

Anthropological Approaches in Neolithic Studies in Iran

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ABSTRACT – *The Mesolithic/Neolithic transition in western Iran are reconsidered in the light of recent anthropological approaches in Neolithic studies in Iran and a brief review of the chronology of the Neolithisation process in Zawi-Chemi, Shanidar, Palegawa, Tepe Ganj Dareh, Karim Shahr, Tepe Asiab, Tepe Abdol Hosien, Tepe Alikosh, Tepe Jarmo, Sarab and Tepe Guran are presented.*

IZVLEČEK – *V članku ponovno pretehtamo prehod iz mezolitika v neolitik v zahodnem Iranu v luči najnovejšega antropološkega pristopa k raziskavam neolitika. Podajamo tudi kratek kronološki pregled procesa neolitizacije v najdiščih Zawi-Chemi, Shanidar, Palegawa, Tepe Ganj Dareh, Karim Shahr, Tepe Asiab, Tepe Abdol Hosien, Tepe Alikosh, Tepe Jarmo, Sarab in Tepe Guran.*

KEY WORDS – *Neolithisation processes; Western Iran; Ethno-archaeology*

INTRODUCTION

After a long period, during which the subsistence of human society was founded on hunting and gathering, came a new era in human history marked by the first appearance of rural society. In the full sweep of human history, no development has had a greater effect than the introduction of agriculture.

Approaches in historical anthropology claim culture to be the primary source of changes and transformations. Every change, taking place in different social fields such as politics, economic etc., is therefore a direct consequence of cultural transformation. This means culture and cultural transformation play fundamental roles in engendering development. Anthropological studies have also provided many useful illustrations, for example the first revolution in the history of mankind, known as the Neolithic revolution (*Child 1936*). It was a transformation that led people from an economic system of hunting and gathering to a productive economic system of foraging and farming. As a result of this transition, new social organisations appeared; all this took place around 10000 BC in the Middle East. The outcome was the first appearance of a more developed society, orga-

nised as a village community (*Braidwood 1975*). The advent of a more developed community, which transpired some 4000 years after the appearance of villages and was followed by a series of cultural inventions such as the discovery of metal, the invention of writing and other technological advances, in fact took place in the wake of the development of village cultures. This mutation seems to have appeared for the first time in the Near East, especially in the hilly regions adjacent to the area of Near- and Middle East, that Breasted called the "Fertile Crescent" (*Peake, Harold and Fleure 1927*). The piedmont hills and lower inter-mountain valleys of the Zagros located in the Western part of Iran are an ideal location for animal and plant domestication. This area has been one of the favourite places of archaeologists and environmental specialists for at least three centuries. The zone suggested lies above hot and almost rainless flood plains, yet below the cold and damp mountains peaks. Ranging in elevation from 300 to 1500 meters, with rainfall between 250 and 500 mm per year, this region was ideal for naturally irrigated agriculture. According to Van Zeist's and Bottema's, as well as Wright's studies of four sites in the cen-

tral Zagros at Lalabad, Nilofar, Zaribar and Mirabad, the climate of the region before 9000 BC was colder and drier than it is today (Wright 1977:281–381). The area that nowadays supports an open forest of oak and pistachio trees contained the late Pleistocene Artemisia Steppes (Van Zeist and Bottema 1977). As the climate of the Zagros region became warmer and wetter at the end of Pleistocene, different flora communities developed in the area of the oak and pistachio open woodland, which included the wild progenitors of potentially domestic wheat and barley. According to Wright (1977) the Zagros mountain region of diversified habitat was an attractive area for certain wild animals and for the people who hunted them. The Epipaleolithic and Neolithic civilisation in the Near and Middle East have been linked culturally and spatially; this enables us to observe the evolution of the Neolithic phenomenon in its domestic regions in the Jordan Valley and Greater Mesopotamia (Cauvin 1978). However, one of the questions we have to face is the chronology and classification of the excavated sites that span through several millennia (10 000–6000 BC). The systems of classification in Zagros were based on technological, economic and cultural criteria, as well as on absolute chronology. The traditional classification, which is founded on the evolution of stone tool technology (objectified as Palaeolithic-Mesolithic-Neolithic sequence), cannot answer all the questions concerning the detection and description of different Neolithic phases and stages of civilisation. Therefore, we intend first to define different periods relevant to this study and thereafter try to present some aspects of the principal stages of the Neolithization.

THE PRINCIPLE TRAITS OF DIFFERENT SEQUENCES AND A BRIEF REVIEW OF THE CHRONOLOGY OF THE NEOLITHISATION PROCESS IN IRAN

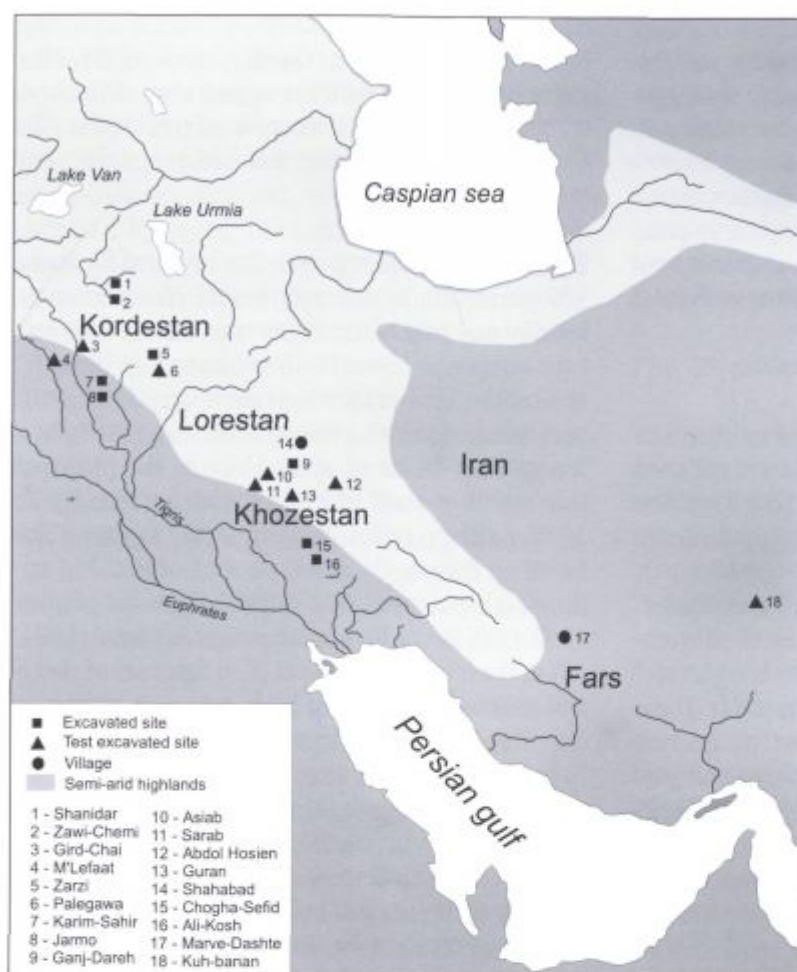
Braidwood, after several seasons of excavating many Neolithic sites in the foothills of the Zagros mountains, formed a sequence founded on socio-economic evolution to represent the different stages known since the upper Palaeolithic: (a) intensive food gathering, (b) incipient food production and (c) developed farming communities (Braidwood 1975–98). This perspective on evolution has great historical merit. For the first time, the relation between humans and their natural environment was accentuated. Braidwood also thought the key to all questions concerning Neolithisation would fit all the Near- and Middle

East. But after 1960, some intensive studies in the Levant (Palestine, Syria and Anatolia) provided new data on the transition from a hunting-gathering to a farming society. The excavations at Mureybet, Aswad, Jericho and Çayönü showed some layers dated with ^{14}C that differed from the Zagros sites. It is perhaps necessary to point out that the Epipaleolithic (Zarzian) stone tool industry was based on microliths having only a few geometric forms, such as the crescent and the triangle.

9th to 7th millennium BC

The most significant period in our region is between the 9th and 7th millennia BC. A uniform complex of economic and socio-cultural changes was completed during this period. A special brief period, called Zarzian, is of great importance, because it links the end of the Mesolithic with the beginning of the Neolithic. Around the 9th millennium BC the first signs of Neolithisation process appeared on Mt. Zagros, in Kurdistan, with the indisputable augmentation of wild sheep, the appearance of “grinding stones” and round stone structures. This phase is represented in Zagros by layers marked as Zawi Chemi B, Shanidar B1 and the upper layer of Palegawa. Information about the latter is scarce, but we have some significant data about Zawi Chemi and Shanidar.

Zawi-Chemi – the multilayered open-air site, located on an extensive terrace, was explored in 1958 and 1960 (Solecki 1980). The stratigraphy, more than two metres high, consists of a sequence of cultural horizons with depths ranging from 215 to 50 cm. The horizon at a depth of 120 cm provided a radiocarbon date of 10870 ± 300 BP (W-1681). Perkins (1964) claimed that the sheep and goats were raised on the site especially in its later phase (100–50 cm). However, the new information allows us to create alternative explanations of the excessively large numbers of young individuals. The dominant sheep and goats are always accompanied by red deer, although the latter loses its significance towards the top of the sequence. The flint material was accompanied by the remnants of a rich ground stone industry and sheep and goat husbandry, which prompted Rose Solecki to determine the assemblage as Proto-Neolithic. According to Kozłowski, “further evidence” of such an evolution could be the presence of partially polished axes documented in the uppermost level of the stratigraphic sequence (Kozłowski 1996: 101–116; Hole 1994:105). However, we failed to find a true axe in the Washington collection, although we examined most of the finds classified by



Rose Solecki as such. Although the stone industry from Zawi-Chemi perfectly matches the early Neolithic Iraqi standard represented in the region of Nemrik, M'lefaat and Jarmo, there was a lack of the other elements of the PPN package. Tokens, clay figurines and stone vessels are absent, and we believe the lower part of Zawi-Chemi's stratigraphic sequence should have been determined as the final Zarzian, more or less contemporaneous with Natufian civilisation in the Levant. Because of the incorrectness in identifying the stratigraphic sequence, it is impossible to date precisely the "proto-agriculture" phase and to identify the appearance of polished stone axes as well as the beginning of the processes of animal and plant manipulation in the region. However, we can be almost sure that all these innovations must belong to the upper part of level B at Zawi-Chemi.

Shanidar – the cave site is located at the southern part of Baradost Mountain at an elevation of about 822 metres. It overlooks Shanidar valley and is a short distance from the Great Zab River. The cave is still occupied during the winter months by local villagers and their livestock, mainly goats (Redman

1978.62). It is large, having about 1000 square metres of floor space, and prehistoric deposits as much as 13 metres deep. The deposits have been divided into four major archaeological levels (A–D) spanning the past 100 000 years. The oldest is Mousterian (level D) and the youngest is early Neolithic (level A). The Upper Palaeolithic layers (Baradostan) were superimposed by a deposit that has been divided into two cultural strata (B1 and B2). Rose Solecki has determined the lower layer as being Epipaleolithic or Zarzian (level B2) and the upper one as Proto-Neolithic (level B1). There is some similarity between the tool assemblages of levels B1 and B2. The stone tool industry in general is similar to that found at the nearby open air site of Zawi-Chemi. However, the uppermost level of this site (A) contains materials that range from the Neolithic to the present. Information about the bone tools of Shanidar B1 is limited; what we do know is

that the celts/ axes have not been found. This could be an argument to support the thesis that this layer is older than Zawi-Chemi B. The available ^{14}C dates also support this hypothesis, placing Shanidar B1 level in the 9th millennium BC (10 600±300 BP) (W-667). It is interesting that grinding stones, which could be associated with gathering, were more abundant in Shanidar B1 (Hole 1987).

Palegawa – in the rock shelter of Palegawa, located very close to the Iraqi border (see map), a microblade industry of rectangles, triangles, trapezoids and lunates has been discovered in the Epipaleolithic layer. A few obsidian tools like in the Shanidar B2 assemblage have been identified, while the nearest obsidian source is located near Lake Van in Turkey, about 250 km away (Reedman 1978.64). The animal bone assemblage consists of gazelle, red deer, wild cattle, goat and probably sheep and domestic dog (Turnbull and Reed 1974). As far as we know, the final Zarzian in Kurdistan must have ended round 8000 BC. The contemporary sites of this period have not been found in Khuzistan, although we found the site Kuh-Banan further to the southeast, which might be coeval to Zarzian period

in the western part of Iran (Rafifar 1993). The site was unfortunately not excavated properly and the radiocarbon dates and data on subsistence strategies and architecture are not available. So, the stone tool assemblage provides the only information we have. The artefacts showed some Natufian characteristics, which could have been defined according to Hukried (1961) by the presence of "geometric microliths" and "sickles" to suggest harvesting activities.

From 8000 BC to 7300 BC

This period was the most important part of the Neolithisation process in this region, because it included the transition from a sub-nomadic to sedentary and agricultural society. All the sites of this period are situated in Zagros, five of them in the northern part in Kurdistan (Zawi-Chemi B, Zarzi A, Karim Shahir, Gird Chai and M'lefaat) and at least three in the central part in Kermanshah (Ganj Dareh, Asiab, Abdol Hosien) have been completely excavated. These eight settlements were used as seasonal camps. The economy of residents was based on sheep and goat breeding. There are some indications for initial agriculture, though hunting and gathering continued to be main economic resource. However, according to Van Zeist, grains of morphologically domesticated barley have been found on the base level of Ganj Dareh (Smith 1986:32) and, if the report is confirmed, the cultivation of barley in Zagros would appear earlier than animal domestication, as in the case of Çayönü in Anatolia (Dollfus 1989:44). The structures discovered at these sites, with the exception of Tepe Ganj Dareh and Karim Shahir, display round buildings that stood until the end of the 8th and the beginning of the 7th millennium. One of the best examples is the construction of the first occupation phase in Tepe Abdol Hosien, which is round and up to one metre thick (Pullar 1979). This round and "primitive" architecture does not appear either in the rest of Iran or in Turkmenistan (Aurenche 1982). The appearance of real masonry is placed in the beginning of the 7th millennium. It is worth mentioning that the chronology of these sites is problematic and should be reconsidered.

The end of the 8th and beginning of the 7th millennium BC

This period is contemporaneous to PPNB in Levant. The number of known sites belonging to this period is higher than in the preceding period. They appear in all parts of Zagros and also in Khuzistan. Generally this period is characterised by first indications

of agriculture, which is manifested for the first time in the "level D" of Ganj Dareh (Smith 1975). This event is associated with the appearance of the first rectangular houses that are made of rectangular *plano-convex* mud brick that show real complex and solid masonry.

Tepe Ganj Dareh – was probably occupied for about 500 years without a longer period of desertion at least by one part of the inhabitants during the year. Four occupation levels (A–D) are known. In "level D" appear the first evidence of tools associated with harvesting: a sickle, grinding tools and especially a "receptacle" made of mud which is the principal innovation in plant processing and storage (Smith 1976; LeMiere 1986). Numerous clay figurines are found on the site: 65 anthropo-zoomorphic, 113 anthropomorphic and 812 animal figurines (Eygun 1992:110). According to Schmandt-Besserat (1974:12) in the most ancient level (E) 6 figurines of sheep and goat were found, together with some geometric clay objects, spheres, discs and cylinders. However, Hole (1987) believes that the evidence of domestication of cereals, animals and the new type of architecture cannot be considered as an argument for permanent settlement. Also, the very high altitude of the settlement (1400 m) is unfavourable for the earliest permanent habitation. The chronology of different sequences of Ganj Dareh has not been determined. The radiocarbon sequence seems unreliable: the first ¹⁴C analysis dated the base level (E) to about 8450±150 BC (Gak-807) and the upper levels (A–D) to about 7300–7000 BC (Smith 1976). The analysis of four carbon samples performed in 1971 put the dates close to 6500 BC. Smith refused the dates and believes even the younger layers at Ganj Dareh belong to the 8th millennium BC (O.c.)

Karim Shahir – an open-air site excavated in 1951, is located on an eroding escarpment in the Iraqi province of Kirkuk. The artefact assemblage consists of chipped and ground stones and organic remains, while pottery is completely absent. The sample of 896 cores, representing the pattern of simple forms dispersed in all levels and all around the settlement has been examined recently and attributed to a single occupational period (Howe 1983; Hildebrand 1996:169). Human figurines are rare, only two having been found (Besserat 1974:11).

Tepe Asiab – a PPN open air site in the Kermanshah region near Ganj Dareh, it was excavated by Howe in 1959–60 but remains unpublished. Excavations yielded some chipped and ground stones, charcoal

and burned human bones as well as few intrusive pottery fragments (Hildebrand 1996). The basal deposit has been dated to 9755±85 BP (Howe 1983). It is worth noting that the artefacts deposited in different layers in southern pit have been treated as a consistent artefacts assemblage for analytical purposes. However, 110 cores from have been examined, analysis is still in progress and final results are yet to come. Human figurines of minute size are rare, asexual and extremely schematised. Amorphous figurines have outstretched arms; others have legs and arms like stumps, and a plaque-like face with a pinched nose and a scatter of circular reed incisions. The meaning of these figurines is unknown (Schmandt-Besserat 1974.12). The number of animal figurines is equally small; at best, perhaps four can be identified. One of them represents the head of an unidentifiable little animal, fashioned without a body, and having a pinched nose and ears.

Tepe Abdol Hosien – is located about 55 km south-east of Ganj Dareh in Luristan, it is probably contemporary with the sites mentioned above. If so, it suggests that formally aceramic groups with or without mud brick buildings may already have been cultivating barley and emmer wheat. Tepe Abdol Hosien also yielded a large number of bullet-shaped cores, which is a sign of pressure-blade technology (Pullar 1990).

Tepe Alikosh – is located on the Deh Loran plain in southwest Iran and was excavated by Hole in 1961–63. Two trenches and a large pit were divided into six stratigraphic zones (A1–C2) attributed to the “era of early dry farming and caprine domestication” (Hole, Flannery and Neely 1969). The earliest occupation phase (Boz Mordeh) was dated to the end of the 8th and the beginning of the 7th millennium BC (7500 to 6750 BC). It is characterized by simple mud brick rectilinear structures and by significant use of obsidian tools comparing to contemporary sites in Zagros (Asiab, Ganj Dareh and Abdol Hosien). The abundance of bullet cores at Tepe Alikosh shows a much greater development in pressure blade technique than sites of Zagros area. Whereas an elevation of 300 metres might be considered as a lower limit for the distribution of potential domesticates in this region and therefore for early dry farming, the elevation at Alikosh, which contains evidence of early plant and animal domestication, is fixed at 145 metres below the limit. The subsistence strategy was based on the combination of wild and domestic resources. A small percentage of the seeds found were of cultivated varieties of two-row hulled

barley and emmer wheat, neither of which is indigenous to the region (Redman 1978.167). Sheep were herded in much smaller numbers than goats. Hunting and fishing presented another major component of the subsistence activities of these early villagers (L. c). However, the northern Khuzistan is an excellent area for winter grazing, a fact that may have had a great deal to do with the beginning of food production there.

The 7th millennium BC

The number of sites at Zagros increases in this period. There are four most important sites located in western Iran. The first is in Kurdistan, two others in central Zagros, and the last on the Deh Loran Plain.

Tepe Jarmo – is situated in the Kurdish hills of western Iran at an altitude of about 800 m. It was the first village to be discovered and described (by Braidwood) and therefore it became a kind of a prototype of the early village society in the Near East. Qulat Jarmo's deposit spanned about nine metres in depth, of which the remains of the Neolithic settlement are preserved to a depth of about 7 metres and cover about one fifth of a hectare. There were as many as twelve layers of architecture identified, representing a community of 150 people over a period of several hundred years. The number of people was obtained when substantial architecture, constructed largely of pressed mud, was estimated. The people of Jarmo grew barley and two different sorts of wheat. They made flint sickles to harvest the cereals, used mortars or querns in which to grind them, ovens in which they might have been parched, and stone bowls out of which they could eat their gruel. They domesticated goats, sheep, dogs and in the latest levels, pigs (Braidwood 1975.127). The buildings, which were rectilinear, consisted of several rooms, many of which had small courtyards. The walls of the houses were made of padded mud, often set on crude stone foundations. According to Braidwood, the Neolithic village probably looked much like a simple Kurdish farming village of today, with its mud-walled houses and low mud-on-brush roofs (Braidwood 1975.129). Jarmo has been identified as a permanent settlement. The site has been dated to approximately 6750 BC. It is interesting that portable pottery does not appear until the uppermost settlement layers, and it was not distributed over the entire site. Pressure technology in making stone tools gradually replaced the old tradition of blades and microliths, which was still very strong. In the upper part of the settlement deposit, where the pot-

tery appeared, the microlithic tools – geometrically shaped microliths – comprise almost 60% of the whole assemblage. The majority (97%) are trapezoids (Hole 1983). It is worth mentioning that round 6500 BC a specific obsidian tool appeared in Jarmo. We named it “fabrictor” and it is not known on any other contemporary site in Zagros. The point is that the nearest obsidian source is more than three hundred miles to the north. (Braidwood 1975.129).

One of the most characteristic features of the Jarmo assemblage is the quantity and variety of clay objects. More than 5500 of them were discovered during three seasons of excavation. Part of the assemblage consists of anthropomorphic and zoomorphic clay figurines. Braidwood believed they favoured the figurine of a markedly pregnant woman, expressing some sort of fertility spirit. Clay pieces shaped into definite and recognizable forms occur in the earliest levels and persist throughout the settlement phases. The total number of preserved zoomorphic figurines is about 1100 pieces. The number of human figurines has not been reported. However, according to Vivian Broman Morales none of the clay figures was found in a context that could suggest pottery use or even production (*cfr. Braidwood 1983.370*).

The **Alikosh phase** (6750 BC) of Tepe Alikosh has been determined as contemporaneous with the lower aceramic levels in Jarmo. The architecture developed into larger buildings that had more solid construction. There is evidence of a substantial community, perhaps with a greater degree of sedentism and bigger dependence on domesticates available. Sheep bones were abundant, though the hunting of large ungulates continued. Wheat and barley became more significant. Clay figurines increased in number and in variety of forms, a goat-like representation being very typical and widespread. Flint artefacts were abundant, especially blade tools and sickle blades. The microlithic tools grow scarce, although the quantity is still twice that of the microliths from the Zagros region (Jarmo aceramic phase). There are some geometric forms in the Alikosh assemblage that could differ significantly from the Deh-Loran and Kurdish industry. On the other hand, the “lamelles a’dos” and “truncature” that are relatively rare in Deh-Loran (18%) represent nearly 75% of the microliths in Jarmo, and the bladelets with discontinued retouch which frequently appeared in Alikosh phase (80%) are completely absent in Jarmo (Rafifar 1996. 414). The microliths in Deh Loran are characterised by a high quantity of end scrapers, borers and sickle

blades. Some of them are obsidian, but we should not forget that the nearest obsidian source to Deh Loran is more than 900 km away.

Sarab – the middle and late Neolithic site of Sarab is located 7 km east of Kermanshan at an elevation of 1300m, which is higher than Jarmo (Braidwood, Howe and Reed 1961). Braidwood conducted the first excavations in 1961, but field documentation was unfortunately mislaid. Three small sondages were dug by the Mahidasht project in 1978. These confirmed that there were two periods, a middle Neolithic and a late Neolithic. The ceramic assemblage of the middle Neolithic consists basically of buff ware in a limited range of shapes. Some of the pottery is painted, usually in a variation of the “tadpole” design known from Jarmo and Guran. A small percentage is painted with geometric patterns along the rim and base, with the centre of the vessel left undecorated (Levine and Young 1986).

According to J. Braidwood it was thought at first that Sarab might have been inhabited only seasonally, but the evidence for restricted seasonal settlement is not so clear (1975.130). Braidwood’s excavations did not reveal substantial mud-walled architecture, but the evidence from animal bones suggested a year-round occupation of at least some of the village’s inhabitants. Some of the people may have moved from one site to the other in pursuit of pastures, while the others remained at home to continue activities that could be carried out during the summer. Curiously, Jarmo, a Sarab-like site in Northern Zagros lacks some of the very characteristics that define Jarmo as a settlement. Sarab has flint and obsidian, and also pottery, clay figurines, stone bowls and bracelets, and even goats, sheep and wheat, but its architectural traces are of wretched reed huts at best.

More than 2400 clay objects have been found at Sarab (Broman Morales 1990). The human figurines comprise the largest category (650 sp.) of realistically modelled pieces among the classified clay material. According to Vivian Broman Morales, this is partly due to the inclusion of three types of abstract form that she considers representing females (O. c. 16). The key example for this type is in the National Museum in Tehran. The legs or “shells” of the figures are beautifully decorated with parallel-line nail incisions which are followed by a row of tiny circular punctuates that were produced by a hollow stem like that of a straw. Twenty-one other figurines of this type are covered with different kinds of decora-

tion. The category of animal figurines follows with three identifiable types: dog (33 sp.), pig (42 sp.) and horned animal (sheep or goat, 255 sp.) and three other types that are not identifiable, probably representing small animals (258 sp.). Some objects have geometric forms, and the presence of stone objects such as beads and labret like studs has resulted in a few imitations of these forms in clay.

Tepe Guran – is situated in Lurestan at 950 m altitude and has been excavated by Mortensen (1974). This site yielded a long sequence of early village material: twenty-one levels have been identified, which make up from 6 to 7 meters of occupation debris dated roughly from 6500 to 5500 BC. The earliest settlers lived in wooden huts in which traces were found of what may have been matting on the floor. At this level we have some evidence of semi-permanent occupation, with domestic goat already present. No evidence for the existence of agriculture has been found. The three lowest levels at Guran do not contain ceramic remains. In later levels, mud-walled houses predominate and there is abundant evidence of both farming and gathering as well as of development of pottery production. Painted pottery appeared in higher layers (R, Q and P) of Tepe Guran (Mortensen 1974:22). This standard painted ware is decorated with red strokes that resemble small tadpoles, a style of painting also found on the pottery in the upper levels of Jarmo and in other early villages in Zagros. Flint and obsidian tools were made on flakes and blades, some of which were characterized as microliths (Redman 1978:172). Level "V" is defined as the oldest (8410±200 BP, k-1006); it contains 2% of obsidian. On the other hand, we do not have any obsidian in level "U". In level "T", dated to about 6350 BC, obsidian tools represent 45% (36 pieces of 80 in total) of the industry. In level "S" there were only 6% and in level "R" no obsidian tools have been identified (Renfrew et al. 1966:58).

Mohammad Jaffar phase

During the latest occupational phase in Tepe Alikosh (6000–5600 BC), there were many innovations, including the introduction of pottery and, it is obvious that the number of sites in Zagros area increased. Building techniques improved and the agricultural tools specified depending on task they were meant for. Sickles are not often found in the aceramic layers of sites discussed above, though they became abundant together with numerous blades, bladelets, end scrapers and borers. There are also evidences for polished axes and domesticated sheep, goats as

well the agriculture. In Zagros area appeared rectangular houses with several rooms as a frequent type of architecture. From now on the society of western Iran can be defined as rural village society. In the period round 6500 BC we notice the appearance of a special type of tool, so called "*fabricator*" (the distinctive "*Çayönü tool*") in Zagros. The tool, made from obsidian, was found at Jarmo in Zagros only. It might suggest that there were commercial and cultural relations between Zagros and eastern Turkey as well western Iraq, where the distinctive tools were produced at Magzaliyeh at the same time (Bader 1979).

ETHNO-ARCHAEOLOGY IN IRAN – CASE STUDY: LURISTAN

As is well known, ethno-archaeology is often used to help archaeology explain the past with analogies derived from observation of the present (Freeman 1968; Watson 1979). In western Iran several ethno-archaeological studies have been made due to the long-term interest in the transition from foraging to food producing systems. However, F. Barth (1952) was one of the first ethnographers to investigate several tribal communities in southern Kurdistan. There was Braidwood's team, working in Iraqi Kurdish village in the years 1960–1961, but W. M. Sumner performed the first ethno-archaeological research in a village in the southern part of Zagros (Marv Dasht region). He believed that there is a correlation between population and settlement area, which could be used to estimate ancient populations by recent analogy (Sumner 1979:164–174). C. Kramer was working on household size and wealth in Shahabad village in western Iran. She states that "The Shahabad data are relevant to certain classes of archaeological materials from the Zagros region for periods in which we have evidence suggesting the existence of variations in socio-economic rank". Another point that she observed and discussed was the correlation between archaeological changes and family structure. She claims residential architecture is closely bound to the needs of nature and number of inhabitants and suggests that archaeologists and social anthropologists alike should further explore the relationships between architecture and the domestic cycle (Kramer 1979:139–163). Hole's ethno-archaeological project in Luristan in western Iran provides a broad overview of his data on contemporary nomadic camps and the pastoral type of material culture, suggesting a venue for future research with such groups (Hole 1979:192–218). Hole's visit

was organised with help of an Iranian assistant S. Amanolahi. They travelled widely through Luristan, questioning people about the economic, social and cultural aspects of their life. They joined one camp of nomads making their annual migration from winter to summer pastures. Hole believes that we can learn much about changes in vegetation, dietary habits, social practices, technology and about influences from outside through interviews, and that pastoral nomads required essentially the same equipment as used by villagers today. The majority of this equipment was probably available by the time domestication began more than 10000 years ago. He thinks that the basic difference between tribal villagers and nomads today is in the amount of equipment and in the style of housing. He also suggests that nomadic treks were usually short and took advantage of closely juxtaposed areas of environmental diversity. Hole adds that modern nomads may be entirely independent of agriculturalists, which could mean that specialised stock-raising could have developed independently of agriculture.

Our ethnographic study in several villages in Luristan yielded some interesting information about the traditional form of life of some nomadic and sedentary populations. One of the examples is a village that lies at about 1900 meters above sea level, approximately midway between Izeh (in the Eastern part of Khuzistan plain) and province of Ardel in the southwest part of Bakhtiyari region. The village itself covers an area of approximately 20 hectares extending along two sides of a river that flows throughout the year. It is set in a valley with excellent climate, and surrounded by the beautiful Bakhtiyari Mountain. The nearest communication is a third rate

road almost 20 km away, which is only used at annual migrations. As often in the Zagros area, people depend on stock raising (cattle, sheep, goat, also donkeys) and agriculture (barley, wheat, rice, vegetables and orchards, limited to several wild fruits such as fig, pomegranate and grapes). Half of the population is supported by approximately 10 hectares of arable land. In 1989 the village was occupied by 135 people living in 33 families, every one of them descended from a clan of the Bakhtiyari tribe. As to architecture, two kinds of dwellings are recognisable. The first one, the winter residence with one or two rooms and a small storing place, is built of stone and mud with combinations of *chineh*. Wooden beams and twigs, capped with mud and rolled annually, are the most common roofing materials; most roofs are flat. Summer residences are black tents, one for each family, situated approximately 200–500 metres apart. These kinds of tents are also made by the people of Houfel of goat wool, which is weaved by the village women. This type of village can be placed in the category of simple societies. This classification is supported by indices showing primitive societies such as (a) absence of writing and literature (b) low population density, (c) simple productive system, (d) democratic tribal organisation, (e) lack of disorders caused by entropies (f) the existence of primitive culture which does not develop historically (*Lévi-Strauss 1969*). It should be mentioned that this village never came in touch with any form of civilisation, such as religious, health, etc, and the majority of the inhabitants never left the area. Its presence in this area could be traced back some 200 years. The community continues to live only with help of entirely indigenous cultural resources (*Rafifar and Asgary 1989*).

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