestine at the settlement of Khirbet el-Kerak (ED period) an impressive religious-economic complex was investigated. It included nine domed constructions accurately set around the central court. The buildings are considered grain storehouses, and according to the assessments suggested by the excavators, they might have contained from 500 to 700 tons of grain totally (Maisler, Stekelis & Avi-Yonah, 1952).

Grain storage constructions were endowed with sacral meaning, which may be seen from the archaeological evidences of ritual procedures, and also from the fact that communal granaries were often shown on cylinder seals. Among them there are scenes of loading down commodities into the set of high domed constructions, people using ladders to reach the openings on the top (Figure 3: 5). Seals were personal symbols of administrative power, therefore the scenes and objects shown on pieces of Mesopotamian glyptic do not simply mirror realities of everyday life, but had profound religious contents related to the fundamental ideas of the time.

Thus among the archaeological data that shed light on the important features of temple economy we may single out specific constructions for storing products, workshops, and administrative centres. Besides, a series of archaeological finds may be interpreted as offerings and temple furnishings, as it is shown below.

The Ubaid culture shows significant achievements of the South Mesopotamian communities decisively based on development of irrigation and farming progress. Big Ubaid centres characterized by monumental architecture and specialized crafts were predecessors of Sumerian cities: the latter, as a rule, arose in the places once occupied by Ubaid settlements. In the Ubaid period stable cultural standards had been worked out, including types of pottery, figurines, and temple architecture. Most probably, a wide-scale system of trade relationships functioned, otherwise in South Mesopotamia barren of metal ores, timber and stone essential cultural progress was practically impossible.

### *2.1 Mesopotamian Temple Architecture*

Mesopotamian architecture in general was based on mudbrick technique. Though simple, it let constructing both utilitarian buildings and monumental constructions, true pieces of grand style of the epoch. Lofty temples erected on high platforms dominated in the appearance of significant Ubaid centres, and probably already at that time fulfilled general economic and administrative co-ordination. In the South Mesopotamian centre of Eridu there was investigated a temenos with an impressive column of successive constructions of religious purpose (Figure 1: 1), starting from a small shrine of Ubaid 1 period in layer XVI till the imposing ziggurat of the 3rd dynasty of Ur (Kornienko, 2006, 134-147). The buildings' corners were always oriented to the cardinal points. The late Ubaid temples of layers VII-VI show a developed plan with central hall, a stepped altar and an offering table placed in opposite ends of the cella and flanked by profiled pilasters. Massive walls were also decorated with stepped pilasters from inside and outside, the central entrance was arranged in the long south-eastern wall (Figure 1: 3). The constructions were rather impressive – up to 23.5 to 12.5 m in size, while the platform the religious centre rose above reached 26.5 to 16 m in size. Mass accumulations of fish remains were discovered in the temples, the offering tables showed traces of burnt matters. In T. Kornienko's opinion (Kornienko, 2006, 147), these data are related to the cult of Enki, the god of sweet waters and patron of the city. The Eridu sequence of religious constructions clearly indicates that typical constructions of the Sumerian religious architecture in the shape of stepped ziggurat originate from the Ubaid temples built on massive platforms.

As to the Ubaid sites in North Mesopotamia, the urban settlement Tepe Gawra on the Tigris is best investigated. Starting from the earliest Ubaid layers constructions of different types are known, such as large rectangular houses and temple associations that for a long period functioned at the so-called Acropolis. In layer XIII there existed a large religious complex (Figure 1: 2) composed of three temples very similar to those known in Eridu. The buildings of rather large size were arranged along three sides of a central court, they measured from 12 to 14 m in length. Judging from the best preserved Northern temple, the entrance was situated in the centre of the façade, leading not to the central hall directly, but through an auxiliary room. In the central hall of this temple there was discovered a well 13 m deep which contained many spectacular finds, pottery and seals among them (Kornienko, 2006, 155).

### *2.2 The Uruk Epoch*

Formation of Mesopotamian social elite took specific forms, which was closely related to intensive regional development in different fields of economy: agriculture and stock-breeding, exchange system and craft. Military campaigns, plundering and seizure of territories and loot in the Uruk period did not play any significant role. Of much greater importance was construction, and first of all building temples. In ancient Mesopotamia this occupation was considered the principal prestigious activity befitting a deified ruler (in literature often termed king-priest). It is indicative that social leader of the predynastic period (Late Uruk and Jamdat Nasr) is often shown in the situation of supervision of productive activity, including construction and farming. The discussed subjects are represented in art of the dynastic epoch as well (Figures 2: 5; 3: 4).

The most significant achievement of the Uruk period was creation of a united irrigation system, the canals network which let regular watering fields. Advanced irrigation farming with incredible crops had brought about an enormous population growth: only in the close neighbourhood of Uruk over 120 settlements of various size are known archaeologically. Most numerous are small rural settlements, but among them significant urban centres are singled out covering an area over 10 ha each. The city of Uruk in the discussed period was a true megapolis over 45 ha large.

The Uruk period in North and South Mesopotamia was marked by intense temple construction. Many monumental constructions of religious purpose were built within specially designed area and functioned for a long period of time with subsequent reconstructions and enlargements. In the South temple associations in Uruk are best investigated (Figure 2: 7), and in the North those at Tepe Gawra, where in the Late Uruk layers IX and VIII functioned temples of developed shapes with related storage constructions – small rooms without entrances (Speiser, 1935, 31-32).

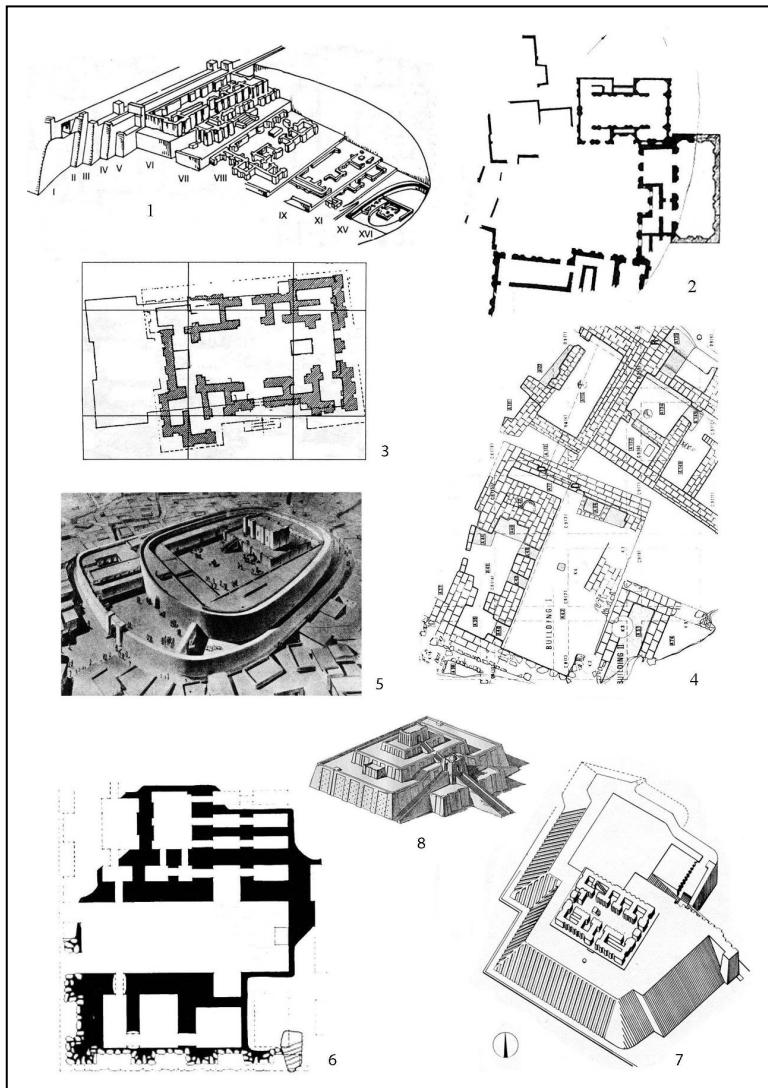


Figure 1. Temple complexes of Mesopotamia, Syria and Eastern Anatolia

1 – Eridu, stratigraphic sequence at the temple area; 2 – Tepe Gawra, temple complex in layer XIII; 3 – Eridu, temple in layer VIII; 4 – Arslantepe VIA, part of religious-administrative complex; 5 – Sin temple in Khafajeh; 6 – Tell Brak, Eye temple; 7 – Uruk, White temple (reconstruction); 8 – Uruk, Urnammu ziggurat (reconstruction).

In Uruk the archaeological investigations were focused at the Eanna religious centre. It comprised several synchronously functioning monumental complexes, mostly of religious character. Generally, temples were built of mudbrick on a specially prepared ritually clean foundation: prior to construction the cultural deposit was extracted from the foundation trench as ritually unclean, the trench then was filled with sand. Over it a high platform was erected surmounted by an imposing temple, so that it controlled the city's everyday life practically and symbolically. In the course of subsequent reconstructions ruins of the earlier buildings were levelled and filled with earth, platform raised. The Uruk temple architecture inherited such essential features of the Ubaid construction traditions as structures' three-partite T-shape plan, elongated central hall where a statue of a local deity was installed. Of the Ubaid origin was also the technique of wall decoration with alternate niches and pilasters. The Uruk architects invented a characteristic decorative manner based on using clay painted cones that enabled to create complicated geometric ornaments of carpet or matting type. Temples were of large size; thus, the temple of the fertility goddess Inanna measured 75 to 25 m, the complex of famous White temple is even more impressive, 83 to 53 m. The temple itself measured 17 to 22 m and rested upon the platform around 13 m high (Figure 1: 7). Its socle was covered with limestone conveyed from the Zagros foothills, from a distance of some tens of kilometres. The whole complex was surrounded by a defensive wall.

In Eastern Anatolia at Arslantepe VIA a well-preserved religious-administrative complex was investigated in details. It consisted of three buildings (Nos. I, III, IV), their walls decorated with niches and pilasters. In full correspondence with the Uruk construction tradition, the temple interior included podiums, offering tables, platforms, and a basin (Figure 1: 4). Some rooms contained numerous storage vessels and sealings (Figure 2: 3), which clearly points to the processes of values redistribution taking place in the sanctuary (Palmieri, 1973, 315-325).

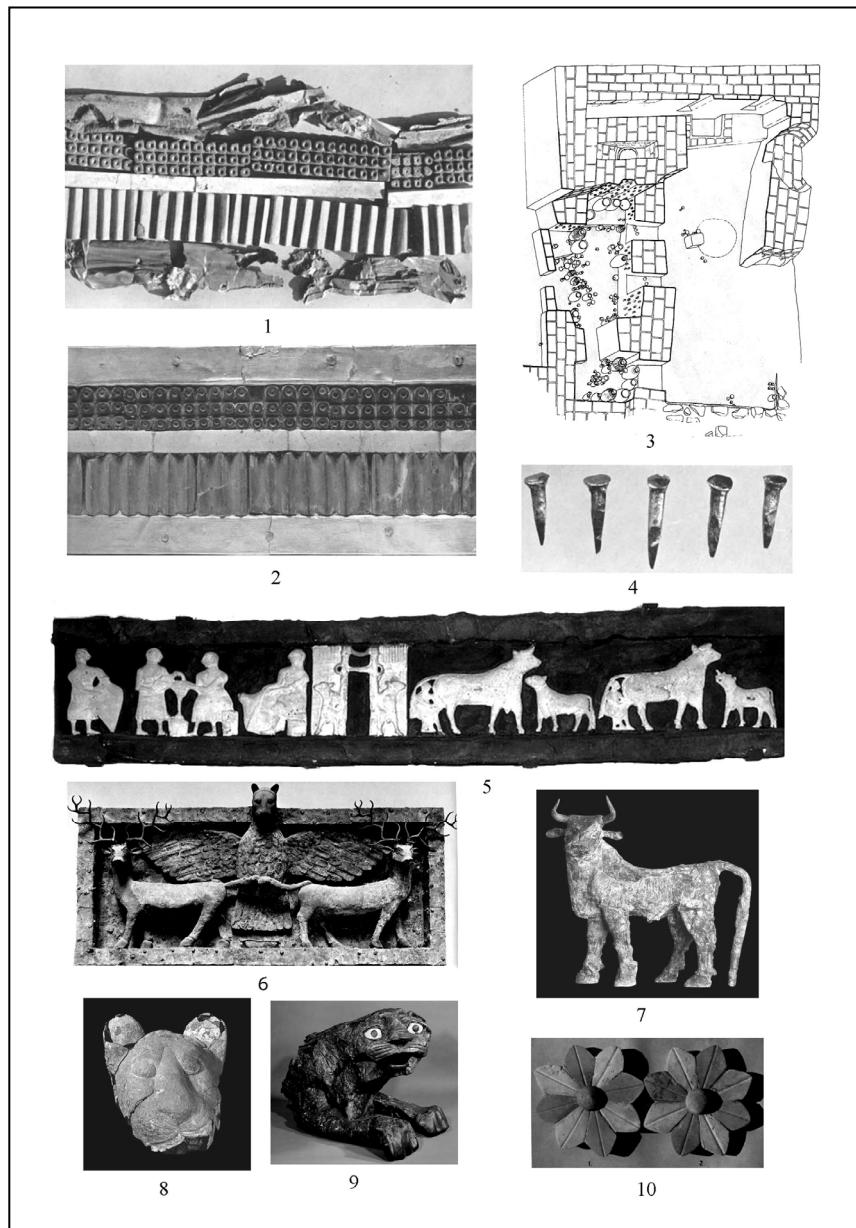


Figure 2. Decorative elements from temple complexes of Mesopotamia, Syria and Eastern Anatolia

1, 2 – Tell Brak, frieze from Eye temple (state in situ and reconstruction); 3 – Arslantepe VIA, interior of the religious-administrative complex (reconstruction); 4 – Tell Brak, gold-headed silver nails from the frieze in Eye temple; 5-8 – Al Ubaid, pieces of monumental decorative sculpture from Ninhursag temple; 9 – Mari, lion figure from the temple building; 10 – Tell Brak, decorative stone rosettes from Eye temple.

The Late Uruk and ED periods see a series of changes in the temple architecture. While the general architectural concept remains the same, lofty platforms are not used any longer. Basic layout provides protection of the

religious centre by walls, which means its isolation from the habitation areas. Thus, Sin temple in Khafajeh did not control the city, but was encircled by a double oval wall strengthened with buttresses (Figure 1: 5). A double oval of monumental constructions surrounded a sacral area at the settlement Tell Hazna 1 of the Late Uruk – ED periods in North-eastern Syria (Munchaev, Merpert, & Amirov, 2004). Probably, this new planning system was to a great extent related with the tangible militarization of the early state formations in Greater Mesopotamia.

Both temples on platforms and lofty stepped ziggurats of the later epoch were associated with a mountain – god's residence (Figure 1: 8). Sacral buildings are often shown on Mesopotamian cylinder seals of the Uruk period. They look as high buildings with richly decorated façades, often supplied with pairs of horns symbolizing a male deity. Near the temple sometimes there are placed bent poles decorated with "ribbons" (Figure 3: 1-3). When shown isolated, the "ribbon poles" served as an ideogram of a temple.

Monumental temple complexes functioned in all major Sumerian cities, stressing and visualizing the key social and economic position the temple organization and temple estates held. I.M. Dyakonov suggested the following characteristic of the Mesopotamian temple construction. Both in North and South Mesopotamia certain type of construction of religious purpose was worked out and became a stable tradition clearly traced in the architecture of later period. It was based on definite principles. Sanctuaries and temples were always built in the same place so that all subsequent reconstructions included the earlier buildings, the whole functioning as a single complex. The central temple stood over a high artificial platform provided with two symmetrical staircases. In the course of time the tradition of constructing each new temple at the same place had resulted in appearance of three, five, and, finally, seven platforms erected one above the other and crowned by temple proper, the whole known as ziggurat. The aspiration for constructing lofty temples proclaimed immemorial antiquity and local origins of the given community, and relation of the earthly sanctuary with the celestial abode of its god-patron. Temples had three-partite plans with central court surrounded by side annexes (in the North court might have had a roof). Temple walls and platform were decorated with alternate niches and pilasters (Dyakonov, 2002, 69-70).

As the foci of religious, social, economic, administrative and intellectual life in urban centres temples played the principal role in the process of formation of cities and early polities in ancient Mesopotamia. The Sumerians fully appreciated this: the early Sumerian historical tradition states that constructing temples preceded formation of their cities (Dyakonov, 1983, 110-111). Temples exercised registration and control over the agricultural and craft production, accumulation and redistribution of values for exchange. They served as centres of education, literacy, astronomic observations, their archives preserved knowledge in various fields, generally speaking, temples must be regarded as the foci of protoscience. Judging from the texts of the 3rd millennium BC temples organised long-distance exchange, and were also principal consumers of valuable materials supplied from distant lands. Especially in South Mesopotamia practically barren of mineral resources construction stone, decorative materials, timber and metals were delivered in exchange for agricultural products. Advanced architecture of the Mesopotamian temples required emergence and perfection of many kinds of craft and professional activity. The process of construction stipulated for skilled work of numerous professionals, such as architects, builders, stone carvers, carpenters, specialists in metalwork, jewellers, and the like. Temple workshops employed craftsmen, ordered certain kinds of production and provided them with raw materials. In their turn, the workers got natural payment – strictly established quantity of foodstuffs, which is evidenced by numerous written documents and vessels of standard size, their volume corresponding to the daily consumption rate for one worker. I mean so-called bevelled-rim bowls and flowerpots (Millard, 1988, 51). Centralized control over production and consuming allowed accumulation of great amount of goods for exchange (Özdogan, 2002).

Thus it is quite logical that in the epoch of formation of the early polities material values were preserved in the temple treasuries. Many outstanding objects of high value and artistry of the Uruk and ED periods were discovered within the temples territory. It seems to be of interest to present a short review of most spectacular archaeological finds (mainly metal ones) with clearly expressed symbolic meaning associated with the temple complexes of the discussed periods. The material may be divided into several groups according to their function.



Figure 3. Images of temples and archaeological finds from temple complexes

1, 2 – temple images on cylinder seals of Uruk period; 3 – “ribbon pole” symbolizing temple on a cylinder seal of Uruk period; 4 – temple estate, scene on a cylinder seal of Early Dynastic period; 5 – loading grain in storehouses, scene on a cylinder seal of Early Dynastic period; 6 – Uruk, foundation peg from Inanna temple with inscription of King Urnammu; 7, 8 – Tell Mozan, foundation pegs from Nergal temple; 9 – Tell Brak, stone head from Eye temple; 10, 11 – Tell Judeideh, figurines from the treasure; 12 – Tell Asmar, alabaster statuette of a worshipper from Square temple; 13 – Nippur, limestone statuette of a worshipper from Inanna temple; 14-17 – Tell Hazna 1, bronze carpenter tools from the treasure; 18 – Susa, statuette of “god with gold hand” from Inshushinak temple; 19 – Susa, golden statue from the treasure found near Inshushinak temple; 20 – Arslantepe VIA, building III, treasure of weapons from the religious-administrative complex.

### 3. Metal Objects

#### 3.1 Interior Decoration of Sumerian Temples

One of the earliest and best preserved complexes is the religious centre at Tell Brak on the Upper Khabur (Syria). In the second part of the 4th millennium BC Brak was a significant urban centre, its area covering almost 50 ha. Similar to other Uruk-time settlements a religious-administrative complex with numerous related workshops functioned there. The complex included Eye temple of three-partite plan (Figure. 1: 6) 30 to 25 m in size (Mallowan, 1947, 93-94, tables 3; 4; 48.4). Side rooms of standard size with very thick walls clearly served as storerooms. In accordance with the Uruk decorative tradition the outer walls were adorned with painted clay cones and rosettes; the inner walls covered with plaster, numerous alabaster idols with characteristically big eyes

being sunk into it. Evidently, these might have symbolized all-seeing eye of a deity. The interior included an altar decorated with composite slate and limestone frieze mounted on a wooden panel. Rectangular stone strips were put together with a copper wire threaded through them. The top and bottom edges of the frieze were framed with massive sheet gold 2 mm thick, 2 cm wide and up to 2 cm sunk into the wall. The golden frame was attached to the panel with 42 gold-headed silver nails (Figure. 2: 1, 2, 4, 10).

Judging from fragmented finds from Uruk (Heinrich, 1936, 47, table 34b, f, h; 35a) and archaic ziggurat in Ur (Woolley, 1956, 181), similar altars were built in South Mesopotamia as well.

### 3.2 Statuary

To the group of temple offerings metal foundation cones may be attributed, often bearing the inscriptions with the name of the ruler who founded the temple, and the name of god. The cones had the shape of anthropo- or zoomorphic statuettes (Figure 3: 6-8). There exists historical information concerning inscribed foundation tablets made of gold: Nabonides, the king of Babylon (the 6 th c. BC) mentioned a golden tablet inscribed by the king Naramsuen (the 23 rd c. BC) and discovered during the restoration of Sin ziggurat in Harran. The statement is confirmed by the real golden tablet with the name of Naramsuen found in Bismayah (Moorey, 1994, 224).

The group of statues and statuettes includes the images of sacred animals related to some deities. Some of them were produced with application of noble metals, mostly gold. Characteristic of the Uruk-time metalwork were composite zoomorphic statuettes with details cast of gold. Thus, from the city of Uruk association called Sammelfund is known containing temple furnishing, namely, a sheet of golden foil for plating some object, golden spout of a vessel, a silver jar, and details of zoomorphic statuettes, among them horns made of sheet gold once mounted on some non-preserved material (Heinrich, 1936, 40, table 30d, 35d, 29). The treasure included also two copper/bronze pins surmounted with recumbent calf images, a figure of a lion (Heinrich, 1936, table 17a, b; 13a), two cylinder seals of lapis-lazuli. Within the Eanna temple area, layer III, the details of composite statuettes were discovered shaped of copper/bronze, silver and gold (legs, ears), together with the figurine of a goat made of bitumen plaited with golden foil (Moorey, 1982, 21).

A series of spectacular objects come from Ninhursag temple of the ED III period in the city of Al Ubaid. Characteristically, among them there are also horns of sheet gold, initially mounted on some base (Moorey, 1994, 224). Both natural animal horns and their copies produced of valuable materials served as symbolic adornments of Sumerian temples and sanctuaries, as we can see from the colourful narration in The Epic of Gilgamesh:

Gilgamesh summoned all the artisans and craftsmen.

(All) the artisans admired the thickness of its horns,

each fashioned from 30 minas of lapis lazuli!

Two fingers thick is their casing (?).

Six vats of oil the contents of the two

he gave as ointment to his (personal) god Lugalbanda.

He brought the horns in and hung them in the bedroom of the family head (Lugalbanda?).

(The Epic of Gilgamesh, Tablet VI).

The collection from Ninhursag temple includes also monumental bronze statues and panels (Moorey, 1994). Excavations of the temple consecrated to the city's goddess patron have revealed two panels, once mounted on the façade (now in The British museum). The first one (almost 70 cm long) shows the scenes in the temple estate: milking cows and making butter (Figure 2: 5). The composite panel had a wooden base on which metal sheets were attached with copper nails; the background is made of black slate, and figures of shell mosaic work. The second panel (Figure 2: 6) is impressively large – 2.59 m long. Its wooden base was first covered with bitumen, over it figures shaped of sheet bronze were nailed. The images are rendered in high relief. The symmetric heraldic composition consists of two confronted deer figures with three-dimensional heads and horns, and the central image of a lion-headed eagle with extended wings known as Imdugud, symbol of the god Ningirsu. The same technique of fixing bronze images on wooden base with the help of bitumen was used, when shaping four statues of bulls. The best preserved one is almost 61 cm high (Figure 2: 7). Numerous images of bulls and cows in the temple are evidently related to the fact that the goddess Ninhursag protected flocks, and her name means “lady of the steppe”. The entrance to the temple was probably guarded by statues of lions: a lion's head 20 cm high made of sheet copper/bronze was found in the debris (Figure 2: 8). Lion figures guarding temple are known also from the later period: to the 3rd dynasty of Ur date two symmetrical images of lion's front parts from the temple in Mari (Figure 2: 9).

Anthropomorphic images are mostly represented by minor statuettes. Some of them evidently depict deities, other ones show worshippers. The figurines played an important role in the Sumerian religious ceremonies, as we may judge from the ancient texts:

Just as day began to dawn Gilgamesh opened ...

and brought out a big table of sissoo wood.

A carnelian bowl he filled with honey,

a lapis lazuli bowl he filled with butter.

He provided ... and displayed it before Shamash

(The Epic of Gilgamesh, Tablet VIII).

The first line of this fragment in I.M. Dyakonov's translation into Russian reads: "Gilgamesh made a figurine of clay" (Epos o Gilgameshe, 2006, 56), so that the mentioned statuette may be associated with an image of a worshipper. The same epic contains a unique description of a memorial portrait statue of the hero Enkidu, with a list of used materials and professions mentioned, moreover, it entirely corresponds to the technological principle of shaping archaeologically known composite images:

Just as day began to dawn, Gilgamesh...

and issued a call to the land:

"You, blacksmith! You, lapidary! You, coppersmith!

You, goldsmith! You, jeweler!

Create 'My Friend,' fashion a statue of him.

... he fashioned a statue of his friend.

His features ..., your chest will be of lapis lazuli, your skin will be of gold."

(The Epic of Gilgamesh, Tablet VIII).

In the context of the theme of composite anthropomorphic images and their literary descriptions of interest are Biblical verses that mention pagan (non-Judaic) idols made with application of different materials: "...the gods of gold, and of silver, of brass, of iron, of wood, and of stone." (Dan. 5, 4; Isa. 30, 22; Ps. 135, 15). The Bible contains also a detailed parallel to the Sumerian description of a monumental composite statue in the dream of Nebuchadnezzar: "This great image, whose brightness was excellent, stood before thee; and the form thereof was terrible. This image's head was of fine gold, his breast and his arms of silver, his belly and his thighs of brass, his legs of iron, his feet part of iron and part of clay." (Dan. 2, 31-33).

The above literary descriptions have their parallels among the discussed archaeological finds. As early as the Late Uruk period, monumental anthropomorphic images were placed in religious centres, which is well documented by stone head of a statue from the Tell Brak temple. The head is 17.8 cm high. The statue was a composite one, since on back of the head there is a groove for fixing it on some base (Figure 3: 9).

Worshippers' images are rather numerous, let me point to the alabaster male figurine from Tell Asmar (ED II) almost 30 cm high (Figure 3: 12) and female limestone statuette from Nippur (ED III), 25 cm high (Figure 3: 13). The figurines represent an impressive example of the Sumerian style in sculpture. Some images of worshippers are of big size, up to 70 cm in height and more; for instance, the headless diorite statue of the king Urnammu shown as an architect with a plan of the temple he built in Ur on his lap is 90 cm high. As to the size and stylistic manner, the statue represents a true piece of monumental sculpture.

Metal was also used for manufacturing anthropomorphic religious sculpture. From the Early Dynastic epoch dates the treasure of six bronze statuettes (three male and three female) from Tell Judeideh (North Syria, Amuq G period) with characteristic details: helmets, belts and weapons on male figurines, and ornaments and hairstyle details on female ones – Figure 3: 10, 11). Application of golden foil, when shaping composite figurines clearly is inherited from the Uruk craftsmanship tradition. Thus, the face of the gypsum statuette of the ED III from Nippur is plaited with sheet gold; the same manner was known in later periods (Amiet, 1977, table 3b, 433, 434). Famous statuette from Susa known as "god with the golden hand" 17.5 cm high (the beginning of the 2 nd millennium BC) depicts a standing deity in a typical horned tiara and long garment (Figure 3: 18). Initially the whole figurine was covered with golden foil, at present it is preserved only on its left hand (Tallon, 1987, No. 1337), hence the name. From the Middle Elamite period (ca. the 14th c. BC) dates a magnificent statue from the Acropolis of Susa excavated by de Morgan (Figure 3: 19). The golden statue 75 cm high (!) was discovered in

the treasure of precious objects near the ziggurat of god Inshushinac – the city's patron. It represents a male figure dressed in a diadem and a long ornamented garment with a fringed hem, and with a goat in its hands. Most probably, the statue portrays a local ruler presenting an offering (Moorey, 1994, 225). Despite its late chronological position, the statue in question gives a clear idea as for the luxury that once reigned in the interior of Near Eastern temples. In relation with the said I should like to point once more to the Biblical descriptions of the tabernacle outfit made by Moses (Ex. 27), and also the work that King Solomon made for the house of the Lord, including two pillars and a gigantic sea of brass, altar, table, candlesticks and vessels of gold (I Kings 7), 200 targets and 300 minor shields made of beaten gold (I Kings 10, 16, 17). The information concerns the Late Bronze and even the Early Iron Ages, yet it helps to shape an idea on the mass and variety of highly valuable outfits preserved in the Near Eastern religious complexes.

### *3.3 Weapons and Tools*

Some temple complexes of the discussed region contain metal weapons and tools. Among the most outstanding finds the treasure from the religious-administrative complex of the Late Uruk time at Arslantepe VIA should be mentioned (Palmieri, 1981, 104, 109, Figure 3: 1-4) (see Figure 3: 20). The treasure was discovered in building III, room A113 and consisted of two bunches of bronze objects: 12 tanged leaf-shape spearheads from 42 to 53.7 cm long; 9 swords (46 to 62 cm long) with solid-cast handles, three of them decorated with silver inlay; and a quadruple spiral plate. The swords and spearheads are the earliest ones known in the Near East now. It is of interest that the swords' cutting edges were well sharpened, while their flat handles make them inconvenient as real weapons, yet perfectly correspond to the ceremonial use. To the Early Bronze Age dates also an association from the sanctuary at Beycesultan XVII (Central Anatolia); it comprised 5 bronze knives (Lloyd, Mellaart, 1963, Figure 9, 1-4, 6). Two knives are respectively 15.7 and 12.9 cm long, the rest are of miniature size (from 4.3 to 7.6 cm). The finds are of significance despite their modest appearance, because metal finds were still rare in that epoch, and their relationship with the religious construction is even more so eloquent.

Taking into account context of the associations containing ceremonial weapons and symbols of power, including those made with application of noble metals, it may be concluded that such objects were used by a community's deified ruler, or a king-priest, as P. Amiet termed it, which is well confirmed by the fact of their presence in temple associations.

There existed also implements specially designed to be used in the religious ceremonies. Ancient written sources and figurative materials suggest that from the ED period onward in Mesopotamia and culturally closely related Anatolia construction was conceived as the most important activity local ruler performed aimed at maintenance of life of given community, and the whole universe (Avilova, 2008, 170-178). Carpenter tools served as gods' attributes: the Sun god Shamash was depicted carrying a saw. In the 3rd millennium BC in royal burials of Mesopotamia and Anatolia unusable replicas of tools made of noble metals were deposited – carpenter tools in men graves, and spindles and musical instruments in women ones. Rich materials on this point are known from Ur, Troy II, Alaca Höyük, Horoztepe, Karataş-Semayuk (Avilova, 2011, 199-213).

Ordinary bronze carpenter tools also could have been related to religious complexes. Of importance in this aspect is the association containing a set of bronze carpenter tools discovered at the temple area of the ED urban settlement Tell Hazna 1 (Figure 3: 14-17). It included two flat axes of different types, a grooved chisel, a chisel-like tool, and a tanged saw (the latter was identified by the excavator as a notch-edged knife – see: Munchaev, 2005, 15, Figures 1: 4; 4: 1-5).

Even the above brief review of finds from the temple complexes suggests that in the Early metal period (the term implies the Chalcolithic and Bronze Age) in the Near East basic features of "prestige economy" are clearly expressed. Its key characteristic was that under the conditions of natural economy, limited resources and productive forces in all-sufficient communities some objects were exceedingly highly valued as symbols of high social status and spiritual leadership, the more so that these aspects of power were closely related (Avilova, 2010). The objects in question were made of exotic, valuable, fine, and consequently practically in all cases imported materials obtained by intertribal groups.

### **4. Exchange in Temple Economy**

The lack of mineral resources in Southern Mesopotamia stimulated intensification of long-distance exchange and, thereby, extensive mining and smelting metals and search of valuable materials, including timber, copper, copper-base alloys and precious metals, stone for construction and semi-precious stones in the regions having such resources at their disposal. Wide-scale economic and political relationships with the territories rich in natural resources were organized by the social elite related to the temple estates – true centres of social and economic development (Antonova, 1998, 131).

By impressively intense exchange is marked the turning point in the history of ancient Near East – the Uruk period. Of special significance in this aspect was the phenomenon of “temple economy”. The farming civilization of the alluvium in this period formed a complicated system with the populations of the Iranian and Anatolian plateaus that practiced the complex economy of which metal production was an important component. The early polities pursued wide-scale temple construction, consequently, they strongly felt the necessity of imported materials, the social elite being the organizer of the exchange system. The Sumerian society developed permanent intensive contacts with the centres of metal production and metalworking located in the adjacent territories of Iran, Eastern Anatolia and the Gulf. The role temples played in the extensive network of trade relations in the Uruk period can hardly be overestimated. Noteworthy, the Sumerians themselves conceived exchange of the raw materials (including metals) as performed with the purpose to construct and decorate temples, i.e. as an important gods-pleasing activity. A colourful narration on this subject can be found in the epic “Enmerkar and the Lord of Aratta” (Kramer, 1965).

Archaeologists and cultural anthropologists should pay special attention to the qualitative leap forward in metal production which took place in the Early Bronze Age (Avilova, 2008, 147-149; 2009) and its relation to the processes of urbanisation and formation of early polities.

## 5. Conclusions

Metal necessity in the agricultural societies and need of certain goods in stock-breeding communities were powerful catalysts in economic progress and development of social complexity. Special role in the interaction of farming communities with the mountaineers engaged in animal-breeding and metal production played agricultural goods (cereals, melted butter and oils) and craft products (textiles). In the depths of farming societies there were worked out many intellectual attainments, such as writing, sets of figurative motifs, finally, fashions, including costume and hair-styles important as the indications of social status.

This pattern of relations with the neighbours was developed by Egypt and Mesopotamia – the Old World greatest producers of foodstuffs. In their lands high crop capacity of the fields allowed accumulating strategic stocks used in particular for exchange and accompanied by wide-scale spreading various cultural standards. It should be pointed out that high crops in alluvium were not secure at all: repeated draughts were a permanent threat, while irregular floods often destroyed crops. These factors combined with rapid population growth were of key significance for formation of basic characteristic features of the Mesopotamian civilization: urban centres – residence of elite and bureaucracy, centralised control of production in general and agricultural works in particular, control of irrigation system, rationing daily consuming with the objective to save food supplies for lean years and organised trade. The foodstuffs preserved in temple granaries could have been used also to maintain the power of ruling clan and to form numerous armed detachments. Numerous finds of valuable objects in the temple complexes prove that public wealth was concentrated there, and ministers of religion disposed of that and used the objects in question, when performing religious rites and managing the community's economy.

Bad harvests and famine caused many ethno-political and social processes. Such important source of historical information as the Bible repeatedly mentions famine as the reason for the Hebrews' migrations from Canaan to Egypt in the epoch of patriarchs, and later events in the history of the Egyptian and Hebrew peoples (Gen. 12, 10; 26, 1; 42, 2). “And the seven years of dearth began to come, according as Joseph had said: and the dearth was in all lands; but in all land of Egypt there was bread. And when all the land of Egypt was famished, the people cried to Pharaoh for bread...” (Gen. 41, 54-55). Failure of crops accelerated concentration of croplands under the control of elite and, consequently, strengthened its economic and political power and centralized state structures: “Let Pharaoh do this, and let him appoint officers over the land, and take up the fifth part of the land of Egypt in the seven plenteous years. And let them gather all the food of those good years that come, and lay up corn under the hand of Pharaoh, and let them keep food in the cities. And that food shall be for store to the land against the seven years of famine, which shall be in the land of Egypt; that the land perish not through the famine” (Gen. 41, 34-36).

Non-guaranteed success of farming paved the way for rivalry and militarization of policy implemented by the South Mesopotamian city-states; the series of metal weapons known from the Ur and Kish cemeteries of ED period are eloquent evidences of the terminal phase of this process. It seems highly probable that growth of urban population and risk of local bad harvests were among the reasons that forced the Uruk communities to organise long-distance trade expeditions and to set up colonies far beyond the borders of the alluvial plain. In G. Alagaze's opinion, the colonies were set up centrally by state with active participation of emigrants from Lower Mesopotamia (Algaze, 1989, 590). I should stress that the process encompassed Eastern Anatolia, the Upper Euphrates, and the Iranian plateau – regions very rich in copper and silver sources. In the Early and Middle

Bronze Ages (the 4 th and 3 rd millennia BC) Mesopotamian society was clearly marked by centralization and expansionism. We may conclude that formation of the “temple economy” was a unique reply to the challenge of specific geographic conditions and model of historical and cultural development.

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