

The beginning of the Neolithic in southeast Anatolia: Upper Tigris Basin

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ABSTRACT – *New research in southeastern Anatolia at Early Neolithic sites has brought a fresh perspective on the emergence of the Neolithic way of life in southwest Asia. In addition to providing more details on the transition to settled life, food production, and technological innovations, this more recent work has increased our understanding of both the time span and geography of the last hunter-gatherers and the earliest farmers in the wider region. Now the picture of the beginning of the Neolithic is more complex and fragmented. This complexity necessitates a multifaceted approach to the questions of the emergence of the Neolithic. In this regard, the data coming from Pre-Pottery Neolithic A sites in southeastern Anatolia, particularly in the Upper Tigris Basin, is remarkable. In this paper the transitional stage to the Neolithic in the region and new data from Gusir Höyük is discussed according to the architectural data.*

KEY WORDS – PPNA; southeastern Anatolia; Upper Tigris Basin; Gusir Höyük; architecture

Začetek neolitika v jugovzhodni Anatoliji: zgornje porečje Tigrisa

IZVLEČEK – *Nove raziskave na zgodnje neolitskih najdiščih na jugovzhodu Anatolije prinašajo nove poglede na pojav neolitskega načina življenja v jugovzhodni Aziji. Poleg tega, da prinašajo več podrobnosti o prehodu na stalni način življenja, produkcijo hrane in tehnološke inovacije, lahko z nedavnimi raziskavami bolje razumemo tako časovni razpon kot geografijo zadnjih lovcev in nabiralcev ter najzgodnejših poljedelcev na širšem območju. Tako postaja podoba začetka neolitika bolj kompleksna in tudi razdrobljena. Zaradi te kompleksnosti potrebujemo večplasten pristop k vprašanju o pojavu neolitika. V tem oziru so podatki, ki smo jih pridobili iz najdišč predkeramičnega neolitika A v jugovzhodni Anatoliji, predvsem na območju zgornjega porečja Tigrisa, izjemni. V članku razpravljamo o stopnji prehoda v neolitik na tem območju ter o novih podatkih iz najdišča Gusir Höyük, predvsem vezanih na podatke o arhitekturi.*

KLJUČNE BESEDE – PPNA; jugovzhodna Anatolija; zgornje porečje Tigrisa; Gusir Höyük; arhitektura

Introduction

The concept of the Neolithic has changed significantly since first used by John Lubbock in the mid-19th century. Based on the distinction between raw materials and technology, the concept of 'New Stone Age' was explained through diffusionist approaches, and the equation of material assemblage and culture in the chronological tables specifically recommended for Europe. This approach resulted in a clas-

sification based on subsistence strategies and subsistence economy with the influence of Marxist ideology in the 20th century. Accordingly, as the modes of production change, there is a revolution in the social order to harmonize with them. In this context, Vere Gordon Childe describes a concept of history through an evolutionist and diffusionist approach and proposes successive revolutions, like the Neoli-

thic revolution and urban revolution (Childe 1942). In the mid-20th century, the definition of the Neolithic gained a more environmental and social dimension. Since then, reflecting shifts in the archaeological concepts of cultures and occupation periods, the term Neolithic has also been explained through social dynamics alongside various technological and economic concepts (Hodder 1990; Bar-Yosef, Meadow 1995; Cauvin 2000; Kuijt 2000; Gebel 2004; Kozłowski, Aurenche 2005; Asouti 2006; Zeder et al. 2006; Watkins 2008; Zeder 2011; Fuller et al. 2011).

Research on the SE Anatolian Neolithic played a crucial role for the definition of the concept of the Neolithic. In the 1960s, the research at Çayönü located in the Upper Tigris Basin provided the first empirical evidence for the existence of a Neolithic culture in SE Anatolia (Braidwood et al. 1971). Actually, Çayönü was specifically selected for excavation in order to address the relationships between ecology and socio-cultural aspects during neolithisation. The site was excavated by a joint project of Istanbul and Chicago Universities' Prehistoric Research in SE Anatolia, focusing on the early settled life in the Eastern Taurus (Çambel, Braidwood 1980). Especially during the project's early years, extensive surveys and some small-scale excavations were also carried out (*ibid.*). In this regard, Çayönü together with Jarmo created the foundation for Robert Braidwood's definition of 'Early Farming Societies', which he used instead of the term Neolithic, and established the basis for his 'Hilly Flanks' theory in relation to the origins of agriculture (Braidwood 1960).

After Çayönü, with the exception of Göbeklitepe, which has been under excavation since 1995 (Schmidt 2011), all the excavations in the Euphrates and Tigris valleys became a part of salvage operations rather than serving to explore a specific archaeological problem. Though it has to be noted that all the excavations that focused mostly on the early phases of the Neolithic helped to establish an understanding of early settled societies and the process of neolithisation at that so-far unknown region (see Özdoğan et al. 2011a; 2011b).

Neolithic research in SE Anatolia confirms that farming was not a

key element of the subsistence economy, rather hunting mammals, small animals and birds as well as fishing was the common activity; thus, hunting and gathering was the major source for subsistence (Peters et al. 2014; Willcox, Savard 2007). Based on this, the earliest settlers can be confidently defined as hunter-gatherer communities. As it is widely accepted that the production of food should have been the result, not the reason of the settled life and the social change that sedentism have brought. This perspective brings new questions regarding the origins of settled life and its interlinked social life patterns to agriculture and animal husbandry together, with their development during Neolithization fuelled new debates (Zeder et al. 2006; Bar-Yosef, Price 2011; Gepts, Famula 2012; Zeder 2011; Fuller et al. 2011; Asouti, Fuller 2013; Peters et al. 2014; Arbuckle et al. 2016).

After Çayönü, in the late 1970s and early 1980s sites such as Cafer Höyük (Cauvin et al. 2011), Hayaz (Roodenberg 1989) and Gritille (Voigt 1988), during the late 1980s and early 1990s Nevalı Çori (Hauptman 2011), Gürcütepe (Schmidt 1996) and Levzin Höyük (Yener 1994), and during the late 1990s and early 2000s Mezraa Teleilat (Özdoğan 2011) and Akarçay Tepe (Özbaşaran, Duru 2011) were excavated in the Euphrates Valley. Following on from a static period of excavations in the Tigris Valley during the 1970s and 1980s, in the 1990s Hallan Çemi (Rosenberg, Davis 1992; Rosenberg 2011a) and Demirköy (Rosenberg, Pesnall 1998) were excavated due to the construction of Batman Dam. In the 2000s Körtik Tepe (Özkaya, Coşkun 2011) Gusir Höyük (Karul 2011), Hasankeyf Höyük (Miyake et al. 2012), Boncuklu Tarla (Kodaş 2018), and Sumaki Höyük (Erim-Özdoğan 2011b) have been excavated within the Ilisu Dam Project. A more recent discovery in the

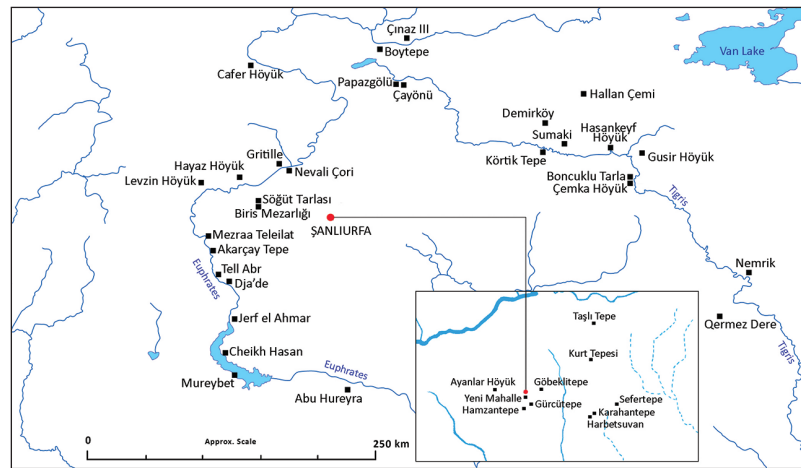


Fig. 1. Map of PPN sites in the Euphrates and Upper Tigris Basins.

Tigris Basin is Çemka Höyük, which was discovered during road construction for the Ilisu Dam (Kodaş, Genç 2019). Recent excavations and surveys as part of the dam project, particularly at the Tigris River, helped us to realize that settlements such as Çayönü and Hallan Çemi, dated to the beginning of the Neolithic period are not unique and/or marginal northern sites. Now, many settlements that are dated to the beginning of Neolithic, are known in the Upper Tigris Basin. In this regard, Southwest Asia, the Levant, Southeast Anatolia, Northern Mesopotamia, Central Anatolia, and the Zagros region must have been experiencing a parallel development during the Pre-Pottery Neolithic. Amongst all the common parameters in the wider region, there are also distinct local differences. These local signatures are at least visible at the settlement level in SE Anatolia.

The PPN sites in SE Anatolia are located in the foothills and low-lying regions of mountainous zones, as also suggested by Braidwood. However, there are sites such as Boytepe, Çınaz and Cafer Höyük dated to the PPNB that are located on the north facing mountainous zones of Eastern Anatolia (Whallon 1979; Bahar 1989). On the southern terraces of the Taurus, in the vicinity of Urfa, settlements such as Göbeklitepe, Karahantepe, Sefer Tepe, Hamzan Tepe, and so on (Çelik 2010; 2015) are located on hilltops or higher ground rather than lowlands or valleys. Based on recent work, PPN sites were predominantly concentrated in the Tigris Valley rather than the Euphrates (Fig. 1), although – with the exception of Çayönü and Boncuklu Tarla – most of them do not have continuous occupation into the PPNB in Tigris. Additionally, by the PPNB a more solid and stronger core seems likely to be established at the Euphrates Basin extending to the Keban Basin. The similarity of Çayönü with the settlements in the Upper Euphrates Basin indicates that Çayönü might also be considered as part of the core PPNB settlements. On the other hand, PPNB layers at Boncuklu Tarla and Late PPNB occupation at Sumaki Höyük indicate that our knowledge of the latter phases of the PPN in the Tigris Valley is still very limited. A special

structure with pillars and terrazzo floors at Boncuklu Tarla suggests that communal buildings known from the Euphrates Basin during the PPNB were also used in this area. In this case, it can be assumed that the similarities between the two regions increased in the PPNB period.

Until recent years Göbeklitepe was seen only as an excavated PPNA site in Euphrates Valley, one which was discovered in 1963 – when Çayönü was also discovered, as part of ‘The Joint Prehistoric Research Project of Southeast Anatolia’ (Benedict 1980:137). The greater significance of the site was revealed when the excavations first began in 1995 (Schmidt 1995; 2001; 2011). Göbeklitepe is located at c. 800m asl, on the hills of the Germuş Mountains, one of the highest spots in the Euphrates Basin, and can thus be distinguished from its contemporaries in the Tigris Basin. The site is located on mountains surrounding the broader Harran Valley, and situated in a rocky area further away from water sources. Under the direction of Klaus Schmidt, an uninterrupted period of excavation was carried out until 2014, and Göbeklitepe became the site which provided further details on the social and symbolic characteristics of the PPNA (Schmidt 2006). The recent excavations at Harbetsuvan and Karahantepe also show that the cultural characteristics known from Göbeklitepe can be seen in other settlements on the high plateaus surrounding the Harran plain. However, since the structures known from the Euphrates Basin, and espe-

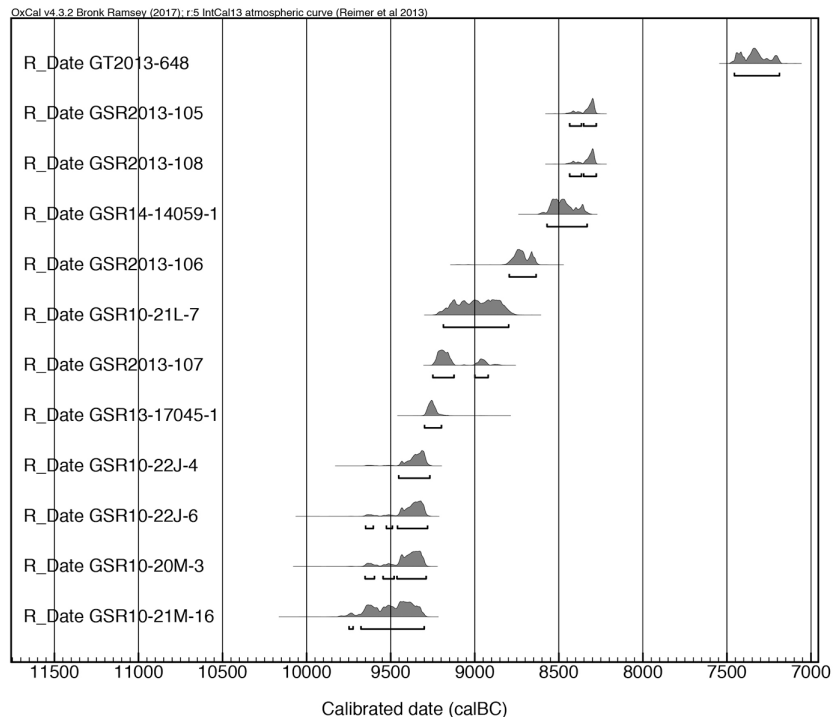


Fig. 2. Gusir Höyük calibrated radiocarbon dates.

cially those at Göbeklitepe, mainly consist of special buildings, it would be more relevant to evaluate the Tigris Basin on its own. Therefore, this paper aims to present evidence from the Tigris Basin, and discuss the status of the region during the emergence of settled life according to the architectural data. In this context, our main purpose is to make some evaluations regarding the new data from Gusir Höyük.

Early sites in Upper Tigris Basin

The major part of our knowledge with regard to the characteristics of the PPNA relies on data collected from the Upper Tigris Basin, where the earliest settlements date far back to the late 11th millennium BC. Radiocarbon dates obtained from the settlements of Hallan Çemi¹ and Körük Tepe – excluding the examples with much higher deviations – show that the first settlements emerged between the later part of the Younger Dryas and the early Holocene (Benz et al. 2015). A similar early layer is also mentioned for Çemka and Boncuklu Tarla (Kodaş 2018; Kodaş, Genç 2019). Moreover, at Hallan Çemi and Gusir Höyük the bedrock has not been reached and in most of the settlements the excavated phases have not been extensively dated yet. Furthermore, sites that have a similar location but have shifted place over short distances, as exemplified with Gusir Höyük (Qermez Dere, and Nemrik 9 to the south), create difficulties in establishing a well-defined site chronology (Karul 2011; Watkins 1992; Kozłowski, Kempisty 1990). Despite all these problems, the excavated sites at SE Anatolia demonstrate that communities that have started to settle year-round or for most of the year start to emerge at around the 10th millennium BC. As demonstrated with limited examples like Çayönü and Gusir Höyük, this phenomenon continued to the PPNB and also after 8800 cal BC. The major point which needs to be underlined here is about the first sedentary communities, as these have yielded several artifacts and a relatively more developed architecture, which do not have any identified predecessor within the region. Although there are layers in Körük Tepe, Boncuklu Tarla and Çemka Höyük going down to the Epipaleolithic, it is not yet possible to discuss this period in detail as a time period (Benz et al. 2017; Kodaş 2018; Kodaş, Genç 2019).

Even though our knowledge of the early Neolithic has improved in recent years, only three sites dated



Fig. 3. Photo of Gusir Höyük, 2014 excavations with a view of Gusir Lake. On the left upper hand corner, the Tigris and Botan rivers can be seen.

to the PPNA had been excavated in the Upper Tigris Valley until the 2000s. Among those sites, Çayönü was located in the Ergani district of Diyarbakır, in the Ergani Plain bordered by the Taurus Mountains at the north. The settlement was situated 832m above sea level, at the northern division of Boğazçay, which is a branch of the Tigris River (Erim-Özdoğan 2011a:188). The Çayönü project started as a collaborative project of the Istanbul University and Chicago Oriental Institute in 1964. For a long time, the site became an exemplary settlement not only for SE Anatolia, but also for whole of the Southwest Asia, where architectural changes of the Pre-Pottery Neolithic period could be studied (Braidwood et al. 1981; Özdoğan, Özdoğan 1990). At Çayönü, the transformation from PPNA to PPNB and the changes during the PPNB were well noted, especially from an architectural perspective. Çayönü is one of the exceptional sites in the region where improvements in construction techniques can be clearly identified.

Hallan Çemi was located in Batman district, on the western side of the Sasson Creek, which is a branch of the Batman River that then adds to the Tigris River. The site is situated at an elevation of about 640m on the hillside of the Sasson Mountains that are part of the Taurus Mountains (Rosenberg, Davis 1992; Rosenberg, Togul 1991:244; Peasnell 2000). It was discovered in 1990s as a part Tigris-Euphrates Archaeological Reconnaissance Project, which aimed to identify archaeological settlements that would stay under Batman Dam Lake. Excavations conducted between 1990– 1994 yielded 4.3m occupational debris dated to the early PPNA (Rosenberg et al. 1998; Rosenberg, Davis 1992.1; Rosenberg 2011a). Demirköy was found in 1989 as a part of

¹ There are ongoing discussions on the early dates of Hallan Çemi, since the dates are old and there is a large range. See https://www.exorient.org/associated_projects/ppnd_sites.php



Fig. 4. Gusir Höyük, view of the main excavation area.

the same project. The site was 540m above sea level and located near the Batman River that then adds to the Tigris (Rosenberg 2011b). It was among the settlements with levels dated to the early PPN (Algaze et al. 1991:181; Rosenberg, Peasnell 1998: 195). Demirköy and Hallan Çemi, which could have been sharing similar environmental conditions, are almost 40km apart.

Alongside Çayönü, Hallan Çemi and Demirköy; Kör-tik Tepe, Hasankeyf Höyük, Gusir Höyük, Boncuklu Tarla and Çemka are among the other settlements with occupational phases dated to the early Pre-Pottery Neolithic in the Upper Tigris Basin. Most of these sites were discovered at the end of 1980s and beginning of the 1990s, within the scope of the Tigris-Euphrates Archaeological Reconnaissance Project (Algaze et al. 1991). However, excavations at these sites only started in the early 2000s, partially prompted by the Ilisu Dam Project. The excavations at Kör-tik Tepe started in 2000. The settlement is located at the intersection of the Tigris and Batman Rivers (Algaze, Rosenberg 1990; Özkaya, Coşkun 2011:90). It is located c. 530m above sea level and covers an area of 100x150m with a 5.5m deep stratigraphy. Gusir Höyük is located near the intersection of the Tigris River and Botan River, on the southern shores of the Kavaközü Creek. The mound is located beside Gusir Lake, which was a sinkhole fed by the Kavaközü stream and groundwater (Karul 2011:1). The site extends to an area of 150m diameter and contained c. 7-8m of occupational depo-

sit. The settlement is 535m asl and situated at the Taurus piedmont, which is still an advantageous position regarding the rich forestry and water resources nearby. Excavations at Hasankeyf Höyük were also initiated as part of the Ilisu Dam Rescue Projects. The site is located near the town of Hasankeyf on the northern sections of the Tigris River. The location of the site was an old riverbed that has been formed with erosions from the Raman Mountain which later reunited with the Tigris. The mound, set at 482m asl, extends 150x9m and contains an archaeological deposit of 9m (Miyake et al. 2012:3). Boncuklu Tarla is a recently identified settlement, detected during the 2008 Ilisu Dam Survey (Taşkıran, Kartal 2010). It is located about 2km west of the Tigris River and south of Nevala Maher stream (Kodaş 2018). Another recently discovered site is Çemka Höyük located 900m southeast of Boncuklu Tarla. The site sits 420m above sea level and is 65x135m in size. The archaeological deposit at Çemka Höyük is roughly 6-7m thick (Kodaş, Genç 2019).

Architectural features of early sites

Rescue excavations conducted simultaneously in the Upper Tigris Basin demonstrate at first sight – without even detailed archaeological analyses – that the settlements around the region must have been long-term ones. At latest, from the beginning of PPN round or oval planned, semi-subterranean structures were constructed. The earliest structures could have been fulfilling more than a need for a short-term

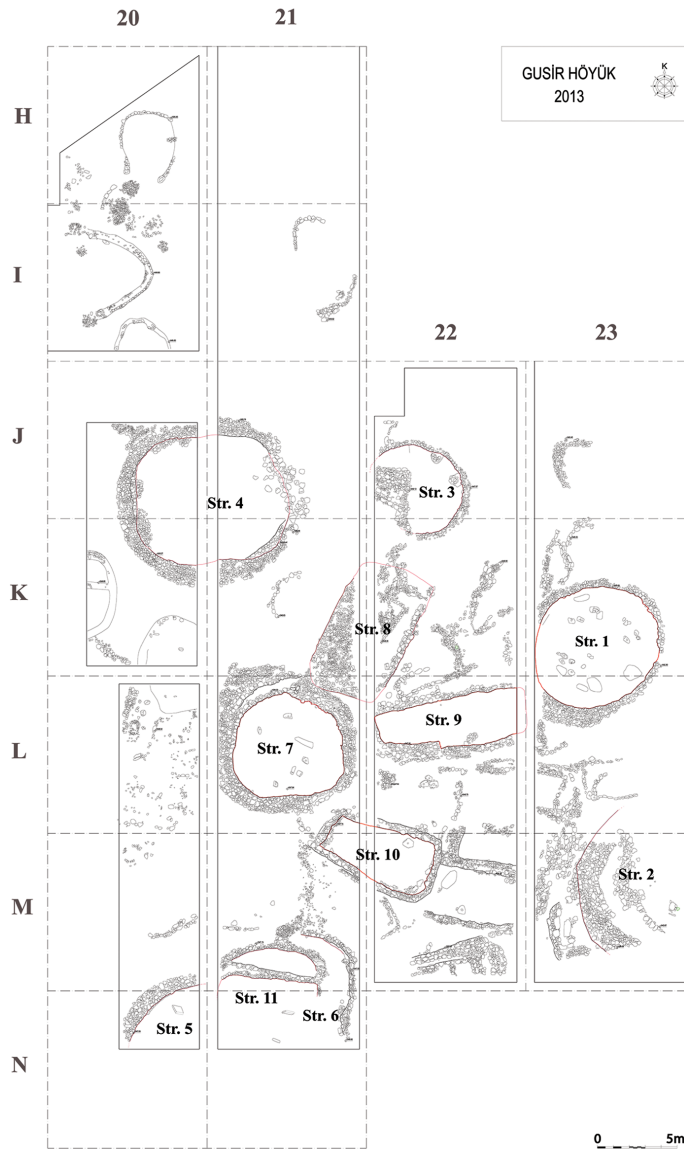


Fig. 5. General plan of main sector of Gusir Höyük. Structures mentioned in the text indicated by Str. numbers.

stay, as indicated from the archaeologically documented repair phases and maintenance. Even though it is hard to correlate the architectural phases among the settlements to establish a certain chronology, it can be argued that there are temporal and spatial differences between these settlements, which could have been occupied at the same time period. These differences are visible on the floors, stone types used for walls, masonry styles and thicknesses, as well as at the burials and construction elements. Çayönü, which is located at the most northwestern zone of the Tigris Basin, has two sub-phases at the end of the PPNA period. The oldest phase, known as the Round Building sub-phase, consisted completely of structures with circular and oval plans. The later phase directly above this, known as the Grill-plan Building sub-phase (g 1-4), contained rectangular

structures in the place of the earlier circular structures (Bıçakçı 2001.13). In the early phase structures, excavated as two clusters at the eastern part of the mound, deposits of this phase were detected above virgin soil. Even though Grill-plan Buildings were heavily disturbed during to this period, structures with different architectural plans were unearthed in the same area (Erim-Özdoğan 2011.Figs. 6, 7). It is not clear yet whether these structures resemble different construction techniques of the same period or different sub phases, and thus whether these changes mark a significant transformation.

The first settlement at Çayönü was composed of huts with subterranean floors that had been built into virgin soil. The huts had circular plans with c. 2m diameter and covered an area of 4-5m diameter (Özdoğan A. 1995.82). The upper parts of the huts were made with the wattle-daub technique. Later, the floors of the pits were shallower and the huts built on stone subbasement. During this phase, the huts were built larger and the floors were plastered with clay. One particular hut, structure 'RA', had a red-painted floor (Erim-Özdoğan 2011a.195). Different from the other structures, this hut with evidence of three renovations had a stone sub-structure, with stones facing on the sides of this shallow pit (Özdoğan, Özdoğan 1990.68). In this phase another structure 'BN', differentiated from the other structures with its dimensions and construction techniques, was interpreted as a special structure. BN has a diameter of 5m and an oval plan (Erim-Özdoğan 2011a.195; Özdoğan, Özdoğan 1990.68).

At the next occupational phase, the architecture changed significantly (Özdoğan A. 1995). The circular structures were replaced with rectangular and ground-level buildings. The rectangular structures, which are 10x3.5m in size, have interiors divided in three sections. The first section in the middle with the entrance had units at both sides, had a plastered floor and interior ovens. In one of the edge partitions there are roughly parallel, medium-sized 'beam like' stone rows, which were used to elevate the living floor. The carrying structure has been proposed as made out of wattle and daub supported with wooden beams situated outside of the floor construc-

tion (Erim-Özdoğan 2011a.195; Schirmer 1990). The settlement layout of this period is well defined as well. Structures were constructed parallel and close to each other, with entrances aligned to the south-southeast where the river had flowed demonstrating the pre-planning of the settlement (Özdoğan A. 1995.Fig. 8).

At Hallan Çemi, there are four layers, though as yet there has been no chance to excavate in the 4th phase (Rosenberg et al. 1998). In Phase 3, three buildings were unearthed, which might have served as houses. The walls were built with rough river stones mixed with a limestone bearing mortar. The structures were ~2m diameter and built directly on soil. There was no pavement on the floors of these 'C' plan structures. In Phase 2, five structures could be determined and four of these were excavated. Similar to the former phase, the walls were built with rough river stones mixed with a limestone bearing mortar. With the exception of one building, the floors were covered with sandstones. In one of the buildings, which had a 4m diameter, a clay basin was unearthed. Unlike the other structures, the walls of this building were constructed with sandstone plaques. Among the Phase 2 buildings, two of them had a diameter of 2.5m and were built on the ground with 'C' or horseshoe shaped plan (Rosenberg 2011a. 62). The other two structures with 5–6m diameters have been defined as public buildings (*ibid.*). Both of these structures were exactly circular and almost 1m deep in the ground. The walls, which were preserved as high as 1.5m, were made of flat sandstone slabs and creek pebbles. The post holes, with a diameter of 10cm, were visible on the surface of the walls. These must have been part of the wooden poles supporting the roof (Rosenberg 1994.124).



Fig. 6. Photo of the building with two phases of repair and sunken floors from Gusir Höyük, seen on the slopes facing the lake.

On either side of the entrance there was a double wall, and the area in between them might have been used for storage (Peasnell 2000.148). Additionally, in both structures a semi-circular platform is observed either on the right or left side of the entrances. The floors of the structures had a sterile layer, which was covered with a mixture of limestone, yellow sand, and chalk. This was renewed several times. Towards the centre of each structure there was a sunken circular hearth. These large structures are different from others not only for their construction but also in terms of contexts; objects of daily use (*i.e.* ground stones) are not found, but the excavators draw attention to imported obsidian and copper mineralization (Rosenberg 2011a.63). In one of these structures, Structure A, an aurochs skull was found that probably hung on the north wall across the entrance.

During the occupation of the site, all of the structures at Hallan Çemi were positioned around a courtyard with a diameter of 15m (Rosenberg 2011a. 61). Platforms with diameters of 2m and 10–40cm thick floors, made out of stone, mud, and limestone were found around these structures. These platforms were interpreted as silos covered with wattle (Rosenberg et al. 1998.28; Rosenberg, Davis 1992). Apart from some structures, which had interior firing places, mostly exterior, clay-plastered platforms have been uncovered. In the so-called courtyard, which was stony, articulated animal remains, fire cracked rock, as well as a deliberate arrangement of sheep skulls have been recovered. Based on these findings, this area was interpreted as one for daily activities as well as being used for feasting (Rosenberg et al. 1998.30; Rosenberg, Davis 1992).

In the Upper Tigris Basin, another settlement dating back to the Younger Dryas is Körtik Tepe. Six levels were identified based on architectural remains, and all structures had round plans, which can be divided into three groups. One of the prominent features of Körtik Tepe is the burials, of which there are more than 800. The first buildings had a 2.3–4m diameter, were semi-subterranean with packed earth floors and single row walls that consisted of small stones (Özkaya, Coşkun 2011.91; Benz et al. 2015). The interior faces of the walls were surfaced, which rested on the wall of the pit. Round structures of 1.1–2.1m in diameter form the second group, which had pebble paved floors. These structures were common to all building levels, and might have functioned as storage units (Özkaya, Coşkun 2011.91). The third group consisted of larger (3.4–3.8m in diameter)



Fig. 7. Photo of building with intertwined walls, pillars placed into walls and sunken floors from Gusir Höyük.

structures that were fewer in number. These were built with larger stones and plastered with clayey plaster (Özkaya, Coşkun 2011.92). Although no interpretation was made concerning the settlement plan, it is understood that the structures were built closely to form a dense arrangement.

Hasankeyf Höyük is located directly right on the banks of the Tigris River. The site contains 9m of archaeological deposit, all of which dates to the PPNA. The architecture of the two levels that are closest to the surface was exposed in larger areas and identified. Of these, the lower level has round structures of 3.5–4.5m in diameter and 1m deep floors. One structure is larger than the other, which is 6m in diameter. Often built with flat river cobbles, walls have larger stones at the bottom and smaller ones above. The interior faces of walls were plastered with yellow-brownish clay. Except for a stone-paved floor, identifying floors has not been possible. There are no hearths or installations in the buildings. Only one of these structures was repaired multiple times, the others offered finds of animal bones, chipped stones and unworked stones (Miyake et al. 2012.5). Additionally, horns of wild sheep were found on the floor of one structure. There were several sub-floor burials, which included stone vessels with incised decorations, bead and stone plates with decorations. Structures in this layer form a dense cluster.

On the layer above, a structure was found with a circular floor and semi-rectangular plan with 9m long sides (Miyake et al. 2012.3). Besides its dimensions,

a flat 1.5m high pillar indicated a special function of the construction. The sequential plastering on the floor indicated at least three renewals. At least 30 burials, either in normal or fixed position, were recovered below the floor and around the structure together with burial goods similar to the earlier phases. Additionally, pigments were detected on some of the bones (Miyake 2013.44, Fig. 2).

Boncuklu Tarla and Çemka Höyük are the southern sites in this group. There are layers that are described as Epipaleolithic at Boncuklu Tarla, although these phases have not been published in detail yet. Still, there are layers dated to the PPNA and transition to the PPNB. A round structure with a diameter of 5m and two silos with a diameter of 1.5–2m were found in the PPNA layer. The walls of the building are thick, similar to those depicted in the upper layers at Gusir Höyük, and have a relatively shallow floor level. This layer dates to about early to mid-11th millennium BC. In the transition layer there is a public building with curved corners, measuring 8–10 x 2–5m, and a clay-marl-earth-ash mixture was used for the flooring (Kodaş 2018). Çemka Höyük has not been excavated yet, the perimeter of the destruction that occurred during the road construction was cleaned and walls belonging to 2m high structures were found in the sections. Medium sized stones were used on the walls of these subterranean dwellings (Kodaş, Genç 2019). The Late Epipaleolithic phase is also relevant for this site, but no published dating has been made to clarify the timing of occupation.



Fig. 8. Photo of semi-subterranean structure with roughly carved 1.5m tall pillar in the centre from Gusir Höyük.

Gusir Höyük

Similar to other rescue excavations, Gusir Höyük was also excavated for a brief period of time. As the radiocarbon dates (Fig. 2) and preliminary reports on chipped stone (Altınbilek-Algül 2013) show, there is coherence picture with the contemporaries, though with some differences. The site is near Gusir Lake, which is an impressive landscape, and it also factored in the excavation strategy. Making use of the eroded hill near the lake, a large sector of approx. 1750m² was excavated (Figs. 3, 4). The second sector was 50m due northwest and covered approx. 800m². Trenches on the slope that overlooked the lake revealed remains from different phases (Fig. 5). However, the fact that most structures had subterranean floors and there are fewer radiocarbon dates available at present make it difficult to compare structures stratigraphically. Additionally, correlating the two sectors will only be possible when the materials are analysed completely, as the architectural remains and building materials are different in each building.

Even though the stratigraphic sequence of the mound is not clear yet, the location, elevation, and construction style of the structures allow us to make some



Fig. 10. Photo of an expertly shaped pillar placed into a 50cm deep clay foundation placed near the centre of the structure.



Fig. 9. Photo of sub-rectangular, circular building with sunken floors from Gusir Höyük. On the side of the building a platform is visible, constructed at the same time as the wall, and with a wild sheep bucranium placed on the platform.

inferences. In Gusir Höyük, a transition from the subterranean simple round buildings into a ground level-based quadrangle can be observed. The pit-based round structures in the lower layers have become shallower over time, and the corners have become more evident. In the earlier building the walls consisted of small stones that were irregularly laid to cover the interior of the pit, up to a height of 2m (Figs. 6; 5.Str.1). These walls show two phases of renewal. The interiors of walls that had a thickness of 50cm were clay-plastered. When the floor was made for the first time, it was approx. 2m below the ground-level, but this was raised during the second re-building. Numerous grinding stones were found on both floors. Each floor layer has sub-floor burials. The great majority of burials were located near the walls, all were in a flexed position, and some had burial goods included. The other structure is situated 4m south of the first and they are possibly contemporaneous (Figs. 7; 5.Str. 2). A similar wall construction was observed in the second structure, which also had similar dimensions. However, the wall of this structure was thicker as several rows of stone were found. Due to re-building activities, the interior space of the structure was greatly reduced over time. Although it is hard to identify whether these walls were built at once, or at intervals, the chalk floor appears to continue under the walls, which suggests that the floor was contemporary with the outer wall. One to 1.5m tall stone blocks were used within the walls, their flat surfaces facing towards the



Fig. 11. Photo of the special building complex from Gusir Höyük. The central sub-rectangular building with rounded corners and rectangular plan buildings added onto it.

inside of the structure. Internally, there was an area with erected flat stones and a stone basin. The concentric walls, erected stones, and renewed plaster floors suggest a special function for this building rather than a habitation unit. No other structure has been dated to this phase of the settlement, which makes its interpretation more difficult.

The next phase is represented only by a semi-subterranean structure, which is 6m in diameter (Figs. 8; 5.Str. 3). The wall consists of two rows of small stones, there were post holes at equal intervals along the wall which might have carried the superstructure, as the walls were not bearing any load. Near the centre, a 1.5m tall and roughly worked, flat stone was erected. This pillar was surrounded by an installation of numerous wild sheep horn cores, most of these horns were bihorns. The fill inside the structure contained relatively thin layers, suggesting that the in-filling of the building occurred gradually over time, which might have been the result of intentional filling.

In the following phase, round structures with floors 1.5m below the ground-level were found (Figs. 9; 5.Str. 4). These structures are larger than the previous ones, with around 9m diameter. The average wall thickness is c. 1m. Oblong river stones were used in the construction, which differentiates the

structures of this phase from the rest. In one of the structures, a stone-built platform is found. On top of the platform there is a podium elevated by stones and a wild sheep horn was found on it. In the other structure (Fig. 5.Str. 5), a specially carved erected stone pillar was found. This rectangular stone block with flattened surfaces had holes on the wide and narrow edges (Fig. 10). The lower part of the pillar was set into a platform or a clay fill of at least 50cm thick. The fill inside the structure consisted of successive clayey and ashy layers, which indicates a pattern of conscious and repeated filling or frequent abandonment and re-occupation of the structure.

The phase above, where the pit of the structure became shallower, was represented with a single structure. The structure is almost 60–70cm deep with a 4m diameter. The side of the pit had been lined with flat stones. Flat stones were used to pave the floors, and a piece of concave stone plate and the pillar were characteristic of this structure. The pillar with rounded edges and a smoothed surface was 1m high, and it had probably been placed in a cavity on a stone plate.

The next phase unearthed at the site has a structure (Fig. 5.Str. 7) with a unique construction technique and installations when compared to the earlier phases (Figs. 11, 12). In fact, the remains described

here constitute a complex of the main unit and additional rooms. The structure is 9m in diameter, has a rectangular plan with rounded edges, and the 1m thick walls of the main unit were built with stones of medium size. The sunken floor of the structure is shallower – c. 1m below the surface – compared to the earlier structures. The platform, which runs along the wall, was built of earth in the eastern half, and in its western half a mixture of earth and stone was used. The platform is about 50–60cm tall and has a similar width. The side built with stones might have been plastered with clay and a wild sheep horn was left on top of it. Inside the structure, symmetrically aligned pillars were intended to form the four points of a square, but only three of them were preserved. Two of them were carved roughly and the third was carved in oval form with three rings engraved on it, and the fourth one is absent. On the east side of this central structure, facing the lake, three separate units of approximately 8 x 4–5m were added in a radial pattern (Fig. 5.Str. 8–10). These rectangular structures were on the same level and built of walls with one row of stones. Near the walls, small stones encircle postholes. These are reminiscent of the Çayönü Grill-plan Building sub-phase structures, which had wattle and daub construction with beams (*Schirmer 1988.144*). The floors of structures were covered with small river stones, and in one of these structures, along the wall, sub-floor burials were found. At points where additional units intersect the central room, passageway like openings were left between the walls of these attached structures. One of these passages is well-defined and was sloping down into the structure.

At Gusir Höyük there is also evidence that shows the use of rectangular plan buildings with subterranean



Fig. 12. Special building from Gusir Höyük, with pillar, platform and stone basins.

floor structures. The walls that were found immediately below the topsoil cut through structures (Fig. 5.Str.6) of earlier phases, and it is hard to determine its exact place in the stratigraphic sequence at the site. The structure (Fig. 5.Str. 11) in question is sub-square – without well-defined corners – and the floor is at least 1m below the surface (Fig. 13). The wall consisted of two rows of small river stones and showed phases of repair. In the corners, stones were not overlapping and instead they were piled to form corners. The interior of the structure was divided into rectangular units; one of these units had been plastered specially and had a pillar at one corner. There was another pillar and the nearby forehead with horns suggests the continuation of the tradition from circular structures at the site.

The structures exposed in the second sector at the southern part of the mound are similar to those documented at Nemrik 9 (*Kozłowski, Kempisty 1990. Fig. 6*) and these structures illustrate another type of architecture. These had rectangular plans with rounded edges (Fig. 14). The walls were built of small river stones in two rows, at a width of 50cm. In one structure, roughly carved pillars were irregularly placed at corners inside the walls or just in front of the walls. Around the structures there were stone platforms that are also found at Hasankeyf Höyük and Körtik Tepe. These platforms that were built of small river stones or broken rocks covered an area of 1–1.5m in diameter and possibly had the function of silos with a wattle and daub superstructure.

On the uppermost part of the settlement, in the main sector there were different types of structures surrounded with courtyards. The common aspect of these structures in this layer is an oval plan with one end remaining open to provide access. In a well-preserved structure amongst these, the majority of the floor was covered with aligned, flat stones, and near the entrance the floor was made by tamped clay. The boundary of the structure was defined by a single row of stones. The superstructure is not known, but based on the presence of a narrow and shallow canal that encircled the structure and the remains of organic material it is possible to suggest that it was covered with a tent-like element. Although this layer has not been dated yet, it indicates the end of the settlement, and possibly the cessation of long-term occupation at the site. There is limited information concerning the PPNB occupation. This phase is mixed with topsoil and has been mainly defined by simple pit graves.

Discussions

The settlements in SE Anatolia reveal the technological, functional, and symbolic transformation of the architectural developments in stages (see the following for further discussions on the development of the architecture in SW Asia: *Watkins 1990; 2004; Özdoğan, Özdoğan 1998; Bıçakçı 1998, 2003; Banning 1998; Özdoğan 2009; 2010*). Although the transformation from shelters to dwellings and the emergence of special – cultic – buildings cannot be understood only by studying the architecture of SE Anatolia with a generalized approach, as the transformation could follow a continuous process of nearly 900 years in the area. In this context the Upper Tigris Basin plays crucial role in understanding the early settled societies at the beginning of Neolithic, due to density of contemporary sites located close to each other.

In terms of construction, semi-subterranean structures became increasingly frequent and led to ground level structures. However, at sites like Hallan Çemi the settlement started with ground level structures or at Gusir Höyük the semi-subterranean building tradition continued even after the replacement of circular plans by rectilinear plans. Within that period, another noticeable transformation in architecture is the transition from round to rectangular plans. The Grill-plan Building sub-phase at Çayönü signifies the sudden transformation from round to rectangular plans, which also contains rectangular, elevated floors with pavements, which are major architectural solutions. However, these advancements



Fig. 13. A late building with a rectangular plan cutting an earlier building from Gusir Höyük.

do not mean that the issue of building corners is resolved or achieving a wall construction that carried its own weight. At this stage, the rectangular plan is used only for floors whereas the superstructure is wattle and daub supported by beams. Other examples of rectangular interiors allow for more effective use of space, such as Çayönü, Mureybet and Jerf el Ahmar (*Erim-Özdoğan 2011a; Stordeur et al. 2001; 2008*). At Gusir Höyük, semi-subterranean but rectangular floors and interior partitions provide evidence of a wide range of experiments at the transition to rectangular structures. Although tall stone walls exist, real intersections have not been built. Without doubt, the replacement of circular with rectangular plans brought efficient interior partitioning of space as well as expanding the space. It has been observed that all improvements concerning rectangular structures and issues related to the load-bearing walls or roofs are resolved with the transition into PPNB as illustrated at Çayönü. In addition, the recent data from Gusir Höyük has revealed in detail the technological improvements in architecture that occurred within the PPNA.

It is possible to say that selective use of construction material starts to emerge among the earliest settlements in the Upper Tigris Basin. For example, in the earliest phases of Gusir Höyük, Hallan Çemi, Hasankeyf Höyük and Körtik Tepe medium and rounded river stones are used, whereas in later phases larger, flat and more suitable stones are preferred. This suggests that rather than randomly using resources around settlements, selective use is more likely. Clay plaster has been used on flat surfaces with the earliest examples of construction.

In terms of preparing the floors, there are concurrent, temporal changes. At Hallan Çemi first sand-stone slabs, then a yellow clay and chalk mixture; chalky plaster was also used in Gusir, at Hasankeyf and Gusir stone paved floors, at Demirköy, Gusir and Çayönü clay floors are observed, with evidence of the use of red pigment in one building at Çayönü. During the later phases of the PPNA, similar to wall construction, floors also show complex examples. In a way, as the floors become less sunken, the effort to work the floors increases; stone-paved or elevated floors possibly with wooden beams emerged in the Çayönü Grill-plan Building sub-phase. Another point that needs to be emphasized regarding the floors is the variation related to the functions of structures. At Gusir Höyük, Körtik Tepe, and Hasankeyf Höyük small units that are identified as silos may have been also paved for insulation.

Ovens, which have been considered as key to understanding the function of the building, have been recovered at Körtik Tepe, Hallan Çemi and Çayönü in the region. At Çayönü, during the Grill-plan Building sub-phase, where interior ovens have been recovered, they could be considered as an element of transformation from shelter to dwelling. Therefore, it can be argued that at the beginning of the Neolithic firing and cooking activities were conducted in external areas; later on, the internal areas of the houses must have been added to this transformative process. Installations such as silos and ovens, which were moved into the building interiors over time, would count as evidence of the emergence of the household concept.

In SE Anatolia, the process of architectural transformation during the PPNA became more pronounced during the PPNB, especially regarding the special function structures. If we exclude Göbeklitepe, it is difficult to designate the special buildings in SE Anatolia clearly during the PPNA. However, our observations from Gusir Höyük in particular show that this kind of building has certain features. The majority of special structures are larger than domestic buildings at a given site, benches along walls, pillars embedded in walls or situated at the centre of units are characteristic. Apart from such technical characteristics, floors were generally built with greater care and there are stone basins or clay platforms inside structures and animal horns were left around.



Fig. 14. Semi-subterranean, sub-rectangular building with rounded corners from Gusir Höyük.

In special buildings at Hallan Çemi, Gusir Höyük, Hasankeyf Höyük, and Çayönü, all these characteristics are found either all together or individually. Pillars are only found at Gusir and Hasankeyf Höyük, and emerged later at Çayönü and Boncuklu Tarla. The pillars at Gusir are found at different levels and from various contexts. Here, they are known from the earliest phase onwards, but only a few pillars are known from structures that are known to be contemporaneous. In general, roughly carved pillars at an average height of 1–1.5m are located in central locations of structures or symmetrically placed in pairs of four in a complex, with the exception of one example that is embedded in a wall. Such features are also known from Nemrik and Qermez Dere (Watkins 1992). The existence of pillars is reminiscent of the Euphrates Valley, but it is clear that neither structures nor pillars are monumental like at the Euphrates sites (Peters, Schmidt 2004).

In special structures, platforms along walls are only known from Hallan Çemi and Gusir Höyük (Rosenberg 2011a.63; Karul 2011). Another feature that is common to both of these sites are horns. At Hallan Çemi, in a structure that is thought to be communal, a complete aurochs bucranium and horns in a row were found in a courtyard. At Gusir Höyük, three structures with special functions revealed wild sheep and goat horns around a pillar and two platforms. Such horns are also found in the large structure that has been defined as a special building at Hasankeyf Höyük.

The similarities and differences among settlements are not limited to architecture only, as there are numerous symbolic elements that make societies in a given region more similar or different. For example, all sites show intramural burials, but they were observed only at certain phases at Gusir Höyük, in all levels at Demirköy, Körtik Tepe, Hasankeyf, and Çayönü, but not known from Hallan Çemi at all. At Çayönü, during the Round Building sub-phase burials took place under the huts or in pit graves outside, whereas during the Grill-plan Building sub-phase primary burials were placed under courtyards or in between the parallel grill walls (Özdoğan A. 1995. 84). At Gusir Höyük, burials are in domestic structures and not associated with special installations (Fig. 15). However, the floors of special structures at the site have not been excavated yet, and therefore it is not possible to make a definitive statement. At Hasankeyf Höyük, a structure that was suspected to have special functions due to the presence of several special installations that were not found in do-

mestic structures, revealed 30 individuals in graves (Miyake et al. 2012.3). Burials that are common in communal buildings were first identified in the Skull Building of Çayönü, which gained a special function starting from the Channelled Building phase.

The practice of burial goods is common but also varied. At Körtik Tepe, all burials are in flexed position and some of them had stone axes, beads, mortars, shell, bone, obsidian and flint tools, *etc.* as burial goods. Most of the burials, along with goods, were covered with plaster or after being left for decomposition, coated with ochre pigment and plaster (Özkaya et al. 2010.514). Also, there are many examples from this site where skulls were decorated with complete turtle shell or animal skulls or horns (Erdal 2015.6). Similar applications are also known from Hasankeyf Höyük. Here, sub-floor flexed burials are found in addition to rich gifts such as stone vessels, beads as well as black bands on long bones (Miyake et al. 2012.3). At Demirköy, applications are similar with these previous settlements. Although there are fewer flexed burials, goods and painted bones are found. Also, the lack of skulls in some skeletons suggests one of the earliest examples of a skull cult (Rosenberg 2011b.83). At Çayönü burial goods were not found in circular plan structures, but traces of red ochre were found. During the Grill-plan Building sub-phase graves, goods, and pieces of ochre were all observed (Özdoğan A. 1995.84).

The finds from PPNA sites in the region do not show diversity compared to finds from following periods, and their production required defined and sophisticated craftsmanship. One of the most common finds are stone vessels carved out of chlorite (Fig. 16). Amongst all the settlements mentioned here, regardless of whole- or fragmentary finds, Körtik Tepe offers the largest collection of such vessels (Özkaya, Coşkun 2011.Figs. 13–23; Rosenberg 2011a.Figs. 9–11). Globular or straight-sided forms seem to be more common among these expertly shaped vessels. Shallow incisions of geometric patterns either cover the whole surface or make up panels that frame a main figure. In some cases, different figures are also seen on stone vessels. Horned animals like wild sheep and goats, which are among the first domesticated species (Rosenberg 2011a.Fig. 11), and snakes take precedence. Centipedes, a kind of arthropod, are also frequently used motifs. Figures of humans are rare during the early phases of Neolithic, but at Körtik Tepe some stone vessels display highly stylized abstract human images (see Benz, Bauer 2013). At Gusir, a vessel that is carved out of a kind of mar-

ble has stylized human drawings. Two pendants carved out of bone also need to be mentioned among anthropomorphic figures. Another object that may be interpreted similarly are figures of human-animal combination carved on stone plaques (Özkaya, Coşkun 2011.Figs. 31–32). Although these representations can be questioned as to whether or not they are realistic, in SE Anatolia – in the Upper Tigris Basin – these representations have strong meanings for PPNA settlements. These finds, like stone vessels, are mainly from Körtik Tepe, but there are some examples known from Hasankeyf and Gusir Höyük. Figural representations on stone plaques do not look alike, but their representations share some common aspects; they are all seated, and generally depicted in profile. Almost all had prominent horns, and, on their backs there are additional elements such as wings or shells (Fig. 17). Some stones that look like plaques also have snake or spiral representations.



Fig. 15. A view of the burials from Gusir Höyük, showing the sub-floor burials aligned with the wall foundations, placement in the flexed position and grave goods included in the burials.

With the exception of Çayönü, all settlements have bone plaques (Özkaya, Coşkun 2011.Figs. 36–37; Rosenberg 2011a.Fig. 16; Miyake 2013.45, Fig. 3). These are in the form of plaques or spatula. They have representations of horned animals such as wild sheep and goats, or arthropods like spiders and scorpions. The most common representations for bone plaques are snake representations (Fig. 18a). Although beads and ornaments in PPNA are not as elaborately worked as during the PPNB, they were made of various materials and of different types (see Özdoğan E. 2016). It is worth emphasizing that the number of beads known from Körük Tepe is much higher than from any other SW Asian settlements (Özkaya, Coşkun 2011).

Animal representations are more numerous than anthropomorphic ones, and the former can also be found on various other finds. Some of them are highly functional objects. Stone pestles and batons that have the shape of a bird or horned animal on the top are among the frequent finds in the region from Hallan Çemi, Körük Tepe and Gusir Höyük (Rosenberg 2011a.Figs. 12–14; Özkaya, Coşkun 2011.Fig. 24–25; Karul 2011.Fig. 17) (Fig. 18b). At Nemrik 9 the pestle with the figure that has a head similar to a vulture is among the closest parallel to these finds (Kozłowski 1989.Figs. 8–9). Elements such as horns are generally highly schematized. There are also baked clay objects that probably symbolize animal heads or horns, which are commonly found at settlements in the region (Özkaya, Coşkun 2011.Fig. 30; Rosenberg 2011a.Fig. 15; Rosenberg 2011b.Fig. 1). Polished stone shaft straighteners also have abstract representations. Some of them are decorated with deeply incised line and chevron patterns (Rosenberg 2011b.81; Özdoğan A. 1995.Pls. 3–4; Özkaya, Coşkun 2011.Figs. 26–27).

Symbols appear on non-utilitarian items or objects which are strongly related with rituals and spiritual life, such as decorated stone vessels found in graves, stone or bone plaques, etc., with utilitarian objects also showing that such symbolism merged with daily life. Accordingly, we can assume that it has a significant place in the society at the beginning of settled life.

Conclusion

Since the beginning of archaeological research in SW Asia, the number of projects that focus on the Neolithic period has increased. There has been a growing body of evidence which makes clearer the



Fig. 16. Stone vessel fragments from Gusir Höyük made of chlorite, similar to those found in the Upper Tigris and central Euphrates Basin settlements.

beginning of the period in both chronological and regional terms. In SE Anatolia, especially in the northern parts of the Tigris Basin, research that takes place at nearby Neolithic settlements emphasizes once again that any local dynamics did not lead the regional culture, but quite the opposite: the common dynamics formed cultures together in the whole of SW Asia with the local differences. The chronological differences between regions such as the southern Levant, Euphrates or Tigris Valley may be interpreted as the result of the intensity and focus of ongoing research. These chronological differences among regions do not provide support for the argument that regions with earlier dates dominated those with later dates. On the contrary, the complex chronological, technological, and social aspects of the common Neolithic might have provided the basis for dynamics that brought transformations.

One of the most striking elements of the Upper Tigris Basin is the development of the architectural techniques. The replacement of subterranean buildings by those built on the ground level and the change from round to rectangular plans have clearly been



Fig. 17. Decorated stone vessel fragments from Gusir Höyük, typical of the PPNA.

identified in the region, especially in Gusir Höyük and Çayönü. This change is not only technological but also conceptual, so the transformation from shelters to dwellings also refers to changes in space use and social life. In this context, architectural transformation in the PPNA can reflect the adaptations of humans to settled life.

Continuous change and transformation in social and technological elements is observed in the PPNA in SE Anatolia. When the process in this region is assessed as a whole – including the periods which precede and follow it – the Tigris Basin in particular allows us to trace the development of construction techniques. The first structures in the region have completed their experimental stages. Like architecture, chipped and ground stone industries, as well as bone tool industry, have a similar accumulation of knowledge and knowhow. One can identify tool kits that were expertly crafted, designed for specific use, and presenting a relatively wide array of choices. In particular the prominence of symbolism, its diversity and the elements used reveal similar aspects. High quality craftsmanship and sophisticated decoration of symbols on these objects make us think that there is long history behind these symbols and the way they are executed.

Additionally, in the Upper Tigris Valley the absence or relative scarcity of wild male animals in aggressive, masculine and phallic depictions is noteworthy. More commonly, a minimal zoomorphic depiction as part of the symbolic repertoire can be seen, which results in a greater divergence from the symbolism of the Euphrates Basin settlements. Monumentality is another feature that we cannot see in the Tigris area. Again, unlike the Euphrates Basin, in the Tigris region burials are an important part of the settlement, the pillars inside buildings are smaller and more roughly carved, and they may not always be placed inside special structures. Differences between the two regions underline the fact that there were different cultural formations in adjacent regions even though they can be predicted to have been in close contact.

Currently, there is no sufficient evidence to create a solid picture for the early stages of hunter-gatherers in the Euphrates or Tigris Basins, which would signify the transition into sedentary life through permanent structures. Consequently, the cultural base that formed the basis of PPNA in SE Anatolia is not clearly known, probably due to lack of research. However, settlements which have Epipaleolithic la-



Fig. 18. Schematic snake motif decorated bone (a) and decorated baton (b) found in the PPNA deposits at Gusir Höyük.

yers in the region are the precursors of previous periods. Even though we do not know as much about the periods predating the PPNA, it is possible to observe how these cultures evolved into the PPNB. The developments in rectangular building technologies, the concept of a house, well-defined special buildings and designed settlements constitute the main elements of this new period. Besides this, the domestication process that is about to end, the new technologies that continue to evolve and continued elements in symbolism indicate a strong continuity and more homogeneous cultural environment in whole region. In addition to these elements during the PPNA, less developed human representations become more prominent in the PPNB, which may be connected to changes in the worldviews of PPNB people. It can be assumed that the humans of PPNB societies who were part of the wild world gradually became the centre of life.

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