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Communities, households and animals. Convergent developments in Central Anatolian and Central European Neolithic

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ABSTRACT – *This paper intends to scrutinize striking similarities in cultural developments and social transformations in Neolithic communities in the North European Plain of Central Europe and Central Anatolia in the early phase of their development and in the following post-Early Neolithic period. They will be explored through evidence pertaining to architecture and the organization of space, alongside changes in settlement pattern, as well as animal bone assemblages and zoomorphic representations. Social changes, in particular a transition from communal arrangements of local groups in the Early Neolithic to autonomous household organization in the following period, will be debated.*

IZVLEČEK – *Članek preiskuje osupljive podobnosti v kulturnem razvoju in družbenih premenah neolitskih skupnosti na Severnoevropskem nižavju in osrednji Anatoliji v zgodnjih in kasnejših, srednje in pozno neolitskih fazah razvoja. Razlike opazujemo skozi arhitekturo, organizacijo prostora, spremljajoče spremembe v poselitvenih vzorcih kot tudi v zbirih živalskih kosti in zoomorfnih upodobitvah. Še posebej se posvetimo družbenim spremembam, vezanim na razpad komunskih skupin v zgodnjem neolitiku na avtonomna gospodinjstva v kasnejših obdobjih.*

KEY WORDS – *Central Anatolia; North European Plain; house; cattle; space*

Introduction

The archaeology of the early Neolithic in the Near East and Europe reveals a range of similarities across various geographical zones as regards arrangement of space, the function of architecture, the similar utilization of bounded space, the integrative character of communal rituals, the communality of technological solutions or human-animal relations. Transformations in these domains in the course of time also reveal some striking parallels.

These parallel developments, however, do not mean that the Neolithic communities across different regions are identical and no idiosyncrasies are reported. On the contrary, trajectories of developments in particular areas are inevitably differentiated, due to the range of social, cultural and historical contexts in which they operated. In particular, these regional sequences differ as much as a peculiar cultural and social milieu at their beginning is differentiated.

In this paper, I intend to present and then to interpret some of these apparent affinities in cultural developments and social transformations in early Neolithic communities in Central Anatolia and Central Europe, in particular in the North European Plain. Some of them are clearly more obvious and better attested than others.

The Neolithic in Central Anatolia is a distinct phenomenon, and it differs in such matters as settlement form, burial customs, and chipped stone industries from that of the Fertile Crescent (*Özdoğan 1995. 58; 1999.229–232; Balkan-Atlı and Binder 2001. 194*). Moreover, it is the developments in this region

that set the conditions for the spread of the Neolithic way of life westwards into the Balkans and then Europe. The Neolithic in the North European Plain is an area equally rich in data, with tight chronological controls, and marks the beginning of the entry of early farming groups into vast previously uninhabited areas. It lays the foundation for the development of food producing societies across much of the northern part of the continent.

In both cases, we are dealing with regions in which the Neolithic mode of life was introduced from elsewhere. However, a point of departure for its development, as well as the time frame in each case, was clearly different. The Central Anatolian Neolithic developed as a result of complex transformations of the tradition inherited from the northern Levant, while the Neolithic in Central Europe originated from the Carpathian Basin. However, centuries long developments in both regions led to the emergence of a very distinct and coherent mode of the Neolithic. It consolidated and strengthened to such a degree that communities in both regions had the potential to significantly contribute to the dispersal of this new mode of life beyond their original settings, first into different zones within both regions, and then outside those regions. The internal logic of developments of early Neolithic communities in both regions appears to be very similar.

The character of social transformations of Central Anatolian and the North European Plain Neolithic communities will be explored through evidence pertaining to settlement patterns and the organisation of space, alongside changes in architecture, as well as animal bone assemblages and zoomorphic representations. Other aspects of these transformations need to be studied in more detail in the future.

The point of departure for this analysis is my own work in the North European Plain, mostly in the Kujavia region, and in Central Anatolia, in particular at Çatalhöyük East, where I co-direct the excavation project focused on the last sequence of the mound occupation. Having been working in both regions for a long time and observing a range of striking similarities, I feel in position to try explicating them and grasping their nature. This paper is the first such attempt.

However, it is not my intention to go into any details here regarding the regional culture-historical schemes that are used to capture changes in the Neolithic. Instead, special attention will be devoted to diachronic interrelations, in order to outline the manner in which the fabric of Neolithic societies was transformed over time. Hence, I will use the terms early Neolithic and post-early Neolithic to pinpoint this diachronic perspective, rather than referring to existing conventional chronological schemes in both regions.

The first part of the paper aims to present an overview of the major characteristic features of architecture and spatial organization in the early Neolithic sequence in both regions. I will also challenge the meat-based livestock-rearing system of early European farming and point out the idiosyncratic nature of the introduction of secondary products in both regions. The early Neolithic in both regions became a point of reference for a local trajectory of development, but the process involved the localized transformation and modification of these constituent principles and rules.

The second part aims to discuss social transformations in the post-Neolithic period. As regards Central Anatolian Neolithic, the changes will be examined both on a microscale, using Çatalhöyük East as a case study, and on a regional scale across the region. Changes observed in the last phase of the Çatalhöyük East occupation will then be assessed within the broader regional context, and the overall trajectory of development for local communities in Central Anatolia in this time frame. As regards the North European Plain, I will refer to social transformations from its earliest Neolithic phase throughout the further developments of the Danubian tradition.

Introducing the Neolithic of Central Anatolia and the North European Plain

Central Anatolia is defined here as the area to the south of the Anatolian Plateau divided into three zones: the region of the Beyşehir-Suğla lakes in the west, the Konya Plain in the centre, and the Cappadocian region in the east. The Early Central Anatolia (ECA) cultural sequence has recently been divided by Özbaşaran and Buitenhuis (*2002*) into five stages. The paper discusses developments in ECA II, ECA III and ECA IV periods. The ECA II period is dated from the late 9th millenium BC to 7500 calBC. The following ECA III is divided into two sub-phases, A & B. The A subphase is dated back to the years 7500–6700/6600 calBC, while subphase B to 6700/6600–6000 BC. The following ECA IV period is dated to the years 6000–5500 BC. Both stages of ECA III correspond well with the stratigraphy of the Çatalhöyük

East. To date, 13 building horizons have been excavated at this site, labelled levels XII to 0. The sequence as a whole can be dated to approximately 7400–6000 calBC (*Cessford 2001; Marciniak and Czerniak 2007*). In the Özbaşaran and Buitenhuis chronological scheme, levels XII–VI, dated to between 7400 and 6600 calBC belong to the ECA IIIA, whereas levels V–0, dated to 6600–6000 calBC, fall within the ECA IIIB period (*Cessford 2001; Marciniak and Czerniak 2007*).

The considerable changes in the last period of Çatalhöyük East occupation are accompanied by the emergence of farming settlements in the region. The ECA IIIA settlement pattern in the Konya Plain is characterised by long-term aggregation, and marked by an extreme concentration of population at one site – Çatalhöyük. An apparent lack of permanent sedentary communities in the region during this period is in sharp contrast with succeeding periods. The following ECA IIIB is marked by the appearance of many smaller sites which continue to be occupied into the subsequent ECA IV (*Baird 2002*). These smaller settlements were inhabitated for shorter periods than previously. In comparison with the steady rate at which changes occurred earlier, around 6500 calBC developments occurred more quickly and their internal dynamics intensified.

The earliest Neolithic communities appeared in Central Europe around 5450 calBC. They are represented by the Linear Band Pottery Culture (Linearbandkeramik – LBK), which is dated in this part of the continent from *c.* 5450 to 4600 calBC (*Milisauskas, Kruk 1989.404*). The LBK covered large areas of Europe, from the Paris Basin in the west to the Dniester in the east, and from the Drava in the south to northern Poland in the north (*e.g. Kruk and Milisauskas 1999; Barker 1985; Starling 1983; 1985; Wiślański 1970*).

The early farmers of the Linear Band Pottery Culture emerged in the North European Plain in the second half of the 6th millennium BC, and continued uninterrupted development through the first half of the 5th millennium BC. This region was colonized by immigrants from South-eastern Europe, who brought with them a whole array of new material culture, including longhouses, a simple style of pottery, with curvilinear and rectilinear motifs, and stone technology in the form of symmetrical axes and heavy adzes, with a plano-convex cross section. They practiced mixed-farming subsistence techniques. The LBK, especially its earlier phases, was characterized by remarkable uniformity over vast geographical distances, and its material culture was of limited stylistic variability in various regions (*e.g. Ammerman and Cavalli-Sforza 1973; 1984; Starling 1985; Kulczycka-Leciejewiczowa 1970; 1979; 1993; Milisauskas and Kruk 1989; Wiślański 1970; Keeley 1992; Price et al. 1996*).

This early Neolithic phase was followed by the dynamic development of farming communities in the region associated with the late phases of the Danubian tradition – in particular, Lengyel culture – and dated back to the second half of the 5th millennium BC. The late phases of the Danubian tradition are represented by the Late Band Pottery, Stroke Ornamented Pottery, Lengyel, Polgár, Hinkelstein, and Rössen cultures. These archaeological entities mark a second important phase in the development of farming communities in Central Europe. They are dated from *c.* 4600 to 4000 calBC (*Kruk and Milisauskas 1999.303*). This late phase of the Danubian tradition (*Milisauskas and Kruk 1989*) is often defined as the Early Middle Neolithic (*Kruk and Milisauskas 1999*; see also *Czerniak 1994*).

Architecture and spatial organization

Central Anatolia

Architecture and spatial arrangement in Central Anatolian Early Neolithic can be discerned at two major settlements in the region, namely Asıklı Höyük and Çatalhöyük. One its unique feature is the phenomenon of clustered neighbourhood settlements (*Özbaşaran 2000.135*). In Asıklı Höyük and in the early building levels XII–VI at Çatalhöyük, individual loam buildings are typically constructed directly adjacent to one another in neighbourhood clusters of approximately 30 to 40 buildings (Fig. 1). These will normally be separated from one another by streets, alleys and midden areas, and additional midden areas may be located within the neighbourhood clusters. Houses have a great degree of continuity, being rebuilt on the same location for up to six building levels in a sequence stretching over several hundreds of years (*e.g. Düring 2005; Farid 2005; Hodder 2005a; 2006*).

Domestic structures were built of loam brick and accessed from the roof by a ladder. They were occupied for hundreds of years, after which they were generally emptied of portable items and the house carefully and systematically dismantled. The lower portion of the building was then levelled to set up a foundation for a new house. Continuity is particu-

larly clear in the internal organisation of the buildings, which displayed a high degree of similarity across the site. This was characterised by the placement of hearths and the oven in the south part of the building, a platform with a burial underneath in the north part of the building, bucrania on the west wall, and the access-ladder near the hearths/ovens. Considerable continuity is visible in platform and floor divisions through successive replasterings and rebuilding, with only minor changes observable through time regarding the location of ovens and hearths (Fig. 2).

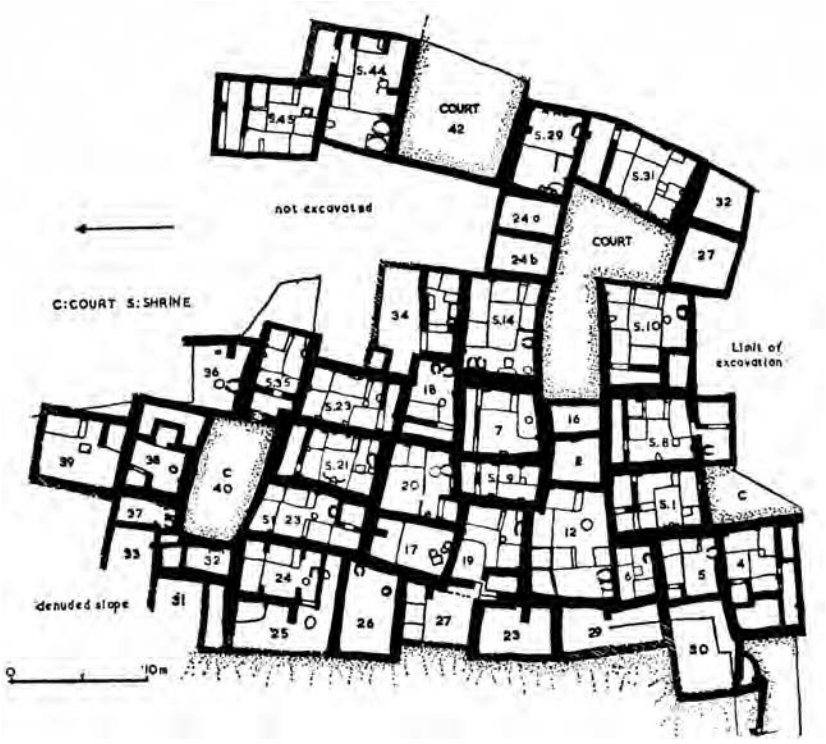

Fig. 1. Çatalhöyük East, Level VII (after* Mellaart 1967.57, Fig. 10*).

Social structures appear to be based around neighbourhood communities, as indicated by clustered distributions of houses and burials. The rooms at Asıklı Höyük are of a restricted size range, with an average of about 6.5m², and 80% are smaller than 12m². This may indicate that they are perhaps too small to have served as household residences. Remarkably, only about 30% of the rooms excavated at Asıklı Höyük contained a hearth. The distribution of these hearths over the settlement does not seem to be clearly patterned, and it is not possible to discern clusters of rooms centred on a room with a hearth (*Düring and Marciniak 2006.8–10; Tab. 3*). The situation is slightly different at Çatalhöyük, as there is a common category of rooms that can be positively identified as living rooms containing a range of more or less standard features (*Mellaart 1967.61, Fig. 11*). However, in contrast to Asıklı Höyük, there is good evidence for dwellings constituted on the basis of both co-residence and economic pooling, but integrated into larger neighbourhood associations.

The dominance of larger social collectivites is additionally supported by burial arrangements. In total, only 70 sub-floor burials were found in the approximately 400 rooms excavated at Asıklı Höyük (*Esin and Harmankaya 1999.126*), indicating that only a small selection of the dead were interred in the settlement. Some buildings clearly served as burial sites for groups that outnumbered their inhabitants. This may indicate that the deceased were interred as part of communally organised ceremonies.

A major shift seems to have occurred at Çatalhöyük in the transition from Level VI to V. These radical changes are particularly well-attested in the architecture and spatial organisation in the structures excavated by the Polish team in Levels IV–0 (*Czerniak et al. 2001; 2002; Czerniak and Marciniak 2005*). They are marked by the abandonment of the pronounced building continuity seen in earlier levels, as well as the appearance of exterior doorways and the emergence of probable courts and streets, which made the houses more accessible than hitherto (*Düring 2001*).

The buildings seem to mark a significant departure from the hitherto prevailing pattern both in terms of their construction and organisation of space. Houses have different shapes and sizes, with internal features which are placed in an irregular order and sometimes are not present at all. The beginning of the demise of internal organisation of the buildings is already clear in Level IV/III as manifested in Building 74 (Fig. 3). Its internal size and the layout of the walls was different than in earlier buildings. It was composed of two rooms and divided by a partition wall that was probably built during its later reconstruction. The internal layout of both rooms was very simple with no platforms, benches, bins and other kind of features. The building had a large doorway. Deliberately placed cattle bones (mandibles, scapulae, ribs), forming some kind of installation,

Fig. 2. Çatalhöyük East. Aerial view of Building 3. Photo by M. Ashley.

were found in its western room. They were placed on the floor in relation to some kind of abandonment rituals/activities. Both rooms were originally connected by some kind of a crawlhole in the northern part of the partition wall. This was later intentionally blocked, probably in relation to sealing off all deposits in the western room when it went out of use.

The following occupation episodes dated to Level II, I and 0 are indicative of the further decline of the previously dominant house arrangements (*Czerniak et al. 2001; 2002; Czerniak and Marciniak 2005*). This is well manifested by a sequence of Buildings 61 & 62 from Level II. They were reconstructed a number of times, as indicated by a complex sequence of floors and partition walls. However, only a few features were revealed in the Buildings. A solid square oven placed in its central part was composed of two superstructures, one placed on top of the other, which is indicative of two phases of its construction. Interestingly, the oven was built in a place that was earlier used by the previous inhabitants of this area to construct some kind of fire installations.

An interesting sequence of occupation levels was discovered underneath the floor of Building 62. An entire sequence is composed of infill, destructional and midden-like deposits, whose homogeneity varied considerably. At the same time, the presence of five fire installations of different size and character is indicative of some sort of activity area. All of them were carefully designed and manufactured. This sequence has no relation to any older buildings, which implies a different relation to the past of the group constructing the Building 62.

Two structures from Level I (Buildings 33 & 34) seem to mark another significant departure from the hitherto prevailing pattern, both in terms of their construction and organisation of space. Building 33 is a rectangular irregular structure, with a small niche in SW corner in which a rectangular oven was placed. Other features comprised two small fire installations in its central sections and a hearth associated with a feasting deposit located in the south east corner of the building. One of the fire installations appeared to be positioned in the centre of the building, in marked contrast to the location of such structures in the ECA IIIA period (Fig. 4). The

Fig. 3. Çatalhöyük East, Building 74. Photo by A. Leszczewicz.

exact length of building 34 is unknown, as it stretches beyond the northern edge of the excavated area, but in general it appears to be a small structure, with its interior dimensions within the trench covering only 2.24m².

North European Plain

The beginning of the Neolithic in Central Europe is marked by the emergence of a new spatiality created by the house. Of special significance was the space of the longhouse, the eminent signature of LBK occupation. They were constructions supported by postholes, with numerous rows of posts running perpendicular to the long axis of the houses. Their walls were made of wattle and daub. Modderman (*1970*) divided the longhouse interiors into three parts: northwest, middle and southeast. The northwest was the most elaborate and solidly built and has been interpreted as the living/sleeping area. The middle part is believed to have been used as the living/working area. A main door to the house was located at the southeast shorter end. The prefered construction material was oak, the prime building timber. There are, however, also examples of conifer use, *e.g.* in Olszanica (*Milisauskas 1986*).

Most of the settlements in the uplands included up to ten longhouses, 7 to 45 meters in length and 6 to 7 meters in width. A number of such constructions in the lowlands of the North European Plain is smaller. They were flanked by ditches and pits dug out to provide clay daub for the walls. Longhouse size differed considerably depending on the region, but the meaning of such variations has not been satisfactorily elucidated (see *e.g. Keeley 1992.82; Price et al. 1996. 97*).

An outstanding example of the lowlands longhouse comes from Bożejewice, site 22 (*Czerniak 1998.26–27*) in Kujavia, where one of the largest building constructed by the early farmers in this region has been found (Fig. 5). It was 43 meters long and 6.5–7.3 meters wide, and was roughly rectangular in shape. The house was divided into three parts, and the function of the specific parts has been interpreted in accordance with the proposals of Modderman (*1970*) and Lüning (*1982*). Long pits were dug out on both sides of the building, arguably for extracting daub for wall construction.

Erecting a longhouse was clearly a complicated and time-consuming task and could not have been done by a single family. This was certainly a communal activity, and it is estimated that a house 45 meters long and 7 meters wide took 3900 person-hours to build (*Startin 1978.146*).

As with any other types of vernacular architecture, longhouses were the product of a long-standing process, incorporating a wide range of elements, both new and old. Their significance was further supplemented and enforced by the architectural permanence of these structures, which contributed to a perception of long-term social stability (see *Pollard 1999.85*). Over time, longhouse settlements became cultural landmarks and repositories of memory, and the focal locales of communal identity.

The early Neolithic settlements in the North European Plain can be characterized as clusters of longhouses. Evidence for units occupying discrete residences in which most domestic activities were performed is conspicuously absent. Instead, a larger form of association, probably incorporating smaller constituencies, seems to have been central to this society. This social configuration persisted during the whole of the early Neolithic sequence, as implied by a general lack of changes over time in house layout and in the spatial arrangement of the settlements. This may indicate that the early Neolithic was characterized by the predominance of the communal

Fig. 4. Çatalhöyük East, Building 33. Photo by L.Czerniak.

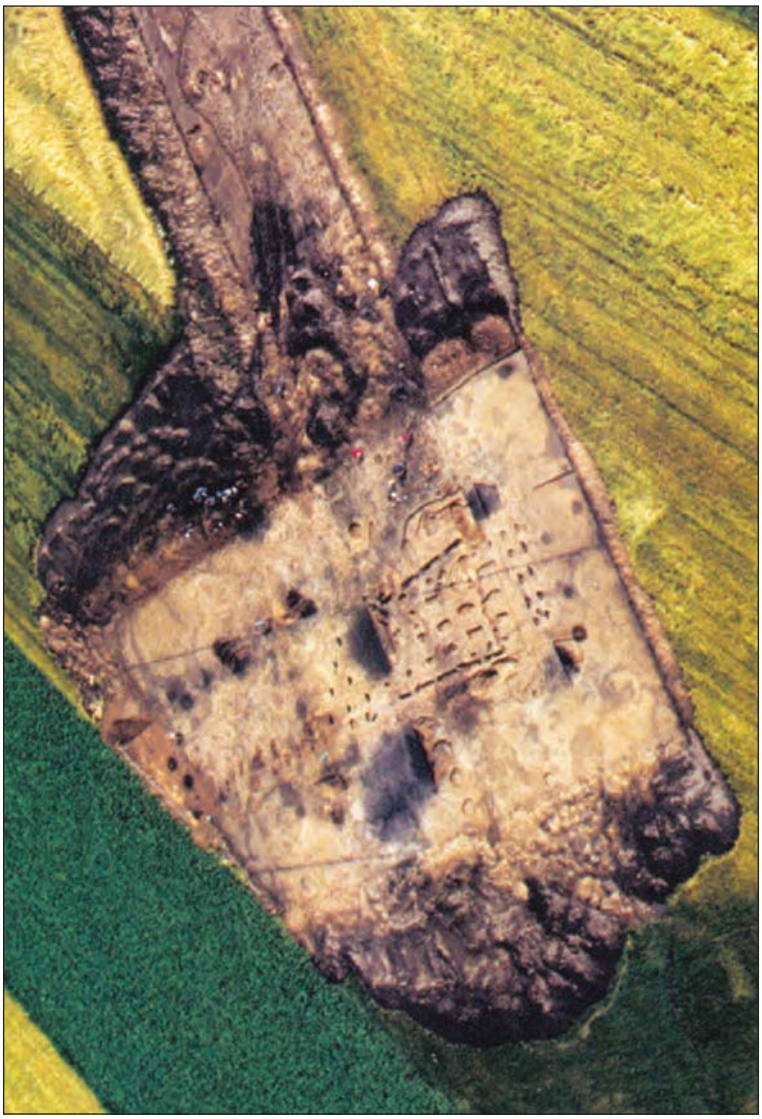

Fig. 5. Bożejewice, LBK, Kujavia. Aerial view of the LBK longhouse (after* Czerniak 1998.23*).

constitution of local groups and that this communal life was focused on longhouses.

Towards the end of Early Neolithic in the region, previously dominant villages/settlements that were the basic social units creating definable groups eventually lost their significance. This is well manifested in decreasing importance of longhouses. The previously homogenous use of longhouse space, became an arena of considerable change, manifested by the appearance of human graves, storage facilities and rubbish pits.

From the formal standpoint, the Late Danubian longhouses, *e.g.* from the Stroke Ornamented Pottery or Lengyel cultures, were similar to LBK constructions. The most apparent difference was their unquestionably trapezoidal shape, especially in the Lengyel tradition (*Bogucki 1982. 19*), although some rectangular structures remained. These oaken trapezoidal constructions featured bedding trenches and posts. They were usually oriented NW–SE, like their rectangular LBK predecessors, with a narrow north and a wide south end. The entrance to almost all of them was placed at the broader part facing east or southeast. However, house size tended to decrease over time. It is estimated that longhouses were used for between 20 years (*Gabałówna 1966.46*) and 50 years (*Jażdżewski 1938.6*). Numerous settlements of this kind have been identified in the Kujavia region in the North European Plain. The best known is Brześć Kujawski, in addition to Krusza Zamkowa, Kościelec Kujawski, Dobre, or Osłonki (*Bogucki and Grygiel 1997*).

In the course of time, spatial organization within and around longhouses changed considerably. This is manifested by the emergence of aggregates of longhouses associated with pits and activity areas. They were reported at Brześć Kujawski, sites 3 & 4 (*Grygiel 1986*). They have been interpreted as household clusters, directly implying the existence of the household (*Bogucki and Grygiel 1980; 1981*) and identified by longhouses associated with a set of features including activity areas, ovens, storage pits, disposal pits/middens, burials, etc. (see *Winter 1977; Flannery and Winter 1976*). All of these facilities were placed in a certain proximity to each other, usually outside of the house, and were separated from similar clusters by open areas (Fig. 6). One part of the house has been identified as a dwelling place, while two others comprised storage and animal facilities. This was also an area in which food was prepared and consumed. The house was arguably used by an extended family, whose members are believed to have specialized in some craft production (*Grygiel 1986*).

These changes are indicative of the emergence of the household as an independent social entity defined as an entity residing in discrete buildings, with evidence of most domestic and some craft activities

performed within the residence, as manifested in the presence of special-purpose activity areas and features in buildings. Interestingly, it appeared first in regions with a long trajectory of development (*e.g.* Kujavia), and it was a much later development in regions being colonised for the first time at that time. In the long run, the North European Plain early Neolithic house was transformed from a communal domain into a private sphere in the post-Neolithic period (see also *Stea and Turan 1993.110*). In the final phase of this sequence the longhouse clusters were in the process of disintegration and were finally abandoned. At the same time, village-like agglomerations comprised of individual farmsteads began to emerge.

Human-animal relations

Central Anatolia

Differences in treatment of major domestic species in the ECA II, IIIA and IIIB periods in Central Anatolia are striking. In particular, the special significance of cattle in the early Neolithic was convincingly proved. This is part of broader pattern in the Near Eastern Neolithic which, however, will not be elucidated here (*e.g. Akkermans, Schwartz 2003.75; Russell and Martin 2005*).

Abundant evidence of the special importance of cattle come from the Anatolian early Neolithic sequence, more particularly from Çatalhöyük (*e.g. Mellaart 1967, Hodder 1990*). The most spectacular and well known evidence of cattle's special significance are plastered bucrania, with insert horns, as well as cattle horns set into benches and pillars (*Mellaart 1964; 1967; Bogdan 2005*) (Fig. 7). There is a disproportionately high representation of not only horn cores, but also cattle scapulae. They are also built into walls and seem to be placed in houses at abandonment (*Russell and Meece 2006*). Either these elements are preserved from some of the attritional forces affecting other body parts, or extra horns and scapulae were brought back from animals not otherwise transported to the site. Horns are very heavy, with no meat, while scapulae are covered with meat which is easily filleted off. It is argued that both of these body parts carried strong symbolic and ceremonial value associated with their consumption (*Russell and Martin 2005*). Both also seem to be tied to houses and the cycle of building.

The age as well as sex data further suggest that bulls were selected for feasts and ceremonies in the ECA IIIA period of the Çatalhöyük East development. Females form approximately half the bones from the contexts related to everyday consumption, while only a third from other categories of deposit, including ceremonial settings. Considering that feasting deposits often contain a substantial number of daily remains, the contribution of males to ceremonial consumption was probably even greater. The predominance of male remains in the area outside the mound (the so-called KOPAL Area) further strengthens its interpretation as a ceremonial setting and/or deposition of the remains of ceremonies (*Russell and Martin 2005*). This is further supported by the results of stable isotope analysis. They indicate that cattle contributed only negligibly to the diet of the tell inhabitants (*Richards et al. 2003*).

This short summary of the available evidence clearly indicates that at Çatalhöyük and other early Neolithic Anatolian Neolithic settlements, cattle were clearly of considerable ceremonial and symbolic importance (*e.g. Mellaart 1967; Hodder 1990*). This implies that first contact with then undomesticated

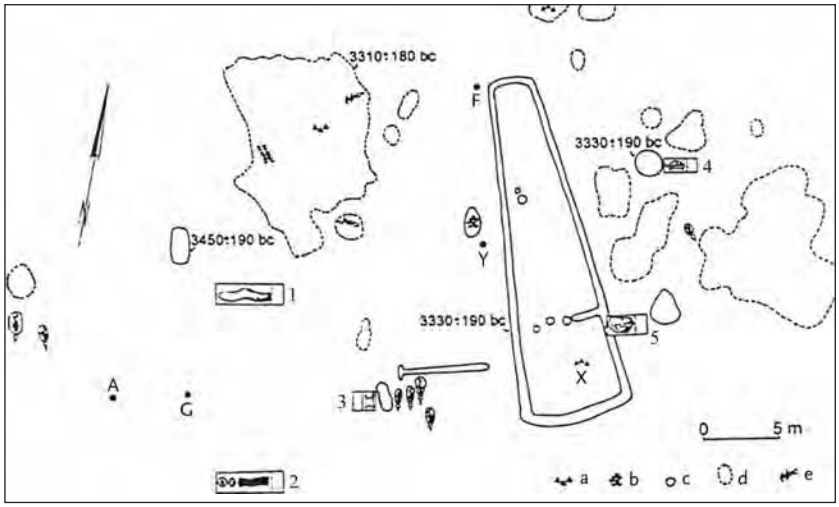

Fig. 6. Brześć Kujawski, Lengyel culture, Kujavia. Household cluster (after* Kruk & Milisauskas 1999.79*). 1. antler workshop; 2. shell artefact; 3. hide processing workshop; 4. storage pit for shellfish and turtles; 5. sherds; A. flint axe; F. Jurassic flint artefact; G. antler; X. flint working area within house; Y. chocolate flint artefact for antler working; a. cluster of ceramic sherds; b: shellfish; c. pits associated with economic activities; d. clay pits; e. burials.

Fig. 7. Çatalhöyük East. Cattle bucrania in Building 52. Photo by J. Quinlan.

cattle was very complicated and primarily involved factors of a social and ideological nature. Hodder (*1990.35*) claims that cattle were first symbolically domesticated and only later acquired their economic significance. This was supposedly achieved through the practice of bringing the cattle into the house and controlling them within various 'cattle cults'.

An analysis of the available evidence as regards the use of sheep/goats among inhabitants of Çatalhöyük in the ECA IIIA phase has proved significant differences in comparison with cattle. Sheep/goat bones are the most abundant faunal remains at this site. In most cases, they are found in middens and fills used as a primary location for dumping consumption debris. This may indicate that both species were used for ordinary food consumption.

This is further supported by analysis of their body part representation, revealing a fairly even distribution subjected to attritional processes. All carcass parts are brought onto the site, and perhaps even whole carcasses, although there is some evidence for the selective importation of sheep-size ribs, and under-representation of sheep-size vertebrae (Fig. 8), suggestive of slaughter and primary butchery taking place off-site. Filleting cuts are considerably more frequent than dismemberment cuts in sheep as outnumber frequency of these kind of cuts in cattle. It appears that meat may have been more often filleted off the bone and cooked in smaller pieces, while larger animals, in particular cattle, may have been cooked in larger pieces still on the bone (*Russell and Martin 2005*).

The age distribution of the sheep/goat looks also very different from that of the cattle, appearing to show the typical management of sheep and goats for meat and herd reproduction. The age data show most animals culled as juveniles and sub-adults, the optimal ages for meat yield (see *Payne 1973*). Far fewer survived to be older adults, which would require pasturing. This segment may only be the breeding stock. This mortality profile does not, however, suggest the intensive use of dairy products or wool. However, one has to bear in mind that sheep were unlikely to have been woolly in this period. This is further corroborated by the results of stable isotope analysis indicating sheep as the main source of animal proteins.

The character of people-animal relationships and changes over time are well attested at Çatalhöyük also in the ECA IIIB period. The distinctive pattern of cattle and sheep/goat consumption underwent considerable transformations. Special treatment of cattle as manifested in the high representation of horn cores and scapulae is significantly less common. No plastered bucrania are recorded from the phase of the mound occupation. Cattle age and sex distribution is now dominated by females and more sub-adults, which appears to indicate a genuine shift, at least in some parts of the site. Its significance remains somewhat enigmatic (*Twiss et al. 2005*).

As regards species composition, whereas pre-Level V assemblages consistently include approximately 65–70% caprines and 20–25% cattle (*Russell and Martin 2005*), from Level V on it appears that caprines provide more than 80% of the remains and cattle only some 10% (*Twiss et al. 2005*). Similarly, as in earlier levels, in most cases sheep and goat bones are found in middens and fills, where their deposition primarily resulted from food consumption.

Equally transformed was the sex and age distribution of sheep/goats, with substantially more adults represented (Fig. 9). This might indicate changes in herding practices and a switch to the use of dairy products (*Twiss at al. 2005*). However, we have to bear in mind that while material from earlier levels comes from a range of different context, the late le-

vels are represented by only a single area. Hence, the results need to be treated with caution.

In any case, the small samples analysed to date (*e.g. Russell et al. 2004; Twiss et al. 2005*) indicate a significant change in various aspects of human-animal relations indicative of considerable socio-economic shifts. A more detailed view of human-animal relations in the upper levels of the Çatalhöyük East following extensive excavations of this sequence will only be possible when detailed results of these invesigations are available.

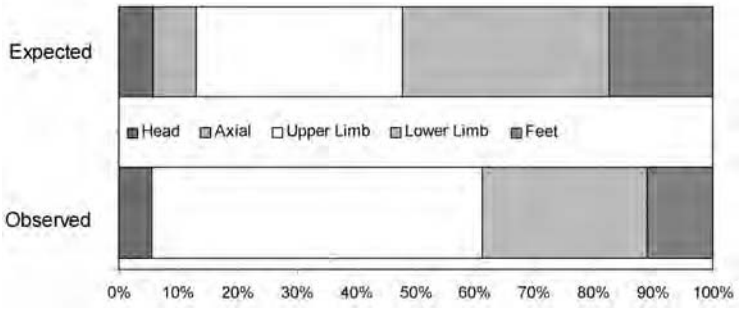

Fig. 8. Çatalhöyük East. Sheep/goat body part distribution (after* Russell, Martin 2005.Fig. 2.31*).

North European Plain

Early farmers in the North European Plain also treated different taxa in different ways, in particular sheep/goats and cattle. While the former was an ordinary source of meat, the latter was embedded in different social and ceremonial contexts.

Detailed studies of animal bone remains and their archaeological context from the early Neolithic settlements of the Polish part of the North European Plain revealed striking differences in the taphonomic pattern, body part representation, spatial distribution, as well as association with other kinds of archaeological evidence, between cattle, sheep-goats and pigs (*Marciniak 2005*). These statistically significant differences in all contexts throughout the studied settlements are indicative of the considerably varied treatment of these animals at these settlements. The small number of pig bones makes it difficult to discern rules of pig treatment in more detail. However, a revealed pattern may imply some similarities with cattle, but one needs to treat this conclusion with caution.

Cattle bones are the most abundant faunal remains in the early Neolithic of Central Europe. Taphonomic analysis implies a very peculiar method of consuming cattle marrow. As indicated by characteristic jagged fractures, with signs of ash, burning and numerous scratches, the bones were first roasted, broken and then the cooked marrow consumed (Fig. 10). This kind of marrow consumption appears as a common and quite peculiar culinary practice of the early lowland farmers and might have had a discursive character. Interestingly, sheep/goat marrow, albeit not roasted, was also consumed on a daily basis.

Cattle body part representation is characterized by a deliberate selection of certain anatomical segments – in particular, skulls, scapulae, and axial segments – and marked by the avoidance of limbs. At the same time, body part representation of sheep/goats was considerably different. It is characterized by varied compositions of highly processed anatomical parts, which implies that all of them were eaten.

Cattle meat and marrow eating was clearly regarded as appropriate in one social context and inappropriate in another. It is indicated by cattle bones deposited in specific locales at the settlement, particularly in the open space between longhouses. The remains of cattle consumption were deposited exclusively in the so-called clay pits located between longhouses and do not appear in other types of pits used at these settlements. Contrary to cattle consumption, sheep/goat took place in the house and/or directly around the house. A small number of pig bones have made their spatial distribution analysis hardly conclusive.

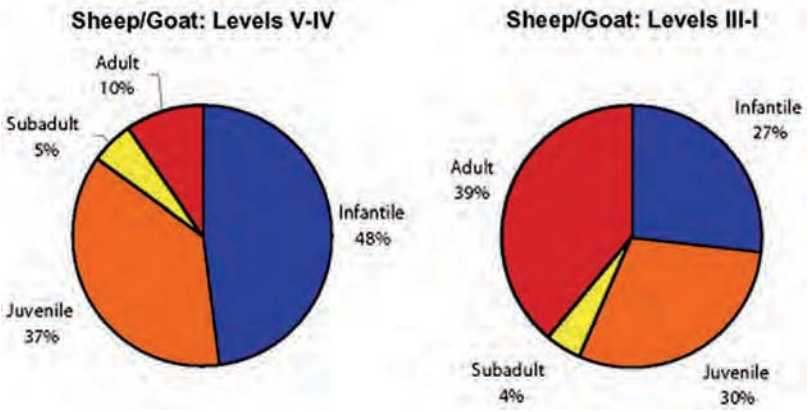

Fig. 9. Çatalhöyük East. Sheep/goat mortality profile (after* Twiss, Martin, Pawłowska and Russell 2005*).

The available evidence from the Early Neolithic settlements from

the Polish part of the lowlands implies the practice of at least two kids of consumption among local farmers. The first focused on cattle, and the other on sheep/goats. Fragmentary evidence implies that pigs were also an important element in feasting, and pork was not consumed on a daily basis. Cattle marrow and meat was arguably consumed ceremonially in a very standardized and repeatable manner over a long period of time. At the same time, sheep/goats were used as a source of meat and were eaten in an apparently ordinary fashion, and consumption took place in the house and/or directly around the house. No roasted marrow of sheep/goats was consumed. Fragmentary evidence implies that pigs were also an important element in feasting, and pork was not consumed on a daily basis.

The post-early Neolithic in the North European Plain brought about considerable and multiscalar changes in relations between people and domesticated animals. They were no longer considerably uniform and standardized as in the preceding period, but rather highly variable and diverse. This applies both to differences between particular species and differences at particular settlements. Interestingly, the overall picture of human-animal relations among Lengyel communities in Kujavia, a traditionally farming region, is far more diverse than among their LBK predecessors. At the same time, it is also more diverse than in the newly occupied regions that retain a range of elements originating from their early Neolithic predecessors, albeit considerably transformed.

Changes in patterns of consumption involved the decline of the ceremonial consumption of cattle. The

Fig. 10. Łojewo, site 35, LBK, Kujavia. Marrow post-fire transverse breakage. Photo by A.Marciniak.

social and ceremonial importance of animals in the post-early Neolithic, however, remained significant, but it was executed in a different way and in different settings. Cattle remained an important status and wealth animal, which is manifested in the form of cattle graves (*Barker 1985.150*). This seems to represent a transformed way of indicating the significance of cattle, which began in the early Neolithic.

A new component in this period was the economically more efficient exploitation of domestic animals, not only sheep/goats, but also cattle. The practice of marrow eating, very common in the early Neolithic, was significantly less popular. In particular, cooked and roasted cattle marrow was not commonly eaten.

Discussion and final remarks

In this paper I examined evidence pertaining to the organisation of space and changes in architecture alongside settlement patterns, as well as animal bone assemblages, in the early phases of the Neolithic in Central Anatolia and the North European Plain. The similarities revealed in the cultural developments and social transformations in both regions are so striking that they need to be investigated and scrutinized in some depth. They refer to both initial arrangements in the analyzed domains, as well as their further developments in the post-early Neolithic period.

In the most general terms, one can argue that these parallels imply the existence of similar trajectories of development of early farming groups irrespective of the regional context. It does not mean, however, that we opt for any kind of universal rules or patterns in this respect. The obvious significance of these parallels needs always be contextualized and referred to the historical, social, and cultural embedding of regional developments.

The emergence of the Neolithic in both regions was accompanied by the production of new spaces. Special attention should be paid to the new form of house and its space, as manifested both in the form of the Central Anatolian house and the Central European longhouse. They initiated a new sequence of Neolithic spatiality in both regions. The house space was organized in a rather normative manner, as they were an embodiment of the past, history and memory, not only a place for living. They were a focus of meaning and action in which social cooperation and practice were undertaken. It is where the everyday lives of the inhabitants were linked to the timeless and stable world of the ancestors, preserving

stability and security for them. This was further enforced by the architectural permanence of these houses, which contributed to a perception of long-term social stability.

As with any other vernacular architecture, longhouses were the product of a long-standing process, incorporating a wide range of elements, both new and old (*Stea, Turan 1990.21*). They should not be treated as finished artefacts. Each house has its own life history and/or replacement cycle. It was (re)created, (re)built and modified in the course of its occupation within a unique historical context.

The characteristic features of the houses in both regions indicate that communal organization among early Neolithic groups dominated the constitution of social arrangements. As argued elsewhere (*Düring and Marciniak 2006*), the earlier Neolithic in Central Anatolia is characterized by the predominance of clustered neighbourhood communities. Local groups appear to be organized into a number of tightly nucleated neighbourhoods that shared a number of facilities and resources. Within these neighbourhoods would have lived a large number of families who probably did not run autonomous households.

The very nature of the communal character of social arrangements in the early Neolithic of the North European Plain has not been satisfactorily scrutinized to date. A majority of scholars stress, however, their communal over household organization. More recent proposals advocate that longhouses were occupied by extended rather than nuclear families (*Hodder 1984.63*). LBK settlements were believed to consist of a number of patrilineages. Each settlement may have had its own chief, whose power was either achieved or ascribed. The coexistence of several houses at the same time, a common feature of LBK settlements, may suggest lineages being reproduced in such a way (*van de Velde 1979.130*). The contrary theory, advocating longhouses as the loci of matrilocal units inhabited by a maternal grandmother along with her daughters, their husbands and children, has been proposed by Ehrenberg (*1989.96*). Other authors, such as *e.g.* Milisauskas (*1986*), have argued that groups inhabiting subsequent settlements were homogenous, with only slight social and economic differences. LBK communities were perceived as being small-scale, largely acephalous, egalitarian and non-stratified. Communal identity was probably of crucial importance for these egalitarian communities, with consensual decision-making (*Milisauskas 1986.215–218*).

Similarities between these two regions in the early Neolithic are not limited to architecture and spatial arrangements, but are also visible in human-animal relations. In both, we are dealing with different uses of sheep/goats and cattle. While the former was an ordinary source of meat, the latter was embedded in different social and ceremonial contexts. In no way can the early use of cattle be equated with meat focused exploitation. Interestingly, similar differences are discernible across other geographical regions. The special significance of cattle has been convincingly demonstrated in other parts of the Near East, in particular in the Levant (*e.g. Akkermans, Schwartz 2003.75*), but also in the Balkans (*Greenfield 2005. 28*) or the British Isles (*Edmonds 1999.28; Thomas 1999.74*).

The first period of the Neolithic saw steady and uninterrupted development that was characterized by a high degree of similarity in the domains discussed in this paper as well as many others. After more then fifteen hundred years of predominance of the clustered neighbourhoods of the Central Anatolia Neolithic, these social arrangements disintegrated and were finally abandoned. At the same time, after roughly the same time span, the larger community that constituted the predominant social arrangement in the early Neolithic in the North European Plain was also abandoned.

Intriguing parallels are discernible as regards regional developments. We are dealing with two types of communities here. The community of continuation typical of pre-pottery Levels both at Asıklı Höyük and Çatalhöyük was replaced by the community of change in the post-Level VI/V level at Çatalhöyük East. Around 6000/5900 BC, the mound was finally abandoned.

In the first phase of Neolithic occupation in Central Anatolia, in the ECA II and ECA IIIA phases, the settlement pattern is characterised by long-term aggregation, and marked by extreme concentrations of population at one site, first at Asıklı Höyük and then at Çatalhöyük. Only a few, smaller Neolithic sites dated to the second half of the 8th millennium have been discovered to date. This long and considerably homogenous sequence at Asıklı Hoyuk and Çatalhöyük is followed by a much shorter 500–600 years of the Late Neolithic period (ECA IIIB), which is distinguished by dynamic changes that increased in pace in subsequent phases. The apparent lack of permanent sedentary communities in the region during the ECA II and ECA IIIA is in sharp contrast with suc-

ceeding periods. The following ECA IIIB period is marked by the appearance of many smaller sites (*Baird 2002*).

It is only in the ECA IIIB that local farming groups emerged as strong and independent entities both in the region and beyond. A number of co-existing communities were formed in both regions, bound within intensive communication networks. Inherited practices were selected, reconstructed, maintained, modified and given a transformed meaning (*Said 2000.185*). Social changes took the form of small scale modifications and transformations of the early farming tradition. The process was uneven and highly localized, and its dynamics varied both between different parts of regions and in subsequent periods. As a result, the landscape was largely dispersed and fragmented and local communities were linked by different communication networks.

This trend continued in the ECA IV period. Settlements were smaller and were occupied for shorter periods than previously. Environmental conditions, such as extensive flooding, in this period do not adequately account for this regional change (*Baird 2002.150*). Rather, the settlement pattern seems to reflect the presence of a settled agricultural population in the region. The subsistence economy was based on the full domestic exploitation of plants and animals, although hunting and gathering still played a minor role (*Özbaşaran and Buitenhuis 2002.71*; also *Gérard 2002.107*).

As revealed in the North European Plain, these evident changes were manifested differently in regions continuously inhabited since the early Neolithic and in areas occupied for the first time in this period. The core region enjoyed a high degree of stability following the strengthening of communal identity. A conceptual frame of reference for these groups provided recontextualised resources mobilized in the preceding period.

Further transformations in both regions imply considerable changes in human-animal relations, particularly in herding practices and a switch to the use of dairy products. Animal use became economically more efficient. The disassociation of animals from ceremonial and social domains, so characteristic of the earlier period, proved to be a prerequisite for the dynamic expansion of the post-early Neolithic communities and had far-reaching consequences for the whole economy.

These significant changes in both regions in the post-early Neolithic period may be indicative of the emerging dominance of a domestic mode of production and consumption, with the associated development of the autonomous household as the paramount mode of social association (see more in *Düring and Marciniak 2006*). This increased autonomy of the household in the post-Early Neolithic was based on its durable and successful economy, in which crop and livestock husbandry were closely integrated and intensively managed.

The emergence of the household mode of production in this period is discernible in both regions. In the last levels of Çatalhöyük East occupation, lithic industries became more complicated, which possibly relates to craft specialisation by skilled individuals (*Conolly 1999*). The increased number of prismatic blades is probably associated with dependence on domestic food sources and with cooking habits, as indicated by bipolar truncation and bilateral wear-retouch. All these changes may be linked to a radical reorganisation of chipped stone production in this phase (*Carter 2005*). Major changes are also identified in pottery manufacture and use, manifested by a shift from the chaff-tempered tradition to grit-tempered and burnished wares suitable for cooking (*Mellaart 1966.170; Last 1996.118*). They are also marked by the occurrence of stamp seals that arguably acted as portable forms of art, making symbolism more mobile (*Hodder 2005b.190*). At the same time, household social arrangements the North European Plain is manifested in emergence of spatially bounded household clusters accompanied by debris of specialized activities (*Grygiel 1986*).

The emergence of the household as an independent social entity had far-reaching consequences, as it challenged the social, ceremonial and economic foundations of early Neolithic communities. As households became more economically robust, imbalances in household production more frequent, and descent-based claims on land more individualized, one may argue that powerful social sanctions came into force to hold the community together. Furthermore, it arguably resulted in a significant change to past resemblance politics. The previously dominant organisation was constructed using collective- and long-term memories within social structures operating at the supra-house level. This was replaced by heterogeneous arrangements based on individualised, short-term memory regimes, within a predominantly house-based social structure (see also *Kuijt 2001; Hodder 2005b.190*).

These transformations are indicative of considerable social and symbolic changes. Changes in individual houses in relation to the disaggregation of the settlement layout may have been related to disaggregation on the regional scale. As a result of these transformations, post-Early Neolithic groups had a more practical style of life, largely disassociated from the symbolic and social domain that had hampered any changes in the preceding period. This contributed to significantly more efficient husbandry and consequently facilitated the large-scale expansion of these communities into hitherto unoccupied areas. Transformations in this domain also facilitated the dynamic development of small mobile groups and became a driving force of the intensified process of agricultural colonization of vast territories. This enabled local groups to inhabit small settlements in strategic locations, start economically efficient lives and fully exploit the available resources.

It is worth reiterating that social changes in this period in both regions had the form of small scale modifications and transformations of the early farming tradition. Autonomous households initially developed as an intrinsic component of the Çatalhöyük building, as well as the Central European longhouse, and eventually contributed to their demise. A conceptual frame of reference for these groups provided recontextualised resources mobilized in the preceding period. As a result of this longstanding process, subsequent generations tended to refer mainly to a common experience rather than to a normatively understood, inherited tradition. At the same time, these transformed traditions provided a solid foundation for communities moving from these centres to previously unoccupied areas.

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back to contents