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The 17th Neolithic Studies anthology comprises seventeen selected papers presented at the sixteenth Neolithic Seminar 'Bodies, Rituals and Religions in Eurasian Early Prehistory' that took place at the Department of Archaeology, University of Ljubljana in November 2009. We also present complementary studies focused on: (i) Pre-Pottery Neolithic ritual architecture at Hamzan Tepe in the Urfa region; (ii) ¹⁴C gradient in the 7th millennium calBC, stratigraphic sequences and pottery evidences from five early pottery sites in SW Turkey; (iii) ritual practices at megalithic complex Rego da Murta in Alto Ribatejo in central Portugal; (iv) ways in which rhythmic temporality of yearly course was woven into the way people lived, experienced and transformed their life in the Balkans Neolithic; (v) Neolithic transition to farming and environmental dynamics in Volga-Kama area; (vi) on fishing as part of the survival strategies of the Mesolithic and Early Neolithic groups of the Danube Iron Gates; (vii) Neolithic and Eneolithic settlement structures and pottery assemblages at Radvanje site in northeastern Slovenia.



*'Urfa statue'
(see Schmidt, this volume).*

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Pattern and diversity in the Early Neolithic mortuary practices of Britain and Ireland: contextualising the treatment of the dead

Chris Fowler

School of Historical Studies, Newcastle University, Newcastle Upon Tyne, UK
c.j.fowler@newcastle.ac.uk

ABSTRACT – *This article presents the first synthesis of the evidence for a diverse range of mortuary practices across the British Isles, and an interpretation of what they suggest about understandings of the body, relatedness, personhood and ancestry in Early Neolithic Britain and Ireland. By exploring the ways that mortuary practices were interwoven with the development of the places where they were carried out, we can build up a more detailed – and more varied – picture of the principles underlying Early Neolithic mortuary practices. Some practices suggest an interest in the ancestral remains of the dead, while others suggest different phenomena, yet a general picture of how human bodies were appreciated emerges.*

IZVLEČEK – *V razpravi predstavljamo prvo sintezo podatkov o različnih pogrebnih praksah na Britanskem otočju in interpretacijo razumevanja telesa, sorodstva, osebnosti in prednikov v zgodnjem neolitiku v Britaniji in Severni Irski. S pomočjo prepletanja pogrebnih praks in razvoja prostorov, na katerih so potekale, gradimo natančno, a raznolično podobo načel, na katerih so temeljile zgodnje neolitske pogrebne prakse. Nekatere prakse so povezane s predniki, druge nakazujejo drugačne fenomene, vse pa omogočajo splošen uvid v dožemanje človeškega telesa.*

KEY WORDS – *mortuary practice; excarnation; cremation; collective burial; successive burial; bodies; Neolithic Britain and Ireland*

Introduction

Recent research has illuminated in increasing detail the wide variety of ways that the remains of the dead were manipulated in Early Neolithic Britain and Ireland¹. Initial treatments included exposure to the elements and scavengers, cremation, defleshing and disarticulation, intact inhumation, and interment of intact bodies in stone or wooden chambers. Where bodies were cremated or exposed, collections of remains were sometimes gathered up and deposited in tombs or on ground then covered by a barrow. Occasionally those who had been buried might have been disinterred. Bones removed from chambers, caves or other sites of primary mortuary

activity were also deposited in activity elsewhere, including during acts of monument construction. The remains of those interred in tombs were sometimes subjected to later disarticulation both as a by-product of inserting further bodies in successive acts of interment or during later activity in the chamber and during deliberate manipulations of skeletal remains. Sometimes the sites where the collected remains of the dead were invested were themselves dramatically transformed through burning; sometimes they were left to decay or collapse, and often the architecture of the site was elaborated some time after initial use. In this article, I present a syn-

¹ The deposits discussed in this paper all date to between c. 3900 and 3300 calBC, and the majority to between 3800 and 3400 calBC. For a brief discussion of how some of these trends extend beyond 3300 calBC see Fowler and Scarre (*forthcoming*).

thesis of the major trends in earlier Neolithic mortuary practices across the geographical British Isles², and an interpretation of what these practices indicate about Early Neolithic understandings of bodies, relatedness and personhood. This synthesis is necessary as, while there are many excellent regional analyses and/or assessments of specific monument types that include mortuary deposits (*e.g. Ashbee 1970; Kinnes 1992; Smith and Brickley 2009*), no synthesis focussing explicitly on mortuary practice at sites of all types across the British Isles has yet been attempted. The current synthesis is intended to be representative rather than comprehensive, and although the evidence from Ireland has here been investigated in less detail than other regions, this article characterises the main trends in mortuary practice for Britain and for some comparable sites in Ireland (*e.g. court tombs, Linkardstown tombs, caves*). I will suggest that a diverse range of phenomena involving the remains of the dead can be identified from this synthesis, including that human remains were often brought to places during acts of monument construction, often deposited collectively in a single event and occasionally some time after the initial transformation of some bodies in the assemblage, and that ‘difficult’ bodies and ‘difficult’ deaths were often contained within special locales rather than allowing those bodies to become distributed into the cosmos through natural processes of decay that were arguably the normal means of dispersal in most communities. I will also argue that the interpretation of specific deposits must rest on contextual, local and regional analyses. I will argue that interpretations favouring a Neolithic interest in the ‘ancestral’ dead explain some, but not all, of these practices, yet explanations for other practices are compatible with a Neolithic appreciation of the body as invested with properties that would also be appreciated in acts of ancestral veneration. The diverse range of phenomena that this synthesis identifies requires a broad range of explanations and indicates both shared and divergent attitudes to human bodies.

Identifying recurrent mortuary practices

While I have divided the following discussion into distinct groups of practices, this is not an attempt to introduce a strict typology. Single sites and even single deposits combined a range of mortuary practices. Nonetheless, there is a need to employ specific

terms to describe these practices and to reflect critically on the entire *chaîne opératoire* of the treatment of dead bodies and production of places containing the remains of the dead. I will use the term ‘collective burial’ to refer to the deposition of more than one set of human remains in the same feature, ‘single burial’ to refer to a single event in which a single body was interred, ‘successive burial’ to refer to repeated instances of deposition of one or more body in the same feature (or same site if so specified). ‘Single-event deposition’, which may involve more than one set of remains, will also be discussed. ‘Primary mortuary practice’ refers to the first event or process in which the body is transformed (*e.g. through cremation or exposure*) or buried if no prior bodily transformation is evident. ‘Secondary mortuary practice’ refers to a secondary event in which human remains are manipulated, for instance by removing a cranium from a set of skeletal remains in a tomb, collecting up bones from an excarnation site or exhuming a body from a grave. ‘Tertiary mortuary practice’ refers to the deposition of remains which have already been collected from elsewhere through a secondary practice. In some cases, only primary mortuary activity might be considered funerary, while secondary or tertiary activity may have more to do with ‘ancestral rites’ (*Barrett 1988*), but I will apply interpretations of which acts are funerary only contextually and, indeed, will argue that Early Neolithic mortuary activity often served to shade the transformation of the dead person into larger concerns, rendering a strict division between funerary activity and other ritual, religious, cosmological and social concerns unhelpful.

Collective primary burial: successive deposition of intact bodies and single deposits of multiple intact bodies

Collective burials comprise the most common form of Early Neolithic mortuary practice, although resulting from different processes. Collective burials have been found in the wooden or stone chambers of tombs, comprising deposits laid out on platforms or paved areas, or in ‘crematoria’ trenches immediately covered by barrows, and found in caves. While some collective deposits of intact bodies clearly resulted from successive deposition, a notable number of sites exhibit single-event deposition of remains from more than one body, mostly combinations of intact and disarticulated bodies. I will discuss the presence of disarticulated remains and burnt remains in collective deposits in another section.

² The geographical British Isles here consists of England, Ireland, Scotland, Wales and the Isle of Man.

Wooden or stone chambers were first built in southern Britain *c.* 3800–3600 calBC, perhaps a little earlier or a little later in some other areas. Wooden chambers with earthen mounds have been found in eastern Britain and parts of southwest Scotland. Cairns with stone chambers were constructed in many parts of the British Isles, including southern and north-western Wales (including Anglesey), the Isle of Man, north-east Ireland, western Scotland and northern Scotland. The exact forms of these monuments varied, but all provided at least one chamber, and most were probably constructed during the period *c.* 3800 to 3500 calBC, although passage graves in particular were constructed well after this, as were various other types of chambered tombs in some regions (Orkney, for instance) (Scarre *et al.* 2003).

The vast majority of burials in tombs were collective and probably derive from successive deposition. These bodies did not always remain intact once interred, although many were clearly interred intact. The primary deposits of human remains in the chambers at West Kennet all appear to have been intact bodies, deposited from *c.* 3670–3635 calBC: these were probably all laid in the chambers within less than fifty years and disturbed only much later (Bayliss *et al.* 2007). At Ascott-under-Wychwood, it seems likely that around seven of the bodies were deposited intact, although there is also evidence for exposure and partial deposition among others of the 21 MNI (minimum number of individuals) whose remains are represented at the site (Galer 2006; Whittle *et al.* 2006.357). All but one of the intact bodies were later disturbed during the repeated deposition of further bodies within an extended sequence of site development, illustrating the presence of successive deposition. The site is symmetrical along a linear axis, with early occupation structures either side of the central axis later joined by two sets of cists either side, to which passages were built when the cairn was assembled (McFadyen *et al.* 2006.134). The first bodies were laid in the small cists while the cairn was still under construction, *c.* 3755–3690 calBC (Whittle *et al.* 2006.329), illustrating a close connection between site construction and collective deposition. Additional bodies were deposited in the passages once the cairn was built, again probably initially intact, but heavily disturbed by later deposition. Only one of these bodies, of a female older adult, was relatively undisturbed in the northern passage, which was not used for further deposition. The entire sequence of deposition is calculated to have taken no more than ‘three to five generations’ (Whittle *et al.* 2006.329). To cite a fur-

ther example emerging from recent re-analysis, the passage grave at Broadsands, Devon, was used to deposit the bodies of three individuals *c.* 3845–3726 calBC (Sheridan *et al.* 2008.15), and it seems likely that these bodies were interred in a relatively short initial phase of activity. The presence of small bones from the extremities suggests that these bodies were probably intact when deposited, and later disturbed by activity which included laying paving slabs and setting fire to the chamber containing the decayed remains, some of which were already free of flesh when burnt (Sheridan *et al.* 2008.7, 15). The next dated phase of funerary deposition at the site is rather later than the first – a single male adult dating to *c.* 3517–3356 calBC (*ibid.*) – suggesting the sporadic re-use of some tombs during the period.

Wooden chambers were occasionally built and used in a similar way to stone chambered tombs. For example, at least five bodies were deposited in the Haddenham (Foulmire Fen) wooden mortuary chamber, Cambridgeshire, *c.* 3600 calBC (Fig. 1) (Evans and Hodder 2006). One adult male was laid across the body of another at the rear of the chamber: both bodies were probably intact when deposited, although parts of the right arm of the second man were displaced. The humerus of this arm exhibited a series of cut marks consistent with removing muscle tendons from the bone, and thus with localised defleshing. A young child was interred in the middle of the chamber, an adult nearer to the front. The remains of a fifth burial, an adult, were more partially represented at the rear of the site, but preservation conditions were poor. All the bodies were oriented with their heads to the rear of the east-west chamber. There was no evidence of gnawing or other effects of exposure (Lee 2006.140–53). The bodies were probably interred successively, and bone elements from some bodies were displaced during the later acts of deposition (Evans and Hodder 2006.156).

Haddenham is illustrative of relatively common pattern: the construction of mortuary chambers on sites which already exhibited a linear arrangement of two or three posts fashioned from the split trunks of trees. The construction of the chamber at Haddenham was also preceded by the erection of a façade of timber posts, suggesting that access to the bodies of the dead was restricted and that the end of the mound formed a focus for gatherings. At Nutbane, Hampshire, two adults and a child were buried intact in a space delineated by split tree-trunk posts and banks and ditches (Morgan 1959). The bodies

must have been protected from disturbance by the surrounding structural features, as the bones show no signs of weathering or scavenging, yet they were not buried as all showed signs of disturbance. This probably occurred during a later restructuring of the site when the mortuary space was enlarged and a further adult body added before the burial area was covered with a linear cairn of chalk (*Morgan 1959. 33; Bunting et al. 1959.47*). Eventually, both the mortuary structures at Nutbane and Haddenham were provided with an elaborated wooden façade which was burnt down before a long barrow was built over the area where the bodies had been deposited. At Haddenham, most of the bones were already dry when this burning and collapse occurred, with the exception of the body found closest to the tomb entrance (*Lee 2006.152; Evans and Hodder 2006. 156*). These two sites exemplify a pivotal role for mortuary deposits in the historical development of Early Neolithic wooden monuments. It is notable that many of the sites with narrow, low wooden chambers, and some with similar troughs delineated by stone, were preceded by two or three split tree-trunks usually set less than 5m apart, set in a line where the chamber would be constructed. At Fussell's Lodge, Wiltshire, *Wysocki et al. (2007)* suggest the third post was an extension to the arrangement, and it is clear that the posthole at the centre of the arrangement was back-filled before bone group B was deposited. It has been suggested that at least some of these structures formed platforms for the exposure of the dead (*Scott 1992*). This is perhaps possible at Ballymacaldrack, but in other cases *Noble's (2006.78–92)* interpretation that the posts at such sites were free-standing split tree-trunk posts left to decay before the locales became used for mortuary practices is more convincing. Indeed, at Haddenham the stumps of these posts were enclosed by the chamber rather than a structural feature of the chamber. Wooden posts might have become co-opted as features of a linear wooden chamber at Street House (*Vyner 1984; Noble 2006.89*). In parts of Ireland, SW Scotland, and on the Isle of Man, the features of some stone-built court tombs resemble features of these wooden sites: some of the stone slabs used to form the side walls to the chambers have the appear-

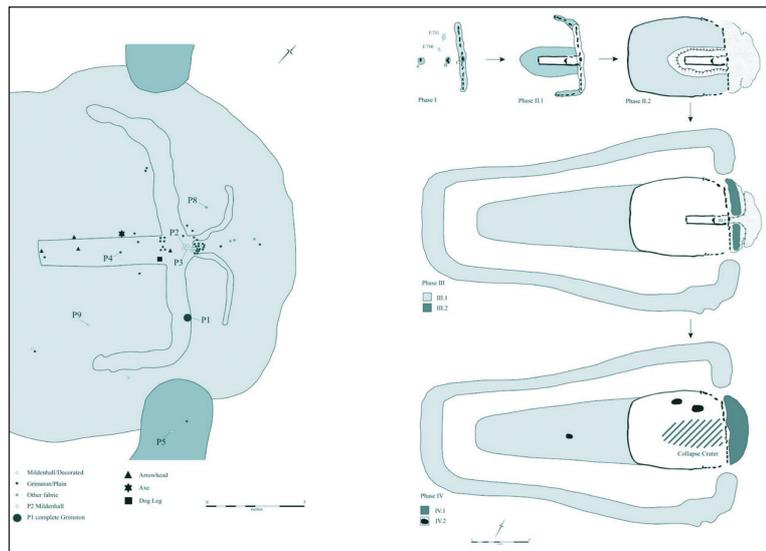


Fig. 1. Mortuary structure at Haddenham (Foulmire Fen): Plan of the chamber showing find locations, and the sequence of site development including wooden chamber and related features. Reproduced by kind permission of the McDonald Institute for Archaeological Research from *Evans and Hodder (2006.Fig. 3.60 and Fig. 3.30)*, drawn by Andrew Hall, Cambridge Archaeological Unit. Copyright reserved by the McDonald Institute.

ance of split logs, as at King Orry's Grave SE, and many exhibited a horse-shoe shaped stone façade similar to the wooden façades at sites like Haddenham and Street House. Some stone façade uprights resemble wooden posts (*e.g.* at Cairnholy I). This tends to suggest a transferral of the concept of burial in a wooden chamber to a stone one. However, split tree-trunk arrangements were also the scene of mortuary deposits combining intact bodies and disarticulated remains without the construction of a chamber (discussed below), and it is important to note their existence as a type of site where mortuary practice *later* occurred, sometimes as a single event. Thus collective deposition of human remains at these locales followed earlier activities on site.

Wooden chambers were therefore used for successive burial at already meaningful locales. They may also have been used in some single-event collective deposition. The burials at Wayland's Smithy I, Oxfordshire, probably sat within a wooden chamber set in a sarsen-paved area hemmed with large sarsen uprights near the front (Fig. 2). Here, the bodies of around twelve individuals were interred intact; in addition, at least two individuals were represented by excarnated and disarticulated bones (*Whittle et al. 2007.106–7*). Eleven were adult males, two adult female and one was a child. The recent Bayesian analysis of radiocarbon dates from the bones of these individuals suggests that all died

within a generation (15 years) of one another in the 3500s calBC. The bodies were stacked densely in the trough, and it seems possible that some formed a collective deposit during a single event even though some of the bodies may have been subjected to different degrees of exposure beforehand. Three arrowheads with missing tips were found among the bones, two clearly embedded in bodies, and as Whittle *et al.* (2007:107) suggest, at least some of the dead may have been recovered from the scene of a conflict.

There is insufficient space in this article to discuss the presence of animal remains at mortuary sites, or to comment in detail on artefacts, other than to note that while artefacts were commonly found in the chambers of Irish court tombs, objects have been less frequently recovered from chambers in mainland Britain. Most of the remains recovered from Irish court tombs were cremated, but Herity (1987) points out that as these are often accompanied by burnt artefacts where chambers without any surviving bone contain similar but unburnt artefacts (mainly shouldered bowls and decorated pottery, projectile heads, concave scrapers which were probably woodworking tools, plano-convex knives probably used for butchery, rounded scrapers probably used in hide-working, a small number of axes and beads), we may infer that unburnt bodies were deposited in these chambers, but the bone has since decayed. Herity indicates that the unburnt remains of some forty-four individuals have been recovered from six Irish court tombs with reasonable preservation, and while some of these remains were from later in the Neolithic, successive deposition seems plausible at these sites as a whole. Some Cotswold-Severn chambered tombs have yielded beads and bone pins as well as fragments of pots: such objects were probably dispersed as chambers were repeatedly accessed (Darvill 2004:165–71), but it also seems probable that not all chamber interments in mainland Britain were accompanied by such objects. In the preserved wooden chamber at Haddenham (Foulmire Fen) two arrowheads were found among the bones and, in this context where wood was preserved, neither was hafted. Two more were found in fills above the bodies as was an axe head. A yew-wood pin survived, and may indicate that at least one body was buried dressed, although it may equally be an ornament for hair or soft tissue. Potsherds from decorated bowls clustered around the entrance of the chamber, and most potsherds lay outside the entrance rather than in the chamber with the dead (see Evans and Hodder 2006:162,

Fig. 3.60) (Fig. 1). These vessels may have played a role in the funeral process or may indicate later offerings at the mouth of the chamber.

In some parts of Britain, caves may have been used in similar ways to tombs, and include evidence of successive or collective deposition of intact bodies. Stephany Leach (2008) has examined Early Neolithic human remains from five caves in the Yorkshire Dales, concluding that some were deposited as intact bodies (*e.g.* at least two children at Cave Ha 3, an adult female and neonate at Thaw Head Cave, and a 40–50 year old man from Jubilee Cave [Leach 2008:46–9]) while others were not. For instance, an adult male at Cave Ha 3 was probably brought to the site while still fleshed, but his left tibia was then split longitudinally while still fresh (Leach 2008:48). Leach suggests that the pathologies she identifies on several of the individuals whose bodies were left intact within the caves is particularly exceptional, although it should also be noted that a general undercurrent of hard labour and occasional malnutrition can be detected from pathologies in human remains from many Early Neolithic mortuary sites (*e.g.* Haddenham), as can signs of violence (Schulting and Wysocki 2005). She also makes the intriguing suggestion that the intact bodies buried in caves were isolated from other members of the community, and left to a very lengthy decay process: “*lack of fragmentation might imply an aspect of spiritual exclusion*” (Leach 2008:51). I will return to ideas of ‘spiritual exclusion’ among Neolithic mortuary deposits more generally below.

Caves were probably special places linking the world of the known surface landscape with an underworld;



Fig. 2. Mortuary structure at Wayland's Smithy I: Photograph of human remains in the chamber area. Reproduced by kind permission of the Prehistoric Society from Whittle (1991:Pl. 7a), Copyright reserved by the Prehistoric Society.

places carved from stone by running water and dripping with tufa which could accrete around bodies and bones left there; places where milky water dripping from rock could coalesce and in time become stone itself. Caves were probably not the only natural places where corpses were placed, but were probably one of only a few locales where such corpses might remain intact for any length of time. Most of the radiocarbon dates from the individuals in the Yorkshire caves pre-date *c.* 3500 calBC and deposition in caves certainly occurred in other parts of the British Isles during the Early Neolithic as in Devon (*Sheridan et al. 2008. 17–18*). Some of the bodies left in caves in Derbyshire may date from towards the end of the earlier Neolithic, although dating evidence is largely by association with artefacts (*Barnatt and Collis 1996.135; Barnatt and Edmonds 2002.117–8*). Caves were not usually modified in the same way as tombs or mortuary structures during the Early Neolithic.

Collective deposition is the practice that has left the most evidence, including successive deposition in chambered tombs. In many ways, this practice would leave more readily identified evidence than others (*e.g.* exposure), but as Beckett and Robb (2006) argue, the repeated use of chambers may have been even more common than these deposits suggest if chambers were occasionally cleaned out. ‘Empty’ chambers are a particular feature of tombs in south-west Scotland, for instance. In some cases, tombs were containers of the dead from one or two generations; in other cases, they were accessible places holding the slowly decaying remains of the ancestral dead (as with Orcadian stalled cairns – see below). Furthermore, deposits of bodies or bones around the outside of tombs are known in several cases, adding to the community of the dead located there. Bodily decay would have been gradual, and, at wooden sites, structures decayed slowly following construction. However, the chambers (and the condition of human remains and access to them) were frequently, but not always, further transformed through events such as acts of burning, paving, chamber enlargement, and later elaborations including closure, mound construction and the placement of new chambers next to or on top of the site of older ones. I would suggest that when bodies, or the remains of bodies, were brought together and deposited, they became inalienable from the sites and their transformation was often entangled with the transformation of the mortuary monuments.

Burials of intact bodies

Early Neolithic single burials were relatively rare and no cemeteries of more than three burials have yet been found. A type of burial in the southern chalklands from Sussex to Dorset stands out. Mercer and Healy (2008.759) identify the crouched burial of a child at the Stepleton enclosure, Hambledon Hill, and two single graves in the surrounding Dorset landscape (one near Wor Barrow) where the grave was marked with posts. The grave of a child buried in a pit at Whitehawk causewayed enclosure was marked with a similar post (*ibid.*). A burial pit in the main enclosure of Hambledon Hill was also marked with a post, but the pit had been recut and any human remains removed, suggesting that some bodies might have been exhumed following this primary burial, but clearly not all were. At both Windmill Hill and Hambledon Hill complex enclosures were built following single burials of adult males. The Windmill Hill burial was left exposed in an open grave which was later covered by the bank from the outermost ditch circuit. The Hambledon Hill Stepleton burial also pre-dated the first earthworks at the site, probably buried *c.* 3780–3630 calBC (*Healey 2004.21, 24*). In both of these cases it is possible that the deposition of a single body was foundational to later activity in which a wider range of bodies were manipulated through a far wider range of mortuary activities over several generations.

Intact bodies were also placed within the ditches of British Early to Middle Neolithic causewayed enclosures during the period *c.* 3650–3400 calBC. At the Stepleton spur of Hambledon Hill, in addition to the two single graves mentioned so far one more was found, while two single burials of children in the main enclosure ditch at Hambledon Hill were both covered with flint cairns (*McKinley 2008.515*). The earlier one was accompanied by three bone beads placed near the head, and a flint flake behind the back; in the later one, two carved chalk nodules were placed by the head (*Mercer and Healy 2008.102–3*). Each child suffered the same deformity: premature fusing of the cranial sutures (*McKinley 2008.511*). In one case, this probably caused significant disability. Although these children died over 170 years apart, they were buried in the same way in the same locale, strongly suggesting a continued conception of how such persons should be treated in death (*Harris 2006. 194–9*). The only two burials of complete bodies found in the ditches at Windmill Hill were also of young children, from the outer ditch

(Whittle *et al.* 1999.361–2). At Offham, the crouched inhumation of a male aged approximately 20–25 years old was buried in a pit cut into the chalk base of the outer ditch ‘tightly packed into the pit without any grave goods’ (Drewett 1977.209). At The Trundle (Curwen 1929) and Whitehawk (Curwen 1934), both in Sussex, two burials were accompanied by incised chalk blocks. At Whitehawk, a heavily pregnant young woman was buried with two perforated chalk pendants, bounded by substantial chalk blocks in the outer ditch. Death so close to an anticipated birth is particularly likely to fall into the category of a ‘bad death’. She was accompanied by two fossil echinoids; another burial in the next ditch segment included one of these fossils (Curwen 1934. 108–110). As a group these enclosure ditch deposits seem to point to a very specific kind of mortuary practice, one which was sometimes concerned with premature death. Beads may have been part of charms intended to protect vulnerable bodies (as observed among the Beng in the twentieth century where, among other things, these are designed to tempt ancestors reborn as children to stay among the world of the living [Gottlieb 2004.85–9]), while borders or cairns of flint or chalk and the placement in outer ditches suggest a need to contain these dead bodies.

There were other Early Neolithic burials, such as the recently-discovered single grave of an adult lying flexed on the left side and with potsherds from a carinated bowl placed around the head at Yabsley Street, London (Coles *et al.* 2008). The excavators note the foreshore location of this grave, and find comparators from Croyde, Devon, and Hartlepool: Yabsley Street provided a date from an oak plank of 4220–3970 calBC³ and Hartlepool of c. 3640–3350 calBC (Coles *et al.* 2008. 231). These burials are arguably in liminal landscapes. Some single burials may be another version of the single event deposit, which might bury one body or more. While some were single burials, as at Pangbourne, Berkshire, where an adult female was buried with an Early Neolithic bowl in a pit (Piggott 1929), others were collective burials or at least part of a sequence. A large pit at Nethercourt Farm, Kent, contained a crouched inhumation of a young adult covered with a scatter of broken pottery from an earlier Neolithic bowl, and disarticulated bones were found in an upper fill of the feature (Dunning 1966.8–11), while at Haddon Moor in Derbyshire plain potsherds and a leaf-shaped arrowhead were found with the dis-

articulated remains of six individuals (Bateman 1844 cited in Barnatt and Collis 1996.135). Burials in pits are also known from Yorkshire, such as the earliest inhumations at Duggleby Howe (Kinnes *et al.* 1983) currently under re-analysis by Alex Gibson and Alex Bayliss (*in press*; Gibson *pers. comm.*), and at least some of the Yorkshire pit deposits under barrows were clearly not of intact bodies (see Thornborough, below).

Natural places were occasionally used for singular deposits of bodies. Marion Dowd (2008) describes intact (though not successive) inhumations at a number of Irish caves, at least two of which dated to the Early Neolithic. Flint mines in the southern chalklands were not often used to dispose of the remains of the dead. There is one crouched inhumation of an adult male, discovered surrounded by chalk blocks in shaft VI at Cissbury (Barber *et al.* 1999. 63). A flint axe head was placed by the knees, and the body was accompanied by six flint tools “eight snail shells, a chalk disc, and a pebble marked by burning” (*ibid.*). Two other bodies at Cissbury, both adult females, may have been burials, or victims of mine collapse in one case and a fall into a mineshaft in the other.

Excarnation, defleshing and deposition of exposed or disarticulated remains

There are various forms of evidence for the deliberate disarticulation of bodies, including exposure to animals and the elements and active cutting away of flesh or limbs. Exposure was perhaps one of the most common fates for corpses, although it will have left very little evidence. Martin Smith (2006) has identified that the bones of at least four different bodies were gnawed by dogs or wolves for a period of weeks before they were collected and deposited in the megalithic chamber at Adlestrop. Bones from two individuals buried in the mortuary structure at Wayland’s Smithy I had also been ‘scavenged by canids’ (Whittle *et al.* 2007. 107), while bones from the chambers at Parc le Breos Cwm show signs of weathering and animal scavenging which indicate excarnation before deposition (Whittle and Wysocki 1998.155–7), and bones from Bole’s Barrow, Wiltshire, also show signs of scavenging (Schulting and Wysocki 2005.116–7). It is hard to be sure whether bodies were deliberately left for dogs or wolves as part of a funerary rite or whether, as Schulting and Wysocki (2005.127–8) suggest, these people died violently or away from relatives, who had to find

³ This date is likely to be older than the burial itself given that it comes from oak, but the burial is clearly from the earlier part of the Early Neolithic.

and collect the remains. The latter explanation fits well into the emerging picture that some proportion of those buried at monuments may have died difficult deaths, although it does not explain why some of the bones from Adlestrop, for instance, bore cut-marks, and the recovery and deposition of such remains in tombs has to be set against the probability that many more corpses must presumably have been completely exposed to the elements, perhaps as part of a common mortuary practice. A blanket interpretation of canid-gnawed bones should perhaps be avoided, although the scenario of remains gathered from the scene of conflict may explain a number of deposits extremely well.

Some of the remains placed in the small stone chambers of Irish Linkardstown tombs in central southern Ireland during the period *c.* 3600–3300 calBC were disarticulated, possibly prior to deposition. At Ashleypark, the bones of an older adult and child lay in a disarticulated pile with a pot in a corner of the chamber, while a second child was placed at the other end of the chamber (Cooney 2000.97–9). Beckett and Robb's (2006) analysis of the bones recovered from the central chamber at Poulawack Linkardstown cairn suggest that the remains of five skeletons or bodies in advanced states of decay were deposited there. While both human and animal remains found in ditches at Hambledon Hill showed signs of weathering and occasionally gnawing, the extent of these processes was more marked on the human remains (McKinley 2008. 496), suggesting that they were exposed to the elements for more extended periods, and the same pattern was noted for the few disarticulated human bones from Etton (Pryor 1998.363). At Windmill Hill, the cranium of an infant found in the middle ditch circuit was attached to its mandible when deposited, but some of the twelve crania found in the ditches at Hambledon Hill were lacking mandibles, suggesting they were not deposited soon after death. The skull elements were often in a weathered condition. There is no evidence for decapitation marks, the only cut marks coming from localised defleshing on three crania (McKinley 2008. 513–4).

Cut-marks denoting deliberate human modification of the bodies of the dead have been noted in other cases. The legs were removed from the pelvis of an adult whose bones, yielding the cut marks that indicate this, were found at Coldrum chambered tomb (identification by Mick Wysocki, cited in Smith and Brickley 2009.49). Here, Schulting and Wysocki (2005. 129) report that a skull bears cut-marks sug-

gesting that an ear was removed. Not all cut marks seem to have served a functional purpose in defleshing or disarticulating bodies; some simply seem to have deliberately marked the body and/or bone. This may be suggested by the cutmarks on a rib and long bones at Adlestrop (Smith and Brickley 2009. 49) or the humerus from Haddenham discussed above, or an adult pelvic bone from Hambledon Hill marked with a grid of cut marks (McKinley 2008. 502–3).

Schulting and Wysocki (2005.128) note that a number of Early Neolithic skulls have not only mandibles, but also cervical vertebrae still attached, and cut-marks on these are reported for a head from Staines causewayed enclosure, Surrey. Cut-marks on clavicles suggest that a head was removed from a body at both Swell and West Tump (Smith and Brickley 2004; 2009.49). Heads, and skulls, were probably specially valued parts of the body and curated for various reasons including mortuary transformation-cum-ancestral veneration, and possibly in order to appropriate the power of others as a result of violent head-taking as Schulting and Wysocki (2005.128–9) have suggested. Some heads or skulls might have moved between such categories – for instance, we could imagine a raid in which a head was taken, and later reparations in which it was returned. Funerary activity for that deceased person might occur only after a period when the skull was moved through other contexts.

It is also interesting that seven of the twelve skulls from Hambledon Hill were from females and five from sub-adults (McKinley 2008.513). If any member of a clan, *etc.*, may be seen as a manifestation of the whole, then perhaps even the skulls of children may stand for 'the ancestors'. Indeed, in some communities ancestors may be reborn. Among the Beng, for instance, children who die young are said to have been tempted back by the ancestors (Gottlieb 2004.85–9). Equally, anyone might have become victims of feuding raids if responsibility for perceived misdeeds lay at the door of the clan, tribe or lineage rather than specific individual members. A generic belief about the value of the head within a conception of the vital essences conveyed by other parts of the body, and of a metonymy in which one part of the body was potentially as good as the whole and one member of a community as good as their clan, may have underlain a range of different practices including feuding, head-hunting, beliefs about appropriate fates for the dead immediately following death, and ancestral veneration.

The complex at Hambledon Hill (which consists of two causewayed enclosures and two long barrows, as well as pits and other features), has yielded the remains of some thirty-five children and some forty adults (Healey 2004.23; McKinley 2008.490), deposited between c. 3700 and 3300 calBC and indicating a range of mortuary practices. The remains of twenty-three individuals bore cut marks from various defleshing practices. There is evidence of some structured deposition of fully defleshed bones and the deposition of defleshed bones in substantial groups comprising much of the skeleton of the dead (Mercer and Healy 2008. 759), as well as deposits of, for instance, isolated crania. Two skeletons of young males in the ditch of the adjacent Stepleton enclosure at Hambledon Hill and possibly killed in conflict were originally thought to have been shot in the back and given no funerary treatment; however, McKinley (2008. 513) argues that one was given a covering of chalk rubble, while the other exhibits some cut marks to the right tibia, but no evidence for further defleshing or gnawing. Although they may have been killed some funerary attention was still seemingly given to their corpses. Disarticulated bones were also found in ditch fills at the causewayed enclosure at Offham, Sussex, including a mandible placed at the bottom of a terminal to the outer ditch, and other bones which ‘probably arrived in the ditches in a more casual way with the other rubbish’ (Drewett 1977.209); while at Whitehawk, Sussex, human bone was also deposited along with flints, potsherds and animal bone, suggesting a connection with either occupation debris or the remains of meals or feasts (Curwen 1934.111–2).

Exposure did not just take place at enclosures and deposition following exposure did not only occur in tombs. Human remains might have been exposed to facilitate processes of decay in caves. Marion Dowd (2008.309) notes that at Elderbush Cave, (where some of the bone is firmly dated to the earlier Neolithic), Gwendoline Cave and Alice Cave (undated), all in County Clare, small bones remain, but larger bones were collected and removed, and Dowd suggests that these caves were used as locales for controlled excarnation and bone removal – further noting that no scavenging on bones has been identified for Neolithic remains from any of the Irish caves (*ibid.*).

While some disarticulated human remains accumulated at a site over time, others were deposited collectively in single events. Some of the collective deposits placed between split tree-trunk posts where

no chamber was built were demonstrably single events which brought together the remains of some people who had died more recently than others, or whose remains had at least been exposed to different treatments after death resulting in different states of decay. Mortuary deposits at the two long barrows at Giants’ Hills, Skendleby, Lincolnshire, exemplify this phenomenon (Phillips 1936; Evans and Simpson 1991). At Giants’ Hills 1 (Phillips 1936) a platform of chalk slabs was laid out approximately 20m to the rear of a curved façade of split tree trunk posts. A long barrow was built around this platform, but leaving it uncovered. The remains of eight MNI were placed on this surface and the void backfilled with chalk rubble. Four of the dead were intact bodies laid out in a crouched position suggestive of a primary mortuary event, but the other four were fragmentary (Phillips 1936.82–4). Many of the bones of the fragmented bodies were weathered, and one of the skulls (cranium and mandible were both present) contained the egg of a snail which lays its eggs on the land-surface and thus probably entered the skull before it was buried (*ibid.* 83). A large sherd from a shouldered bowl and a cattle atlas bone were also found with the bones. Here, then, some remains underwent a tertiary mortuary practice alongside others receiving primary burial – and here it is clear that the distinction between these categories should not be drawn too sharply. What must be emphasised is that this was a collective deposit laid down in a single event, drawing together bodies which were in an advanced state of decay with those that were still intact, and bringing them all together during the completion of the construction of this long barrow. As in this case, the sites chosen for such events often displayed histories of previous use, such as occupation debris (spreads of which were woven into the layers of mound construction at Giants’ Hills 1) or split tree-trunk post arrangements.

Giants Hills 2 further supports Noble’s (2006) interpretation that human remains were sometimes laid out between the decaying or decayed remains of a split tree-trunk arrangement. A discrete mortuary deposit between two split wooden posts included two adult crania and fragments of thirteen long bones, comprising three MNI (Harman and Evans 1991.16) (Fig. 3). One humerus exhibited cut marks, and some bones were gnawed by scavengers (ranging from snails through rodents to large carnivores). All were weathered. Sometime after the bodies were initially exposed, the bones were collected in a ‘perishable container’ and this was placed between the

two posts and covered with a layer of chalk rubble (*Evans and Simpson 1991.14*). The barrow mound was then erected, again indicating a connection between bringing together bodily remains, deposition, and monument construction. The collected essences of several absent people were made present at the monument through the act of deposition, and the nature of the site was transformed.

Disarticulated remains were also buried, again sometimes during acts that founded barrows. At Thornborough, Yorkshire, one pit under the centre of a round barrow was cut by another: the earlier pit contained a cranial fragment and finger bones, the later one the skull (cranium and mandible) of an older adult male along with fragments of bone, some of which had been disarticulated for some time before deposition, and at least one piece of which was disturbed from the earlier pit. This later feature seems to have been cut through a mound covering the earlier pit, which was not large enough to contain an intact burial (*Harding et al. forthcoming*). Here, human remains were deposited when a barrow was constructed and the deposit was not only remembered, but sought out in a subsequent act when human remains were deposited, notably a skull.

While it is possible that victims of violence were left for scavengers and their remains only found and collected later, we can also suggest that excarnation was deployed in funerary sequences which only in some cases ended with the selection of bones to place at chambered tombs or other sites, and only in some cases left human remains in ditches or pits. Remains may also have been left where they lay on the land-surface, may have been placed in trees, or collected from their initial place of exposure (or even burial) only to later have been cast into rivers or treated in other ways that did not leave deposits that could be recovered by archaeologists. Emotive rites of passage might have accompanied any such activities. It is difficult to assess how frequent bodily exposure was, but the tens of thousands of earlier Neolithic people whose remains have not survived to the present day were probably exposed to the elements in some way.

Cremation and burnt bones

Some bodies were transformed in a dramatic funerary rite involving the immolation of the body. Cremated human bone was deposited behind the façade prior to the construction of the wooden mortuary chamber at Haddenham, for example (*Evans and Hodder 2006.101*). Smith and Brickley (2006.351–

2) report that cremated bones have been recovered from at least twenty chambered tombs in southern England and Wales. Cremated bone has been recovered from wooden chambers or from layers underneath stone structures, for instance at Pinacree (*Coles and Simpson 1965*) or Lochhill (*Masters 1973*), both sites with split tree-trunk arrangements. Cremated or otherwise burnt bone has also been recovered from many Irish court tombs and passage graves, as well as several Scottish tombs, and Manx tombs such as Mull Hill (*Fowler 2001.153–5*) and Ballaharra, where cremated bone (including some children's bones) mixed with fragments of shouldered bowls overlay a disturbed set of unburnt remains (*Fowler 2004. 92*). Cremated remains have been found in at least twenty-six Irish court tombs (*Herity 1987.111*), which probably date to c. 3800–3500 calBC. At Tully, Co. Fermanagh, an analysis of the cremated remains located scraps of bone from a second individual among a greater quantity of bone from one individual suggesting the re-use of a pyre site for successive cremations (*ibid. 112*).

There are numerous accounts of human bone which specify that the bone is burnt, scorched or charred, and not all of these necessarily resulted from cremation. At Tulloch of Assery A, Caithness, some bones were scorched, but none were fully burnt (*Davidson and Henshall 1991.63*), and Noble (2006. 136) reports that there is evidence that flesh was seared from bones within chambers in Caithness, Sutherland and the Hebrides. McKinley (2008.497) states that none of the bone from Humbledon Hill was cremated, but some was charred when already dried and fleshless. At Ballymacaldrack, Co. Antrim,



Fig. 3. Mortuary deposit at Giants' Hills 2, Skendleby. The patches of chalk rubble lie within the top of the postholes from the two split tree-trunk posts. Reproduced by kind permission of the Society of Antiquaries of London from Evans and Simpson (1991.Pl. VIIIb), Copyright reserved by the Society of Antiquaries of London.

a split tree-trunk post arrangement was burnt some time c. 3800–3600 calBC and replaced by a dry-stone walled chamber (Cooney 2000.100–103). The five adults whose cremated bones were found in the postholes and underneath the chamber may have originally been laid out as corpses between the posts. The wooden mortuary structure at Street House, North Yorkshire (which incorporated a split tree-trunk arrangement in its architecture), was also burnt down, cremating the remains of the bodies of adults and children within, before a low cairn was built over the mortuary area (Vyner 1984). While the bone report concludes that some bones were probably fleshed when the burning occurred the remains were extremely fragmented, although the body of a child was clearly intact when the conflagration occurred. Some bodies were cremated collectively *in situ* in stacks of fuel covered by earthen mounds at sites that have been termed ‘crematoria’ (Kinnes 1992.84–5). At Willerby Wold, an earthen trough was formed around two posts, and already disarticulated remains were covered with wood and chalk and burnt within this ‘crematorium’ (Manby 1963). A similar structure may also have stood between the two split tree-trunk posts at Copt Hill, Tyne and Wear, where disarticulated remains were cremated (Young 1985.8–10), and cremated bodies were found among quartz pebbles, charcoal, peat ash, and burnt and broken stone in the centre of the non-megalithic mound at Ballafayle, Isle of Man (Kermode 1927). Façades and wooden structures that contained human remains, were sometimes burnt at a later point in their history, charring the bones as observed at Haddenham (Lee 2006). In fact, the number of instances where the dead were cremated singly and then deposited in the earth or at a mortuary monument in mainland Britain would seem to be low in comparison with the number of cases where collections of remains were burnt. Bodies might be burnt at various stages following their deposition in wood or stone chambers or in linear mortuary arrangements at sites that would later become barrows, and the act of burning seems to have formed a pivotal part in this process. These acts of collective transformation deserve further interpretation alongside acts of collective deposition of remains at unchambered long barrows, and I will return to this below.

Further forms of manipulation of human remains in secondary and tertiary mortuary practices

I have already outlined some examples where bodily remains were collected from the context of their

primary treatment, combined with other bodily remains, and deposited elsewhere. The bones of bodies that were left in stone chambers were particularly susceptible to later activity, potentially a long time after death, as the architecture afforded the possibility of enduring access. As such, these tombs projected the dead into the future. Sometimes bones were removed from tombs; sometimes they were reorganised within tombs; and sometimes bones were re-articulated with one another.

In the court tomb at Audleystown, County Down, the long bones from two adult males were selected for deposition under a shale slab and were laid out parallel to one another along with a flint flake and quartz crystal (Herity 1987.118). At West Tump, one of the femurs from a still partly-articulated skeleton was removed and replaced with the ball joint at the wrong end (Smith and Brickley 2009.64). Skulls were placed along the walls at a number of sites, including Lanhill, where mandibles were re-articulated with crania, and in one case, the mandible clearly did not belong to the cranium with which it was articulated (Keiller and Piggott 1938. 125, 127) (Fig. 4). Here, bodies were condensed into the small chamber as new ones were added, but the re-articulation, and the way that long bones were stacked parallel to another suggests sorting at some point in this process. At Windmill Hill, an infant cranium was placed within a cattle frontlet, and the femur of an infant inserted into the humerus of an ox, indicating a degree of deliberate manipulation of human bones here too (Whittle *et al.* 1999.362).

Discrete piles of bones selected from different individuals who were probably initially interred in chambers intact have been found at Pipton (seven bone groups, 11 MNI), Penywyrlod (seven bone groups, five MNI) and Ty Isaf in the Black Mountains in Wales (Wysocki and Whittle 2000.596–9). Cranial fragments were placed in the same group at Penywyrlod which did not originate from the same cranium, while bone group C at Pipton consists mainly of bone from two adults, but mandibular fragments originated from four different skeletons (*ibid.* 598). Furthermore, in bone group B, one skull was placed on a pile of long bones which rested on top of a further skull on top of long bones, suggesting a sequential dimension to this practice. Thomas (1999. 151) sees these examples of bodily re-assembly as evidence that ‘specific dead people were now of importance’. The bodies of the dead may have formed a notably collective body. At the Knowe of Yarso, Rousay, (Richards 1988.Fig. 4.8), crania were clus-

tered at the rear chamber of the site and post-cranial bones along the 'main body' of the tomb. At Torlin and at Clachaig, both on Arran skulls were pressed into the corners of each chamber, and long bones lined along the chamber walls (Jones 1999: 346–7). In such examples, the composite body of a community of the ancestral dead was laid out within a stone chamber presenting an homology between tomb, body and community, as Jones (*ibid.*) suggests for Arran. In these and other cases, the bodily remains of the ancestors were located within the body of a monument which was itself an assembly of materials from the wider cosmos, and it is possible to infer a broader logic in which tombs were a manifestation of the community as a single, yet composite, body (Fowler 2004b; 2008b).

Stalled cairns in Orkney provided benches along the walls of the tomb where bodies could be placed while they decomposed. Successive deposits probably built up communities of the dead fairly rapidly. Following Colin Richards (1988), Stuart Reilly (2003) argues that some of the bones from bodies interred in Orcadian stalled cairns on Rousay were removed from one tomb and taken to another, postulating that the Rousay stalled cairns form a kind of extended cemetery. He suggests that bodies were interred intact in the tombs nearest sea level, then skulls and other bones from these bodies were later taken to tombs on a terrace uphill from the low-lying sites; and finally, crania were selected from these to be stored in tombs highest on the island (*ibid.* 142). Indeed, no mandibles have been found in the high-lying tomb at Knowe of Yarso at all (Richards 1988: 49). Reilly (2003:142) argues “these tombs form part of a large cemetery and a long process in which the body (and the person) is seemingly distilled into the skull.” We might equally suggest that this process distributed the person throughout the landscape, perhaps locating specific aspects (*e.g.* those associated with the head or skull) higher up in the landscape than others (*e.g.* the flesh, or the hands or feet). Bones that were inalienable from one place, one community, were then carried elsewhere to become inalienable from yet another community that drew on the extended bodily histories of a select membership. Stalled cairns like these, then, were designed with the expectation of successive

deposition, and this also provided the opportunity for the later manipulation of bones. The mortuary practices that unfolded here did so very differently from those at unchambered barrows in England, for instance.

At Fussell’s Lodge, Wiltshire, either bodies were left to decay in a wooden structure *c.* 3630–3620 calBC along with some bones brought in from an older site before remains from four bodies were re-assembled to resemble two skeletons (Wysocki *et al.* 2007:69, 82), or remains from individuals who had died at different times were deposited at the site in one event following decay of the split tree-trunk arrangement (Noble 2006: 75–8). Whichever interpretation is correct, Wysocki *et al.* (2007:69) are clear that the state of the remains indicate “a minimum period of between five to ten years, and very possibly at least two or three times that, may have passed between the deaths of the individuals represented at Fussell’s Lodge and the final arrangement of their mortal remains”. Thus, while Fussell’s Lodge might have been the scene of successive primary deposition or single-event deposition of remains from those who died at different times, a collective deposit was ended by the assembly of the collective ‘skeletons’. The low cairn of flint covering the remains seems to have been draped with an ox hide, leaving a low mound composed of bone, flint and hide. After some thirty years, a long barrow was erected to cover this mound, probably preceded by burning at the locale (Wysocki *et al.* 2007). In this case, then, the remains of the dead were rearticulated at a key juncture in the development of the

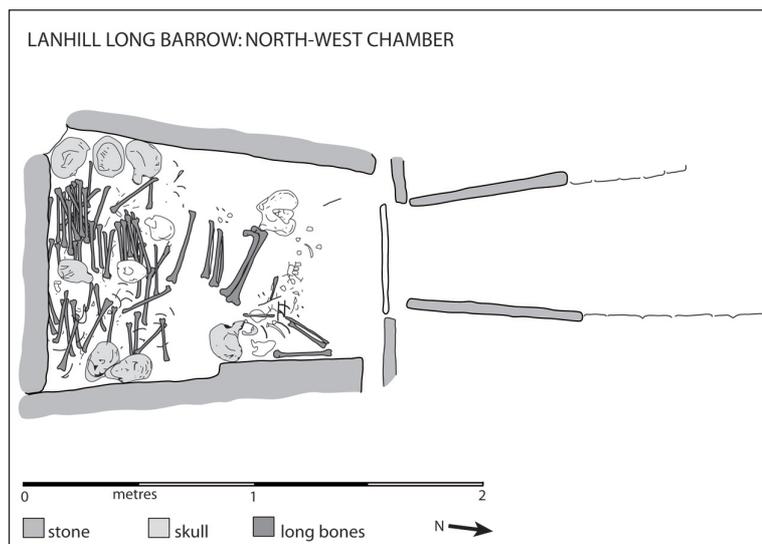


Fig. 4. Human remains within the north-west chamber at Lanhill. Redrawn by Sheila Severn Newton (after Keiller and Piggott 1938, Fig. 2).

site, and while these were not left available to later generations, the sequence exhibits practical interaction with the bodily remains of those who had died some years before at one or several points in the site's history.

In some cases, the architecture of the tombs enshrined the idea that they would provide only limited access to relic bones. 'Port-holes' enclosed chambers at Rodmarten, Avening, Luckington (Wiltshire) and Bryn yr Hen Bobl (Anglesey), among others (*Clifford and Daniel 1940; Fowler 2004b.98–100*). A very small portal lay between the second and third cells producing a separate rear chamber at King Orry's Grave South-west on the Isle of Man. Two other Manx tombs – King Orry's Grave North-east and Cashtal yn Ard – have portals between arched stones that provide access only to the first chamber of a series, while the rest were very difficult to access over high sill slabs. Human bones or even bodies were also worked into the structure of some chambered tombs, including when they were elaborated later in their history. For instance, a skull was found behind the false portal at Belas Knapp (*Smith and Brickley 2009. 71*). Smith and Brickley (*ibid.*) summarise a number of other instances where human bone was incorporated into acts of construction including bones on a land-surface prior to the construction of Gwernvale long cairn, mixed in with cairn material during construction at Rodmarten, and placed on top of an early phase of a monument before it was extended and elaborated at both Sale's Lot and Notgrove. At Haddenham, two crouched inhumations (one child, one adult) were buried into the primary mound, and while it is uncertain when this occurred (they remain undated), the excavation report offers the possibility that they were buried preceding the enlargement of the mound. (*Lee 2006. 147; Evans and Hodder 2006.157*). Human bodies – and particularly human bones, which I suggest were important essences and objects that were the congealed evidence of past relationships – were again articulated in constructing new relationships and changing the nature of places.

Disarticulated remains were occasionally deposited outside of mortuary sites, providing evidence for secondary and tertiary mortuary activity. For example, the cranium of an adult male was deposited in a ditch at the end of an oval barrow at North Marden, Sussex (*Drewett 1986.41*). One of the mineshafts at Grimes Graves pit 1 contained an isolated human skull at a layer about half way up the shaft (*Barber et al. 1999.62*). In Orkney, where bone circulation

seems to have been fairly prominent, Richards (*1988.49–50*) points out a human skull fragment from occupation debris at Knap of Howar, and human skulls and two polished stone axes found in a mound at the Knoll of Skulzie. Thomas (*1999.68*) provides a brief summary of human remains from pits in southern Britain from throughout the whole of the Neolithic period, citing four examples of pits associated with habitation containing fragmentary bones, along with three examples of pits that may have functioned as primary graves, but from which most of the remains were later removed. As a whole, Thomas interprets the deposition of fragmentary (and intact) human remains in ditches and pits as part of a meaningful interaction with substances that conveyed particular values that were articulated contextually (*Thomas 1998.81 inter alia*): human remains were deployed alongside a host of other materials (chalk, flint, animal bones, ash, etc) in ritual/cultural practices (*Thomas 1999.75–7 inter alia*). While in agreement with Thomas' interpretation of valued substances, I think further work needs to be published evaluating how frequently (or rarely) human remains were deposited at occupation sites or in pits with other materials. Nonetheless, it is clear that skulls and other human remains did have currency long after the death of the person from which they originated, although diversity in how such remains were valued and manipulated still merits further discussion.

Discussion: Interpreting pattern and diversity in Early Neolithic mortuary practices

It is important to consider the mortuary practices outlined above both in terms of an unfolding history of changing practices – as excellent dating and re-analysis programmes now enable us to do – and alongside the broader context of mobility patterns, subsistence practices, biographies of artefacts and architecture, and dwelling alongside animals. Such concerns are vital in considering how human bodies were treated and conceptualised in their material world – for instance, how human bodies were related to the bodies of animals (*e.g. Ray and Thomas 2003*) or how mortuary practices related to mobility and subsistence patterns, exchange, and experiences of material phenomena as part of an overall experience of time and place (*e.g. Cummings et al. 2002; Edmonds 1999; Pollard 2001; Fowler 2003; Fowler and Cummings 2003; Harris 2006; Bradley 2007*). While the interpretations presented below are narrower in scope, focussing primarily on mortuary practices and monuments, they offer further

inferences about earlier Neolithic beliefs about bodies, persons, and relationships between the living and the dead based on the pattern and diversity in mortuary practices revealed by this synthesis.

Regional patterns

Certain aspects of Early Neolithic mortuary practices were widespread throughout Britain. Bodies were usually laid out in a crouched position, whether deposition was single, successive or collective (and perhaps occasionally bodies in chambers were set in a sitting position [*e.g.* an adult at Ascott-under-Wychwood who was killed by an arrow; *Whittle et al. 2006.357*]). This is seen from Cissbury in the south to Midhowe in the north: the way the dead were laid out according to the same grammar might imply a shared cosmology at some level. Single burials were rare outside of the south of England, where they often appear to be contemporary with causewayed enclosures – which are also seldom found outside the south of England. The occasional pendants and beads found in the unusual single burials and some chambered tombs in the south of Britain, along with the bone pins in Ireland and the wooden pin from Haddenham, hint at a broader decorated, adorned body. Throughout Britain, if not Ireland at present, there is evidence for primary exposure or defleshing of bodies. Mortuary deposits laid down on paving or the ground and covered rapidly by low cairns and then earthen long and oval barrows occurred in eastern and southern England. In eastern England in particular, but elsewhere too, these collected remains were sometimes burnt. Trough-like chambers of wood or stone built between or replacing split tree-trunk post arrangements were more widespread, found across southern and eastern Britain and also in southwest Scotland and northeast Ireland. Some of these were set alight before a mound or cairn was built. Many of the mortuary practices at split tree-trunk post arrangements were contemporary with radical transformation of the site, often by conflagration in northern England, southern Scotland and eastern Ireland. In Scotland, this coincides with the burning of houses *c.* 3800–3600 calBC (which perhaps occurred in parts of Ireland – *Smyth 2006*) and the burning of post-defined cursus monuments *c.* 3700–3500 calBC (*Thomas 2006*), suggesting that dramatically transforming and purifying wooden structures was an experience that connected different contexts. Court tombs in Ireland seem to have been used to deposit the dead singly and successively, sometimes following cremation, though detailed radiocarbon sequences have yet to be established for most of these sites. As a whole, chambered cairns,

mainly found in western Britain, Ireland and northern Britain, display a wide range of mortuary practices and increased opportunity for later manipulation of the remains of the long dead. Such manipulation, although widespread, was more common in some areas than others and took locally distinctive forms. I will not attempt to draw out any further chronological detail here, as so much rests on ongoing research programmes. Instead, I now want to consider what further inferences about Neolithic bodies and Neolithic personhood can be drawn from these patterns.

Aggregation and dispersal: different rates, kinds, means and experiences of transformation

Different local or regional practices produced different experiences. The bodies of the dead were transformed at different rates, as were the places where their remains were lodged or interred. The dead were exposed to different means of transformation and different degrees of aggregation or dispersal. Bodies might be left to decay, consumed by wild creatures and the elements, hidden in caves, cremated, assembled into a group and buried under a low cairn, or buried in a pit. Where bodies were placed with those of others who had died not long before them, the proximity of the bodies in the same space suggests these people were being defined as sharing close relationships, forming a community. We can interpret the significances of particular local combinations of these practices alongside patterns in daily practice, routine activities and other material conditions of existence.

In Ireland, as Richard Bradley (*2007*) notes, houses and bodies were often burnt following death, and domestic goods were placed in tombs along with the dead. The dead were aggregated near to the sedentary community of the living, and a strong sense of community ancestry may have emerged, even though the remains of the dead may have entered the chambers in the course of individual funerals. Bradley contrasts Ireland with southern Britain, where, he argues, bodies were not usually deposited with objects, where houses were more ephemeral, and the living probably moved around the landscape more frequently. In each region, the fate of the human body was parallel to the fate of the community: in Ireland, the dead aggregated near the settlements of the living (*Bradley 2007*); in southern England, the communities of the living and the dead were subject to moments of aggregation, conviviality and wholeness (*e.g.* through gatherings at

enclosures), but also destined for dissolution and dispersal in an ongoing cycle of social renewal (Bradley 2007; Fowler 2003). We should beware of drawing distinctions between regions that are too neat, but there is much to be said for characterising the general phenomena we can detect in this way. It is notable that many of those buried in graves were not accompanied by the objects of daily life and that relatively few artefacts have been recovered from many tombs. Where personal objects and the trappings of daily life did not accompany the dead (or were later retrieved) we have to ask where those ended up and what roles they played in funerary rites and/or in extending personhood and commemorating the dead within wider society. Indeed, it has been noted that while mortuary ceremonies among small-scale communities may acknowledge the loss of the group, intimate memories of the specific dead person are remembered in routine life by the survivors as they encounter the tools used by the deceased and inhabit the places where they lived together (e.g. Battaglia 1990. 197–199 *inter alia*). Thus, aspects of dead persons may have remained distributed in the world of the living, invested in objects and places that evoked memories among the living. Furthermore, if the dead in some regions were knowingly left for wolves and other scavengers, it might have been believed that certain spiritual aspects of the person were either to be consumed in this process, or released to inhabit the wilder parts of the landscape. Bodies were at times deposited collectively in singular acts particularly in northern England and southern Scotland: even though they may have each passed through individual funerals beforehand, their final transformation produced an aggregation of the dead and this was often commemorated architecturally. We could even suggest that some people did not receive individual funerals, but collective ones. However we interpret the funerary process, these collective deposits were seldom added to later, suggesting a finality to the mortuary sequence. This finality was not present at many chambered tombs, but the remodelling of tombs did eventually close some chambers and some remains from later access.

There were arguably a range of key metaphors and experiences that applied to the transformation of the dead, some of which were more prevalent in some regions than others. The kinds of experiences generated varied, differently articulating dramatic transformation through burning with acts that buried or hid bodies from view and/or recovered bones from sites of decay, or juxtaposing the permanence

of stone and bone with the transience of flesh and fluidity of water (Fowler and Cummings 2003), or setting bodily transformation in liminal landscape contexts (Cummings *et al.* 2002). The differing ways that people treated the bodies of the dead, the different rates and means of transformation that were employed, reflected on the impermanence and transmutability of the living and dying body in differing ways, yet resulted in monuments invested with the remains of the dead across large areas.

Difficult lives and difficult deaths?

The impact of specific life histories or sudden deaths may have set some people on a course of mortuary transformation very different from the norm. Premature or violent death has been noted in a number of cases above. Some of those buried at causewayed enclosures and unchambered barrows were hidden from view, the dead being weighted down under cairns of flint or chalk or stone. As is often noted, only some acts of violence leave traces on the skeleton, but it is also worth bearing in mind that ethnographies record that in some communities, death does not occur ‘naturally’, but is the result of an assault through sorcery, the action of the dead or spirits, *etc.* Some deaths are more likely to be thought the result of witchcraft than others, and some people might be more likely to be accused of witchcraft than others (e.g. those who marry in to a community). Moreover, certain members of a community may be seen as especially potent, their remains needing special containment. This may apply to witches and other anti-social persons, but it might also apply to shamans or, in a hierarchy, to the bodies of those from high-ranking lineages. In some cases, it might be the bodies of the particularly vulnerable who require special treatment, both during life through special activities (including body ornamentation or modification) and after death. It may have been necessary to contain the spirits of those who had died badly or who had not been given the appropriate funerary rites at the right time. It may have been inauspicious to allow the remains of certain people to disperse back into the cosmos in the normal way. For the archaeologist, it may not be possible to clearly identify good and bad deaths for Early Neolithic persons, or find a single umbrella to identify why all the members of a certain chamber or ditch were buried there, since certain places might be appropriate for burying those whose lives and deaths were seen as ‘difficult’, but for differing reasons. Nonetheless, in a world where most people’s bodies were cast to the winds, water or wild animals, the containment of the dead in closed tombs, under

barrows or in delineated burials within ditched enclosures suggests that they were perceived as distinctive in some way and that particular anxieties surrounded their bodies and/or their deaths.

Death and the regeneration of life

Deaths, even bad deaths, may also have begun new relationships, new projects. For instance, the men buried prior to construction at Windmill Hill and Hambledon Hill may have been directly related to the development of places of gathering there. Above, I have also noted instances where collections of bodies or body parts were laid down before or while cairns and barrows were built, as at Giants' Hills 1 and 2. Many such deposits were not later accessible, and some of these were not primary, but secondary or tertiary mortuary practices for bodies already in states of decay and fragmentation. Furthermore, they were invested in places with a local history, but potentially widespread meaning. For instance, while later activities at locales with split tree-trunk arrangements illustrate some diversity in whether a stone or wood chamber was constructed or whether bodies were laid out on a paved area and covered with stones and/or earth, and in whether the bodies were left to decay or burnt, the initial referent of the split, decaying tree was widespread through much of Britain and into Ireland. As Noble (2006. 100–1) suggests, the deposition of human bodies often took place at a locale where the split trunk of a tree had decayed – indeed, the bodies were brought together within a space originally delineated by the exploded body of a substantial tree. Only once the tree had been transformed could decaying or decayed human bodies be incorporated at the site. As Noble argues, the overall pattern of events indicates that the ancient, even ancestral, tree was replaced by flimsier wooden structures in which bodies were placed. These structures either decayed or were burnt before the site was redeveloped into an enduring form, usually a stone chamber or cairn or an earthen barrow. Thus, the transformation of human bodies at such sites needs to be put in the context of a longer sequence of practices, and we could suggest that meaningful sites were transformed when human bodies were introduced (*cf. Fowler 2003.56*). While the entire sequence need not have been preconceived from the outset, and regional variations are evident, the material conditions presented by the earlier activities were responded to in broadly similar ways when bodies were introduced and sites were reconfigured. An event of growth followed a process of decay or destruction, and human bodies were inserted into that process

at the point where decay was transmuted into growth (*cf. Fowler 2003*). These deposits might have been believed to be cosmogenic; part of an act of social and cosmic renewal at sites that were already socially and religiously meaningful.

Depositing such remains, sometimes burning the site, and covering the remains with a cairn or barrow might have 'covered' and 'converted' especially traumatic deaths, in some cases, but communal production of the mass of the mound might more generally have celebrated growth following death, particularly collective deaths. This has to be set alongside the increased construction of mounds in many contexts – not just following the deposition of the human dead – across mainland Britain after *c.* 3600 calBC (*Thomas 2006*). Some acts of monument construction may actually have required the investment of human flesh and/or bone while others did not, as among some of the earthen long barrows near Avebury or in Sussex where no human remains were present. Few earthen mounds formed chambered tombs for people to access the ancestral remains of the dead, although they did produce monuments where future generations could gather and, perhaps, venerate their ancestors who had built the monument. We might consider some mortuary deposits at earthen barrows as 'foundation deposits', then, perhaps establishing a new lineage or clan or a new status for existing ones – votive and cosmogenic practices necessary before construction could take place, rather than simply funerals.

Healing the wounds?

Some single-event collective deposits may have resulted from a process whereby those who died in a certain period were buried on a specific event in a ritual calendar (*Smith and Brickley 2009.68–9*), although we might expect to find more sites or more bodies at each site if this were so. Some may have resulted from events in which a broad community of more than one lineage or clan came together to bury those who died in, say, a feud, ending that episode in their mutual history and starting another as they co-operated in building a mound or enclosure. In this context, it is worth remembering the scale of these monuments, and also worth bearing in mind that the deliberate destruction, dismantling and deposition of axes have been noted at several causewayed enclosures. Schulting and Wysocki (2005. 125) point out that antler picks, which are commonly found in ditches at causewayed enclosures and other sites, might have been weapons as well as tools (providing a good match for some of the

healed injuries found on crania)⁴. Perhaps feuding groups sometimes ‘buried the hatchet’ (*cf. Edmonds 2006.353*) by using weapons as tools and discarding them and/or burying their dead. Perhaps some of these events helped to transform bad deaths into good relations. We are used to considering that the remains of the long dead might be manipulated in forming connections between communities (*e.g. Richards 1988.50*), but perhaps displaying and burying the remains of the fairly recently dead played similar roles at times: assisting in the forgetting of insults and injuries as much as (or more than) remembering the dead themselves; or forgetting the traumatic deaths of these persons and remembering instead the social ties that bound the surviving community together (*cf. Fowler 2003. 57–9*). Perhaps some mortuary deposits were events of atonement, regret, reconciliation. These events served also to remind the living of the ephemeral nature of life, and that their deaths, no matter how traumatic, could be converted into renewed relations and new growth. Furthermore, it has been suggested that Highland New Guinea *moka* exchanges may have originated in mortuary exchanges, whereby one clan offers gifts to its mourning neighbour, and later receives a greater gift in acknowledgement (*Nairn and Strathern 1974; cf. Barraud et al. 1994*). Thus, one of the contexts of Neolithic gift exchange might have been debts related to deaths, funerals and other mortuary events, while, as Schulting and Wysocki (*2005.132*) note, ‘[g]roups that exchange axes and marriage partners one day, may fight the next.’

Bodies, persons and ancestors

It is possible to characterise Early Neolithic concepts of the body and person in general terms which encompass the diverse range of practices discussed above, although local patterns and histories of the body were probably distinctive. It has been pointed out before that, while funerals may commemorate the deceased, Early Neolithic mortuary practices do not accentuate a singular bounded body or person (*e.g. Fowler 2001; Thomas 2002*). Such interpretations have often focussed on the evidence from chambered tombs, and this wider synthesis illustrates that the general interpretation of relational personhood and bodily matter that is charged with cultural value (*Thomas 1998*) fits well with the wider diversity in Early Neolithic mortuary practice.

Even where bodies were left intact in tombs, the collective nature of the tombs indicates a concern with relations between the dead over the celebration of individual features of distinctive identity.

Bodily remains were clearly meaningful both soon and long after death, and objects (and animals) encompassed by the deceased were probably similarly meaningful. As personhood can be distributed beyond the human body, such objects, animals, etc, could all be considered as inalienable from a person (*e.g. Fowler 2001; 2004a*). Thus, the gift (or theft) of these parts would be felt deeply. Body parts were extracted from bodies, perhaps sometimes as a result of an assault with exactly this appropriation in mind (*e.g. in exercising grief [Rosaldo 1984] or coping with other emotions arising from tense relations with others*). At the level of the community, which might have been considered as a corporate body and composite person, animals or even humans might be given away or taken by force in a parallel way. Bodies, and even parts of bodies such as heads, were in some cases ‘exchanged’ in a range of interactions between persons and communities. In Orkney, this interchange was probably focussed on the remains of the ancestral dead as part of an unfolding mortuary sequence which ultimately led to a situation whereby relations between communities could be re-articulated by bringing the remains of the dead together. Other exchanges might have been predatory: for instance, in southern Britain, efforts might have been made to appropriate the remains of the dead or take heads from the living. In some regions the blocking in of chambers as cairns were reshaped or extended might have safeguarded the ancestral remains of the dead (and thereby the community of the living) from disturbance, dissipation or theft; the loss of spiritual essences associated with the material remains. Indeed, we could infer that bodies were believed to contain vital essences manifest in flesh and blood and other bodily substances as well as in bone. Where does this leave the view of a Neolithic concern with their ancestors?

No matter how diverse Early Neolithic mortuary practices were, they left the material remains of human ancestors in the landscape in an enduring way – sometimes as the decaying remains of the recently dead; in others, the long dead and mounds covering them. I would suggest that human remains be-

⁴ Harris (*forthcoming*) develops the idea that many of the non-lethal blows in Schulting and Wysocki’s corpus could have been produced using antler tines in acts of violence that were not intended to be lethal but rather harm and mark bodies (during rites of passage, penalties for transgressions, *etc.*), and various kinds of violence probably shaped as well as ended Neolithic lives. The discard of antler tines and axes might have had other connotations connected with personal biographies.

came inalienable from the sites where they were invested, and from other remains sharing that locale, and that a distinctive sense of place and community emerged from the ongoing series of practices to which bodies and sites were subject. Chambered tombs set up conditions from which ties to the ancestral dead could be traced time and again even when other practices had different results. As Whittle *et al.* (2006:360) outline for Ascott-under-Wychwood, particular deaths (*e.g.* violent deaths, the deaths of specific people) were invested in and transformed at these sites, as the sites themselves became sedimented with a particular history or biography which combined place, community and the memory of specific persons. Later activities reached back into the past at these sites, further reworking formative relationships for the present community.

Only in some places, at some times, were the *bones* of the ancestral human dead a key focus of concern. The realisation that some tombs were only used to deposit the dead from one or two generations or included victims of violence might erode some of our faith in Neolithic cults of the ancestral dead. Yet, there need be no conflict between a belief in potent ancestors and the other practices discussed here: all were concerned with the values invested in and effects of interacting with Early Neolithic bodies. Indeed, ancestry is usually something that is invested in the living body, made evident in the materials of the body. One of the classic ethnographic analyses used to discuss the value of bone as ancestral – Bloch's (*e.g.* 1982) studies of the Merina – indicate that flesh and blood are used to trace ancestry along the female line, while bone relates to the male line, for instance (see also Carsten 2004:88–91). Thus, bodies might be understood as measures of relatedness regardless of whether they were alive, recently deceased or long dead, although the precise relationships and identities characterising those bodies/bodily remains at different points in this biography arguably changed. Furthermore, the sites cho-

sen for depositing the Early Neolithic dead were very often places with a history. Occupation sites and 'shrines' of split tree-trunk post arrangements may have been associated with the ancestors (or other spiritual or divine agencies) long before anyone was buried there, and mortuary practices may have changed how living humans and dead humans related to other beings with whom they believed they shared ancestry (trees, cattle, deer, *etc.*) at that locale. Human bodies cannot be understood in isolation from the bodies of animals, plants, objects, buildings and places, but are co-existent and co-emergent with them through particular practices, cosmologies, and experiences (*e.g.* Cummings *et al.* 2002; Edmonds 2006; Fowler 2004a; 2004b; 2008a-b; Ray and Thomas 2003; Thomas 2002). Thus, to grasp Early Neolithic beliefs about the body, we need to move beyond the material remains of the human bodies themselves and place them in context. Interpretations of the wider context of death and mortuary practice – including analysis of mortuary sites as contexts of bodily transformation and consideration of the role of mortuary practices alongside monument-construction in the transformation of communities and places – are vital in building interpretations of Neolithic bodies, persons and social relations.

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Messing with the dead: post-depositional manipulations of burials and bodies in the South Scandinavian Stone Age

Fredrik Fahlander

Department of Archaeology, Stockholm University, SE
fredrik.fahlander@ark.su.se

ABSTRACT – *This paper concerns post-depositional manipulations of burials at two Stone Age sites in Southern Sweden: the Late Mesolithic Skateholm and Middle Neolithic Ajvide. A distinction is made between non-aggressive and aggressive manipulations of graves and dead bodies. Fine-grained horizontal stratigraphies make it possible to associate each category with different phases of occupation. It is suggested that aggressive manipulations are generally the result of social stress during periods of hybridisation between different groups and traditions.*

IZVLEČEK – *V razpravi se ukvarjamo s po-depozitnimi posegi v kamenodobne grobove v južni Švedski na poznomezolitskem grobišču Skateholm in srednje neolitskem grobišču Ajvide. Razlikujemo med neagresivnimi in agresivnimi posegi v grobove in trupla. Natančna horizontalna stratigrafija omogoča povezati posege z različnimi fazami poselitve. Agresivni posegi so v glavnem posledica socialnega stresa v času mešanja različnih skupin in tradicij.*

KEY WORDS – *Skateholm; Ajvide; Burial; post-manipulation; hybridisation*

“When the skull is taken from the grave and the sister’s children of the deceased dance with it, he must not look upon the dancers. The skull is kept by the sister’s son and the spirit ceremonially sent upon its way to the land of the dead.” Ruth Benedict, *Patterns of Culture*, (1934.146f).

In Ruth Benedict’s classic ethnography, *Patterns of Culture* (1934), we find a brief but vivid glimpse of a post-depositional manipulation of a grave where a retrieved human skull is used in rituals by the deceased’s relatives. The classic works of anthropology often contain similar accounts of manipulations of graves and corpses, supporting the idea of the ‘primitive’ as a ritual rather than a rational being. The image of people dancing with the skull of a dead ancestor is indeed dramatic and appealing to the imagination, and it is not surprising that archaeologists generally interpret traces of ‘secondary action’ taken on the dead along similar lines. However, it often wise to adopt a critical stance towards the rhetoric and exoticism of colonial ethnography and anthro-

pology, and also discuss other possible lines of interpretation. For instance, secondary action taken against a grave or a dead body can also be interpreted as an act of aggression towards the dead. Different groups competing over a site or piece of land may, as part of the struggle, find it effective to disturb the others’ dead as mockery. It could also be cases of aggressive acts on the individual level, seeking to deny a dead individual serenity in the after-life by manipulating the grave. There may even be efforts to manipulate the means of the dead as virtual actants in the world of the living (*cf. Gansum 2008*). The phenomena of reopened, reused, and manipulated burials are known from all periods of prehistory (*e.g., Randsborg 1998; Brinch Petersen 2006; Andrews and Bello 2006*), but in this paper I wish to discuss various interpretations of post-manipulated burials at two different sites in Southern Sweden: the Late Mesolithic site at Skateholm and the Middle Neolithic site at Ajvide (Fig. 1). Despite their distant relation in time, both sites display similarities that facilitate a dual outlook on the phenomena.

The Skateholm complex

The late Mesolithic settlement and burial complex of Skateholm (c. 6000–4000 BC), located in Scania in southern Sweden, consists of nine more or less contemporary sites. Two of the sites (Skateholm I and II) contain the majority of the burials and are thus the primary sites discussed here (see Figs. 2 and 3). Skateholm I is the larger of the two, comprising 65 graves, while the smaller Skateholm II, situated approx. 150m southeast of Skateholm I, contains 22 graves (*Larsson 1981.36; 1982.37*). The Skateholm complex is interpreted by the excavators as a typical hunter-fisher site, harbouring a few families quietly living in what at the time was a sheltered brackish water lagoon (*Larsson 1988; 2002*). There are, however, a number of interesting spatial patterns of criss-crossing synchronous and diachronic character which suggest that the social life in the late Mesolithic at the Skateholm area was substantially more varied and complex (*Strassburg 2000; Fahlander 2008a*). For instance, changes in burial practice and analyses of animal bones in the area suggest seasonal occupation, possibly by separate, non-related groups (*Carter 2004; Eriksson and Lidén 2003*). In total, 87 have graves been excavated, together with about 200 features of more domestic character (e.g., post-holes, huts and hearts). The osteological material is inconclusive in many cases and interpreted differently by different scholars (*Persson and Persson 1984; 1988; Strassburg 2000.155; Nilsson Stutz 2003.172–173, 177–179*). It is thus difficult to convincingly relate corporeal aspects of the dead (i.e., sex and age) to their respective interments. The shore displacement, artefact typology and changes in burial practice provide us with a general stratigraphic horizon in which we find the oldest graves at the smaller site, Skateholm II. The burial area then expanded to cover the southern lower levels of Skateholm I, while the most recent graves are situated in the north, on top of the ridge (*Larsson 1985.369*). The shore displacement change actually suggests that Skateholm II became submerged, compelling movement to the higher area of Skateholm I (see Fig. 2).

General development of Skateholm I and II

It is not possible to go into the details of this rather complex development here; suffice to say that the key to understanding horizontal development at Skateholm is in the placement of the graves of children and dogs. Children under the age of eight and dogs are consistently placed on the outskirts of the



Fig. 1. Map of Southern Sweden and the Skateholm and Ajvide sites.

two sites (*Fahlander 2008a.36–37*). Taken altogether, it is possible to distinguish three general phases of burial activity at Skateholm. The earliest burials at Skateholm II are characterised by high variability in burial practices. Many different kinds of bodies are buried, including small children and dogs, which are placed on the fringes. Dogs are buried in the east and west, and children in the north and south. The lack of formalised burial practice supports this sequence and strengthens the interpretation of Skateholm II as an early formative phase.

The subsequent burials are those situated at the south-west part of Skateholm I. Most of the bodies are still being buried, including children and dogs, which continue to be placed on the fringes of the main burial area. Another continuous feature here, linking Skateholm II with these graves, is the double adult burials. There is, however, less variability in grave shape, and far fewer interments in graves of this area. The proportion of double burials taken together with fewer interments in the graves suggests that ritual is of less importance, or perhaps that fewer people were involved in the burial act. The greater number of double graves may also indicate a period of stress, with a higher mortality rate. The last phase of burial activity is found higher up on the ridge of the northern half of Skateholm I. Here, we find even less variability in burial practices. There are no individually buried children or dogs, nor any double adult burials. The standardisation of

the burials may indicate a consolidation phase in comparison to the greater variability of the earlier Skateholm II. The lack of children and dogs in this area is interesting, and indicates a change in how such animals and individuals of young age were perceived. It does not necessarily suggest that their status declined; if the last phase was of short duration, the lack of children's graves can actually indicate a lower mortality rate among the youngest.

These three phases will not be viewed as separate wholes, or as belonging to three different seasonal phases. As we shall see further on, there are a number of criss-crossing patterns and individual 'anomalies' at Skateholm, but in general, these phases provide a broad overview of the development of the site.

Manipulated graves

It is interesting to note that the post-depositional manipulated graves, as well as those that intersect with others, are all located in the midst of Skateholm I. In some of these cases, parts of the bones were removed after the soft tissue had dissolved, such as in the case of grave 28. The buried man's left radius and ulna, the left ox coxae and the left femur were removed after the flesh had decomposed (*Nilsson Stutz 2003.242; cf. Larsson 1988.121*). Other examples are grave 7 (male 30–40 years old) and grave 35 (female 30–40 years old), both of which are missing the left femur (*Nilsson Stutz 2003.312*). There is also one grave, no. 13, with partly disarticulated bones that shows traces of having been cut up and buried as a 'package' (*Larsson 1988*). Whether this event was part of the original burial ritual or a later

manipulation is not clear. Burials that intersect or overlap older examples comprise another, possibly related, category (nos. 1, 35, 41, 47 and 56). These instances could be the result of research mistakes, because older burials had become invisible on the surface (*cf. Strassburg 2000.256; Midgley 2005.70*). However, the fact that several graves were reopened and manipulated suggests that at least some were visible for many years after the original burial. An important point is that all the manipulated graves at Skateholm are located in the middle of the area around the remains of a hut (construction 10). How this hut correlates with other activities in the area is not immediately evident, but it does overlay one of the graves (no. 12) and is thus stratigraphically later than the burials in this area. Indeed, the sequence of events here is crucial to understanding the secondary actions taken on some of the graves at Skateholm. But before we go into further detail and possible interpretations of these actions, I would like to jump forward a millennium in time, and about 350 kilometres northeast, to the Ajvide site on the island of Gotland in the Baltic Sea.

The Ajvide site

Ajvide is another coastal site occupied between c. 3100–2450 BC, according to the carbon determinations (2sigma, 70 y. res. eff.), and is associated with the Pitted Ware Culture (generally coupled with the Combed Ware Culture). A number of details make this site interesting, but as in the case of Skateholm, basic data must suffice (for an overview and details, see *Burenhult 2002; Fahlander 2003; Österholm 2008*). Thus far, a total of 85 burials have been excavated, of which only the first 62 have yet been

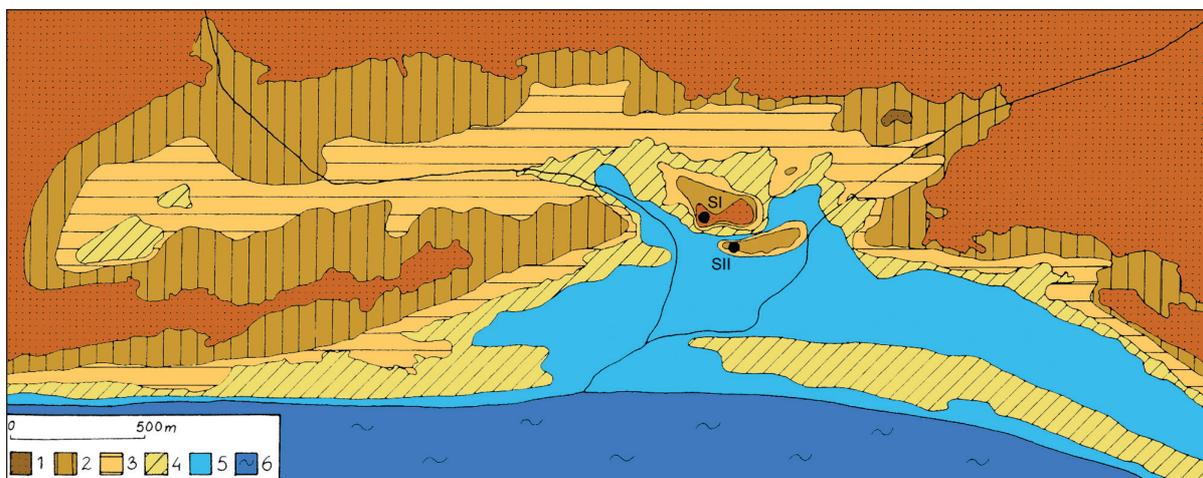


Fig. 2. The Skateholm area with suggested changes in shore displacement. Key to legend: (1) area above 5m asl, (2) 4–5m asl, (3) 3–4m asl, (4) 3–2m asl, (5) area less than 2m asl, and (6) contemporary sea level (modified after *Bergensträhle 1999.337*).

fully published. The additional excavated burials are available in various details in the annual excavation reports (*Norderäng 2001–2009*). Because of the lack of detail, the present discussion departs mainly from the first 62 graves. In general, the graves at Ajvide are inhumations, normally containing one individual buried in supine position, along with a variety of interments, but there are also eight grave-like pits (cenotaphs) as well as a few areas of scattered human bones from multiple individuals. Taken all together, the demography seems to correspond to a normal population distribution: The age and sex ratios are evenly distributed and the child-adult ratio is about 1:3. At first glance, this suggests continuous occupation by a few families. But as we shall see, this site is also more likely to have been seasonally occupied, possibly by different non-related groups (*cf. Norderäng 2009.23*). The shore displacement process at Ajvide is the opposite of that at Skateholm; during this period, the land rises over time, but not with any dramatic changes, as in the Skateholm case. The burials seem instead to have been placed in a broad band aligned with the contemporary shoreline (*Norderäng 2009.23*). By transforming the burial plan into vector graphic and polygons in ArcGIS®, and the excavation data into an Access-database, it is possible to put multidimensional queries and display the result graphically on the screen. Such procedures allow a more detailed pattern to emerge that suggests the general development of the site followed a slight slope southwards over time, leaving the oldest burials in the north and the youngest in the south (*Fahlander 2003.87–120*). From this general horizon, it is possible to further identify at least three phases of burial activity at the site (Fig. 4).

General development of the site

The first phase (I) of burials comprises those of the northern cluster. The great variability in interments

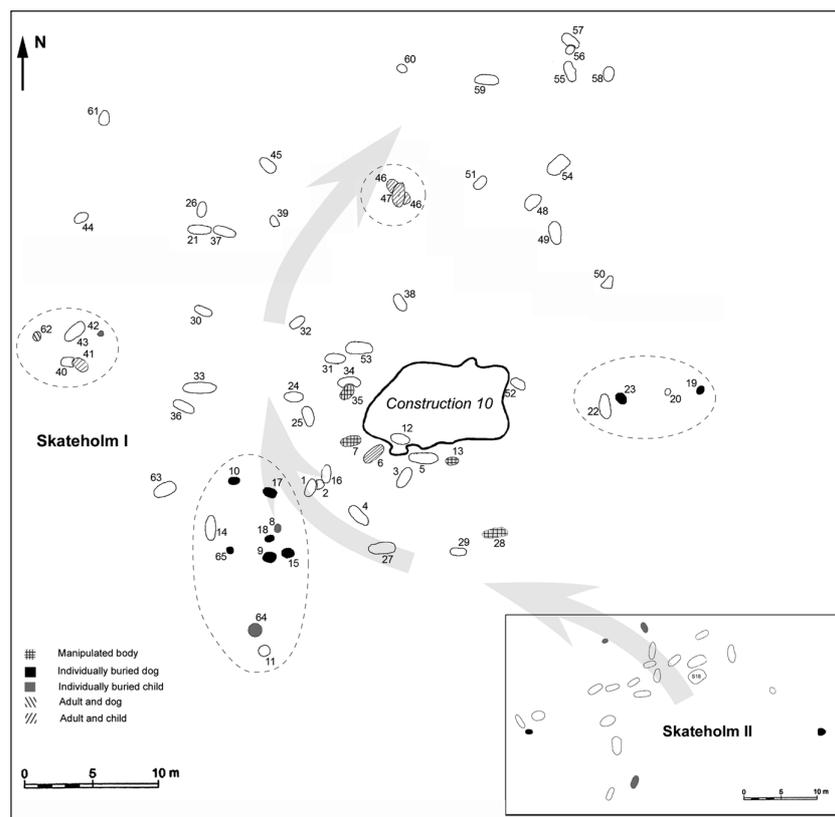


Fig. 3. The graves at Skateholm I and II (the latter in 1/3 scale). The grey arrows illustrate the general horizontal stratigraphy of the area. Graves with individually buried dogs (black), children under 8 years (grey), and graves containing dogs/children buried together with adults (lines). The manipulated burials mentioned in the text are hatched. Image constructed in ArcGIS.

and grave form indicates a formation phase (although the additional, unpublished graves further north may be even older). In this area, we find all of the cenotaphs, and most of the manipulated burials. We also find extremely long pits here (2.5–4m) and the greatest number of artefact types, which together hint that the ritual was important and emphasised. The excavators noticed that the four east-west aligned graves are stratigraphically later than those aligned north to south (*Burenhult 1997.54*). At first, it may seem that there are two layers of burials here, whereas the first consists of the N-S aligned burials, and that the E-W ones are associated with a subsequent period of occupation. The almost contemporary carbon determinations, as well as the many similarities between the burials in this area do, however, suggest that they were all dug within a quite short time span and probably constructed during the same phase. The obviously intentional overlapping of the T-shaped pairs of the graves (nos. 7/6, 2/1, 13/4, and 14/15) are of special interest here, as they indicate intentions of establishing relations with those buried earlier. The second phase (II) consists

mainly of the burials in the midst of the area. Here, there is much less variability and fewer artefact types. We also find all the double and triple burials in this area. This general pattern could indicate a less traumatic relationship with the dead body and hence also less interest in the ritual. But, of course, it could also indicate a period of stress and higher mortality. The third phase (III) covers the burials in the southern part of the site and can be interpreted as a period of consolidation. The burials are all very similar, there is little variation, and the alignment of the pits is much more varied here – almost dissolving the earlier dual distinction between the N-S and E-W orientation. This vagueness in burial practice makes it difficult to interpret any general attitude toward the dead, but they are nonetheless differently constituted and less organised than the earlier two phases of graves. These phases are not absolute or do not correspond individually to three different occupation phases, but rather emphasise differences over time and provide a more fine-grained basis for the interpretation of individual burials such as those that were manipulated.

Manipulated graves

Interestingly, we find similar types of manipulation of older burials and bodies at Ajvide as in the case of the Late Mesolithic Skateholm complex. Here, too, bones were removed after the soft tissue had dissolved. Just to mention a few cases, we may consider graves 16 and 23, which both indicate signs of reburial. Grave no. 16 contains fragmented and dislocated parts of a skeleton. The excavators suggest that the individual, a woman, seemed to have been ‘folded’ into the grave as a package, similarly to grave 13 at Skateholm (*Österholm 1989:183; cf. Norde-räng 2007*). The other grave, no. 23, includes a double burial of a man, 50–60 years old, and a young boy of 12–13 years of age. The extremity bones of the adult are missing and the skeleton shows signs of having been decarnated. The adult is laid out across the chest of the young boy, and the femur bones rearranged to fit into the pit. It thus seems like a two-event burial, where an earlier grave was reopened and adjusted to fit an additional individual. There are also at least ten burials that lack crania at Ajvide. Some of these bodies are missing their skulls due to modern disturbance, but a few of these graves were clearly manipulated in the past. One of the more spectacular cases is grave no 6, which contains the remains of a young man of 18–20 years of age, with the upper vertebrae and cranium missing. In all other respects it is a quite normal burial from the

northern cluster. The really odd thing about this particular grave is that the teeth of the young man were put back in the grave, as they would have been if the cranium had not been removed – that is, most of them, except for two that were replaced with animal teeth (Fig. 5). This instance can perhaps be related to the overall obsession with animal jaws and teeth at the site, but the strangeness of such actions are hard to comprehend – it almost defies interpretation.

There are also intersecting burials at Ajvide. Most notable are the so-called T-shaped pairs of graves in the northern part already mentioned. There are also two cases of overlapping graves in the southern part of the area, which are clearly different from the northern ones. Graves 57 and 58 are reported to have been dug through the older ones (nos. 62 and 61 respectively), but the documentation of these cases is inconclusive. It is burials nos. 57 and 61 that are incomplete and the other two that are intact, which leave doubts as to which grave actually intersects the other (see *Burenhult 2002:111–116, 158–166*). In either case, the attitude behind these cases is clearly different from the less destructive T-shaped pairs of graves in the northern part of the area. While the northern pairs of intersecting graves almost gently touch the older ones as if seeking a relationship with those buried earlier, the examples in the southern part rather suggest a more hostile attitude. In a similar sense, the act of putting the teeth back in grave 6 can hardly be viewed as aggressive, however queer such an act may seem.

Same, same, but different?

As we have seen, the two sites show some similarities in burial practices, but what does that mean? Is it even significant? Is it possible that the similar way of life at the sites – hunting, fishing and gathering in coastal settings – may have given rise to certain practices regarding the dead? On the other hand, what ethnography and anthropology shows is that similar milieus and ways of life do not necessarily result in similar ways of thinking and acting (*e.g., Metcalf and Huntington 1991*). There could, of course, be some kind of continuity between the Late Mesolithic hunter-gatherers and the later Pitted Ware culture, which could partly explain similarities in burial practice. However, despite many attempts, the archaeology has not been able to sustain such a hypothesis; rather, we are completely lacking in indicative material from the intervening millennia. Of course, the continuity may be found in another geo-

graphical region, considering the mobility of these groups, but such evidence has yet to be discovered. That a memory of an ancestral way of life would be continued, and would appeal to unhappy farmers, does not seem very plausible (Andersson 2004; but see Knutsson 2005). Although a way of life and ideology may survive in bits and pieces through millennia of oral tradition, it is not likely that actual practices would survive that intact. However the point here is not to connect the sites in any cultural sense, nor to suggest that the causes for similar expressions of the burial ritual are the same. Something that indeed is common to both sites is that the manipulations of graves and bodies described above tend to be interpreted in a somewhat one-sided way as expressions of ancestor veneration or cults of the dead (e.g., Strassburg 2000; Gill 2003). Even if that may have been the case in some instances, it is the overall generalisation regarding a single ritual perspective I wish to question. A more careful look at the data does reveal, for example, some interesting patterns. At Skateholm, we find no post-depositional manipulations among the oldest burials at Skateholm II (which became submerged); these occur only in the middle of Skateholm I. More precisely, they are located around the remains of a hut (construction 10). This construction overlay grave 12 and is likely to be of a later date than the burials of the second phase. My suggestion is that this construction actually is part of the third, or even an additional fourth phase of activities at Skateholm. The manipulations of the surrounding graves may thus have been performed on the previous occupants' dead. The distinction is crucial, because it suggests that interfering with burials is not a normal cultural trait of ancestral veneration, but might be more

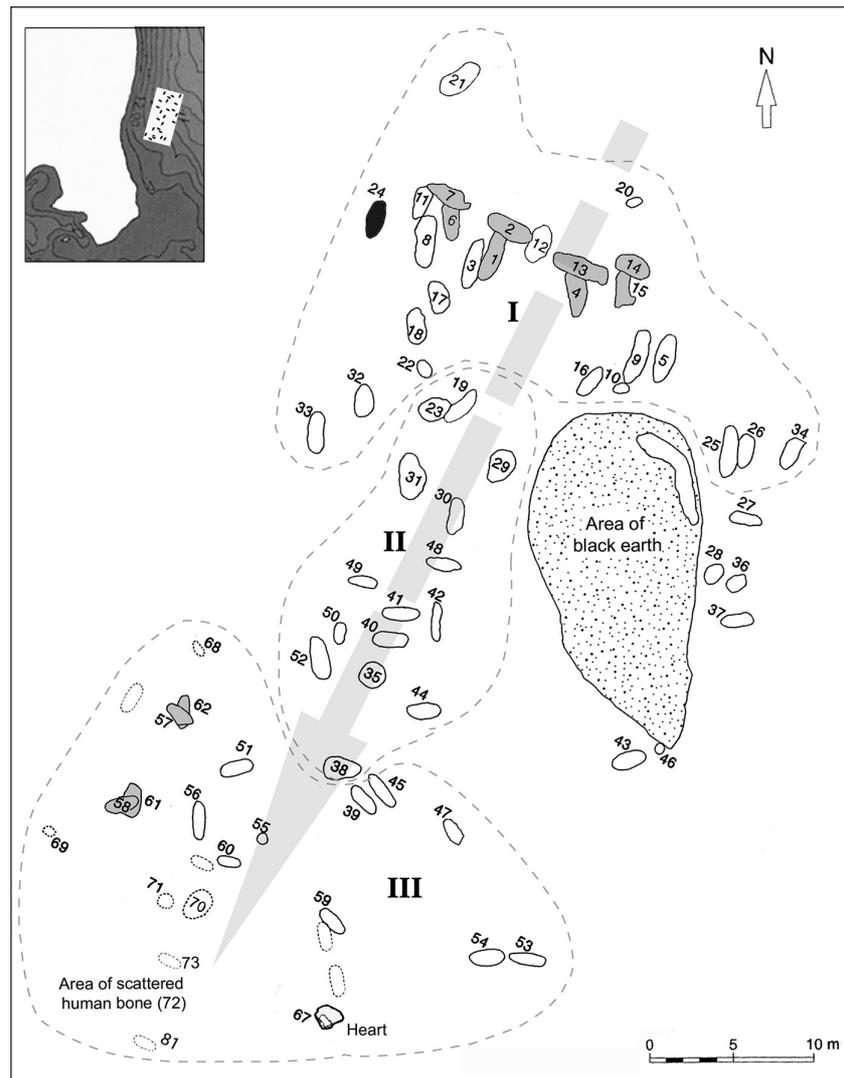


Fig. 4. The Ajvide burials with the general three phases circumscribed by dotted lines. The grey arrow illustrates the general horizontal stratigraphy of the area. The incorporated image in the upper-right corner shows the relation of the site to the contemporary shoreline. So far, only graves 1–62 have been fully published. The dotted-outlined additional graves are approximations added from the excavation reports when sufficient data is available (Norderäng 2001–2009). There are more graves in the north, but their shape and position are as yet uncertain. Image constructed in ArcGIS.

about gaining control over an area previously occupied by another group. The difference obviously has implications for our view of both the ritual and the social life of Late Mesolithic hunter-fisher groups in southern Scandinavia. The three cases of intersecting burials (nos. 1/2, 35/34 and 47/46) at Skateholm are, of course, later than the graves they intersect, but how much later is difficult to tell other than that they intersect the graves of phase two. It is possible that these, too, are associated with activities in conjunction with construction 10. Grave 47 especially, which actually destroyed the earlier grave (46), must be considered aggressive rather than venerating in

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character. It is probably no coincidence that this is the deepest of all the graves at Skateholm (it is also the only grave containing a small child). At the Neolithic Ajvide site there are also traces of different groups occupying the area. Although it generally is regarded as a Pitted Ware site, it also contains traces of the contemporary Battle-Axe Culture (generally associated with continental herding and farming Linear-band cultures). Examples of such 'foreign' material are all found at the southern and youngest part of the site. One example is a femur-shaped grindstone, typical of the Battle-Axe culture, which was found in grave no. 19 (Burenhult 2002). Another example is the broken battle axe found in the cultural layer in the southern part (Norderäng 2002). The areas of scattered bones in the south-western part may also constitute a feature that can be associated with the death-houses of the Battle-Axe culture complex. It is also telling that the only two individuals (graves nos. 60 and 73) whose ^{13}C values indicate a terrestrial diet were buried in the southern part (see table in Norderäng 2008:297). It does seem likely that these instances indicate that the two groups – the fisher-hunting Pitted Ware culture and the predominately herding and farming Battle-Axe culture – became involved with each other during the final period of activities at Ajvide (Fahlander



Fig. 5. Vertical photograph of grave no. 6. Detail of the cranial area with extracted teeth in situ. Photograph: Göran Burenhult (modified from Burenhult 2002, colour plate 22d of the CD).

2006). Also at Ajvide, we find that the intersecting graves generally are of two different categories. The T-shaped set of graves (nos. 7, 2, 13, 14) in the northern part must be considered an attempt to relate to the previously buried in an almost gentle, non-destructive way. The two overlapping burials at the southern part are, however, quite different. Both destroy the older graves in an aggressive manner (cf. the case of graves 46 and 47 at Skateholm). It is probably no coincidence that both these cases are found in the southern part of the area, which also shows traces of new occupants. Also at Ajvide we thus find indications that interference with the dead is not necessarily a result of ancestral veneration. In the first phase, relationship with those interred are sought, but in a gentle way, not disturbing the remains of the buried. During the later phase, however, the intersections are destructive and brutal and rather suggest an aggressive attitude to those buried earlier.

Hybridity, complexity and intra-site change

At both Skateholm and Ajvide, we find indications of internal changes and traces of social hybridisation during the course of their use. This variability and alterations cannot only be a matter of marginal anomalies, but emphasise the importance of an open rather than static perspective that allows for criss-crossing synchronous and asynchronous chains of events. It also highlights the question of what may happen when different groups interact. In traditional social analysis, a social encounter between two 'cultures' is often seen as superficial (the mere exchange of certain objects), or a matter of one 'strong' culture compelling another culture to adopt their way of life. In recent discussions, however, the viability of such a dual perspective has been questioned (e.g., White 1991; Bhabha 1994; Lucas 2006). Instead, encounters between groups of different traditions are much more complex affairs. Cultural critics like Homi Bhabha (1994) point out that encounters are typically characterised by intricate layers of mockery and misunderstandings. Others, such as the historian Richard White (1991), emphasise the creativity of both sides in the struggle for power (Fahlander 2007). The outcome of a social encounter is thus difficult to pre-determine and often has unforeseen consequences. There are no given sets of simple logics, or even pragmatics, operating here. This complexity is valid not only for recent historical situations, but must also be addressed in pre-modern encounters. The aggressive post-depositional manipulations discussed here are among a number of such hybridisation processes. For instance, instead of sim-

ply referring to post-depositional manipulations as a ritual trait of a culture, such events are probably better understood in a differentiated and methodical perspective. In this paper, I have concentrated primarily on non-aggressive as opposed to aggressive manipulations of the dead. It is suggested that the latter may have been a consequence of the social stress that appears during periods of hybridisation of different groups and traditions. This is, however, not a discussion about whereas a social is advocated over a ritual perspective (in a way, to mock by interfering with other peoples dead can also be seen as ritualistic, although the aim of the actions differ). In most cases, it is hard to maintain any sharp distinction between the ritual and the profane – or for that matter, a social and a ritual interpretation (cf. Bradley 2005; Fahlander 2008a.32). My aim is rather to think outside the (anthropological) box, arguing with archaeological data rather than reverting to routine interpretations based on colonial ethno-

graphy. The issue of secondary action also emphasise the advantages – or even necessity – of treating burial grounds as processes rather than closed cultural units. By using local and detailed analyses of chronology and sequences of events (horizontal stratigraphies) we can minimise regional and cultural generalisations (cf., Fahlander 2008b). It is obvious that if we deny those peoples internal complexity, development and agency, we run the risk of doing no better than the modernist ethnographers of the early 20th century. Moreover, the bottom-up approach applied here not only tells a story that is slightly different from that related by conventional culture-based studies; it also raises new questions that are seldom of concern in traditional analysis. Certainly, the local, bottom-up approach complicate matters, but it nonetheless forces us to look at sites such as Ajvide and Skateholm differently. They become more complex, less stereotyped, and indeed, more fascinating.

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The way we bury our dead. Reflections on mortuary ritual, community and identity at the time of the Mesolithic-Neolithic transition

Liv Nilsson Stutz

Oxford College of Emory University, Oxford, USA
lstutz@emory.edu

ABSTRACT – *This paper discusses how archaeologists can approach ways in which the ritual treatment of the dead body was a means of reproducing a sense of identity and community in the past. The approach combines a theoretical framework grounded in practice and body theory with a methodological approach based on taphonomic analysis. This framework is introduced to analyze the mortuary practices at the Mesolithic cemeteries of Skateholm I and II, Vedbæk, Bøgebakken and Zvejnieki. Beyond the immediate context, the study seeks to reflect on how similarities and differences noticeable over time and space may provide an insight into changing identity processes.*

IZVLEČEK – *V članku predstavljamo arheološki pristop k proučevanju ritualov, v katerih obravnava mrtvega telesa izkazuje način reprodukcije identitete in skupnosti v preteklosti. Pristop združuje teoretski del, ki temeljni na teoriji prakse in telesa, ter metodološki del s tafonomsko analizo. Z njegovo pomočjo smo analizirali mezolitska grobišča Skateholm I in II, Vedbæk, Bøgebakken in Zvejnieki. Z analizo smo poskušali tudi ugotoviti ali zabeležene razlike in podobnosti skozi čas in prostor omogočajo vpogled v proces spreminjanja identitete.*

KEY WORDS – *ritual practice; mortuary ritual; archaeoethanatology; Mesolithic*

Introduction

Traditionally, the archaeology of death and burial has focused on the loss of a social being. Mortuary practices have typically been viewed as strategies for reproducing religious faith, social structure and political power among the living, or more recently, as strategies to express and overcome grief and bereavement (*Tarlow 1999a*). However, death results not only in the loss of a social being, but also in the emergence of a cadaver – a dead body, which is in an irreversible state of change and disintegration. This material outcome of death has, until recently, gained surprisingly little attention in archaeology. I have argued elsewhere that this has been a lost opportunity, since the human cadaver plays a central role in mortuary rituals. Moreover, the many ways in which people deal with the dead body gives form to central concerns (regarding life and death,

the living and the dead, the body and the person it embodies, clean and unclean, *etc.*) of the society in which these acts take place (*Nilsson Stutz 2003*). Such culturally fundamental concerns are likely to play a central role also in identity production. In recent years, there has been an interesting turn toward the body in archaeological approaches to mortuary practices. This new focus can probably be related to a more the general interest in body theory that has become manifest in archaeology over the past two decades or so (see *Kus 1992; Meskell 1996; Rautman 2000; Hamilakis et al. 2002; Joyce 2005*, to only mention a few examples). While many of these approaches have contributed to putting a focus on the body and stressed the social and cultural dimensions of the body, they have tended to remain abstract (*Hamilakis 2002.22*; for a critique, see

also Nilsson Stutz 2008:19–21). Recently, however, the biological and material dimensions of death have gained increasing attention in mortuary archaeology, especially through an interest in the biological processes of death and the complex place of the dead body within society (e.g. Fahlander and Østgaard 2008; Fahlander 2009; Kus 1992; Nilsson Stutz 2003; Østgaard 2004; Tarlow 1999b; Weiss-Krejci 2001).

These new theoretical interests have only partially translated into new methods of excavation and analysis. One exceptional example of this can be seen in the French approach, anthropologie 'de terrain', recently renamed archaeoethanatology (Duday 2009), which combines knowledge of post-mortem biological processes with detailed archaeological observations in the field, in order to reconstruct in detail all the processes that affected human remains after death – natural as well as non-natural (i.e. processes that can be traced to human interaction with the remains during mortuary practices). While this approach has been integrated into French archaeology for decades (Duday et al. 1990), it has only recently been extensively published in English (Duday 2009). As a graduate student working with Duday as an advisor, I began work on applying archaeoethanatology to the study of northern European Mesolithic burial practices (Nilsson 1998), seeking to 'synchronize' the rigorous taphonomic approach with ritual theory, body theory, and practice theory (Nilsson Stutz 2003; 2004). As the taphonomically based methods, along with the defining case studies, have reached more researchers in English translation, this interesting methodology has begun to be used and refined in diverse archaeological settings. I have emphasized especially how the taphonomic focus on the body can complement and deepen the social theoretical understanding of the body (Nilsson Stutz 2003).

Indeed, the broader interest in the body in mortuary archaeology, manifest in theory and methods of analysis, opens up a series of new questions and perspectives that have remained insufficiently explored in the past. In this paper, I apply the methodology of archaeoethanatology in combination with a theoretical framework that focuses on ritual as structured and structuring practice, building on the ritual theory proposed by Catherine Bell (1992), in order to explore the mortuary rituals in the Mesolithic cemeteries at Skateholm (Sweden), Vedbæk/Bøgebakken (Denmark) and Zvejnieki (Latvia). This study does not focus on what the rituals mean, but looks

instead at the reproduction of deep structures in Mesolithic societies revealed through practices that have left material traces that can be recovered archaeologically. What happens to these patterns over time and across space, and how can we understand change and continuity within this framework? To what extent do these practices reflect communities in the past – not necessarily through shared symbols and meaning, but through shared practices? I will address these questions by looking in detail at the role of the dead body in the mortuary ritual, and how the treatment of the dead body can be studied archaeologically with regards to social structure, identity and community.

The dead body as a locus for ritual practice

A human cadaver is not neutral. When the vital functions cease, the body undergoes a dramatic and irreversible transformation through processes of putrefaction and decomposition that give the body a new character. While there is great variability in the many ways human societies react to and deal with the emergence of a cadaver at the time of death, the cadaver is also subject to some biological constants that we can understand as universal characteristics. From the first subtle post-mortem processes, including relaxation in muscle tone in combination with the formation of cell debris and mucus on the cornea, through the stages of temporary rigor mortis and cadaveric hypostasis that contribute to the discoloration of the skin, and on to the processes of putrefaction and decomposition that include further discoloration, emission of gasses and fluids, swelling and so on, the cadaver goes through a cycle of complete transformation which eventually consumes most if not all of the soft tissues of the body (for more details see Knight 1991; Mant 1984; Polson 1955). These dramatic transformations must be handled by the survivors, often through some kind of ritual disposal of the remains.

But the ambiguous, changing character of the cadaver is not limited to the physical appearance. At a deeper level, the mourners have to deal with the fact that the body that once embodied a social person simply no longer does – it is now a corpse. This corpse still resembles the living person to some extent, but at the same time, it has changed forever. The human cadaver is thus liminal – it is located somewhere between subject and object, between culture and nature, and between life and death. In her book 'Le pouvoir de l'horreur', Julia Kristeva discusses the human cadaver as the ultimate abject,

thus capturing its liminal character between categories, and its consequent threat to order and society (Kristeva 1980). From a perspective that views the body as culturally produced (e.g. Asad 1997; Coakley 1997; Csordas 1994; Lock 1987; Scheper-Hughes and Lock 1987; Shilling 1993; Strathern 1996; Turner 1996; 1997; and others), the cadaver poses an additional problem, since it can no longer be controlled from within. Instead, cultural and social control now has to be imposed from the outside – which is exactly what the survivors do. Through the mortuary ritual, they correct the cadaver, manipulating the remains of the dead to conform to cultural and social conventions of what a ‘good death’ should be. Of course, the post mortem changes are given very varied places in different societies, which is reflected in the cross-culturally diverse strategies played out in mortuary rituals; decomposition and putrefaction may be denied and hidden (as in our own society), accelerated (for example, through incineration), partially stopped (as in mummification or embalment) or played out and publicly exposed (as described for example in Hertz 1960; Huntington and Metcalf 1979; Knauff 2009.39–51). But no matter how different the strategies may be, the important point made here is that a cadaver is never ignored, and is always taken care of and disposed of in a culturally structured way. Drawing on Arnold van Gennep (1909) and Victor Turner (1967), it is possible to see cross-culturally variable treatment of the body as part of a liminal phase that challenges social order through the abject character of the cadaver. The mortuary ritual re-defines the cadaver – from a subject that it used to embody, to an object of death from which the mourners can separate – and thus provides an exit from the liminality caused by the abject status of the cadaver. The ritual redefinition of the dead body, which often involves an idea of separation between the physical remains and the spirit, soul, or memory of the dead, allows the mourners to separate from the dead, and at the same time, structure an acceptance of death (Hertz 1960). By producing a ‘good death’, the ritual further reinstates order, and society as a whole can manifest its resistance and control over death. The mourners redefine their relationships – among themselves and with the dead – as they heal the rupture in the social fabric. Seen within a practice-focused framework, and following Catherine Bell’s work on ritualization (1992), the mortuary ritual becomes an event for the reconstruction of the social structure and the cosmology as a whole. Through the ritualized creation of an image of death which is culturally and socially acceptable, the death is given a place

within the general cosmology. From this perspective, it becomes clear how a mortuary ritual can be viewed as reproducing existing relationships and practices and reaffirming values held by the community.

Ritual, community and identity

How can we understand the role of mortuary rituals in reinforcing a sense of community? And, more importantly perhaps, how can we investigate this archaeologically? In order to respond to these questions, we need to take a closer look at how ritual works in society, how identity is produced, and how the two intersect.

In her book *Ritual Theory, Ritual Practice* (1992) Catherine Bell applies Pierre Bourdieu’s (1977; 1980) practice theory to the concept of ritual and sees them as part of a structuring process. In this framework, rituals are not viewed as expressing meaning, but rather, meaning is created through practice and experience, and it can vary between different individuals and over time. Instead of focusing on what rituals *mean*, Bell is interested in what they do. She introduces the concept *ritualization* to separate rituals from other actions. Ritualization is defined as a strategic way to act (Bell 1992.7) that creates a distinction from other actions, a distinction that defines the specific practice as ritual, and thus privileged, significant and powerful (Bell 1992.90). In this production of separation, a cosmology is created – a structured world of significance organized according to a hierarchy of binary oppositions linked by chains of associations in which everything has a place in what appears to be a logical system (Bell 1992.140–141, see also Bloch 1986; Kertzer 1988; Turner 1969). In this world created through ritual practice, each movement, sound and gesture becomes a part of the process of structuring, and the active participant thus becomes included in this hierarchy through the ritual practice. It is thus through practice, the bodily engagement in the ritual, that the structure is created. By being an active participant in the ritual, the participant would also embody the experience itself – through sensory experiences that would be carried as embodied memories acting to reinforce a sense of structure. The participant possesses practical knowledge, or an embodied sense of how to execute the ritual correctly – that is to say, in the moment, in a thoroughly socially relevant, competent way. If we return to the theme of burials and more particularly to the handling of the dead body, this means that everybody

in a society gains a shared sense of what to do with the body (and even if specialist knowledge may be required, the average person would still have a set of expectations of what should be done). Through past experience these strategies have been embodied in the participants throughout their lives, and people simply have a sense of what a 'decent' burial is. The ritual practices are learned, but are often so deeply rooted in culture that they are taken for granted and non-negotiable (see below). This framework also allows us to understand change in practices. Since every ritual event is an opportunity to reproduce past actions or change them, and incorporate these changes into the same practice-structure dialectic, change can occur at any time within the structured process.

When looking into current research on identity, we see a similar focus on the subliminal taken-for-granted or 'natural' aspect of cultural practices, as opposed to more essentialist views of identity. Identity, it is argued, is constantly reproduced through interaction with others (*Barth 1969; Díaz-Andreu and Lucy 2005; Insoll 2007 etc.*), and practices play a central role in this process (*Jones 1997; 2007 [1996]*). In other words, the ways in which we do things create markers of difference and similarity between groups of people. The practices that seem so 'natural' that they are taken for granted appear to be the most powerful in this process. However, in encounters with 'the other' these taken-for-granted practices still have to be systematized and rationalized, and it is at this level, which tends to be discursive, that social boundaries, status differences, or ethnic categories are produced and reproduced (*Jones 2007*). The term practice is used to denote activities which are learned – something which distinguishes them from mere habits (*Turner 2001.120*) – and which are “*situated, corporeal, and shaped by habits without reflection*” (*Thévenot 2001.56*). They are thus to be seen as socially produced, and yet, at the same time, they are also fundamental in structuring society. Taking into consideration the relation between ritual practice and cosmology described above, ritual practice is likely to be particularly effective at reinforcing a sense of shared identity and community. In fact, Ann Swidler (*2001*) has argued that ritual practice might have a privileged role, at least under certain circumstances, as anchoring the social and cultural structure, by reinforcing constitutive rules – especially if they “*define socially central but informally structured social relationships*” (*Swidler 2001.91*). Here, it is possible to see the repeated ritualized actions of treating and bury-

ing bodies of the dead and the embodied knowledge of what a good death and proper burial should be as also central to the construction of self and other, especially in structured contrast with other social practices. Once we consider patterned traces of repeated rituals, we can then look at variation in burial features that may reflect discursive social negotiation, whether it is expressed within the context of the 'proper burial' or outside of it.

Archaeologically, the repeated ritualized practices involved in dealing with the dead body should translate into recognizable patterns in mortuary features. The theoretical foundation provided by a focus on practices as structured and structuring – with regards both to ritual and identity – is well suited to the nature of archaeological sources, which substantially consist of the materialized traces of past practices. This emphasis on practice requires that we adjust our methods to meet the demands of understanding what people in the past were doing with their dead. The methodology provided by archaeo-*thanatology* allows us to do this, as it provides the tools for reconstructing the sequence of practices that created the archaeological situation today. Beyond the need for new methodologies, this approach also requires that we rethink what we are really looking for. I have argued elsewhere that if we want to take the practice theory framework seriously in archaeology, we must re-evaluate our results (*Nilsson Stutz 2003; Berggren and Nilsson Stutz 2010*). To look for practice means looking for the repeated non-negotiable in the ways in which people were doing things. In other words, we need to re-evaluate the everyday at the expense of the extraordinary. When applying this theoretical model to the extraordinary Mesolithic cemeteries around the Baltic, we must highlight not only the variability, but also look for the structured, repeated and reproduced practices that are likely to reflect the non-negotiable and un-reflected response to death revealing deep structures. If we can identify some aspects of mortuary practices that are widely distributed among these cemeteries, then we may be able to argue for some shared response to the social and biological crisis of death. The basic idea here is that people from different communities in a region, in treating their dead in similar ways, would have had a sense of collective identity, which would have structured and been structured by their shared mortuary practices. Since the ritualized actions of burying the bodies of the dead are structured by fundamental aspects of what death is, but also embodied as knowledge about the 'good death' and a proper burial, it is possible to see

variations of these deeply structured practices as examples of social negotiations expressed within the context of the proper burial, or outside of it. Through variation, we may be able to reflect over culturally structured ways of creating boundaries between people within a group and between groups.

Preserving the body's integrity in Southern Scandinavia

In a series of studies, I have analyzed the mortuary practices in three Mesolithic cemeteries, at Skateholm (Southern Sweden), Vedbæk/Bøgebakken (Eastern Denmark) and Zvejnieki (Northern Latvia). I have used the approach of anthropologie 'de terrain'/archaeoethanatology to reconstruct in detail how human bodies were handled after death (*Nilsson 1998; 2003; 2006*, and I refer to these publications for details). The analysis led me to ask new questions that have not been posed in the usual discussions regarding these sites. The mortuary practices in Northern Europe during the late Mesolithic are often described as complex and varying. The significance of the differences in the treatment of the dead has been debated at length. Some see horizontal differentiation, while others see a vertical differentiation in the treatment of the dead, reflecting social ranking in society. Instead of looking at what the graves could tell us about the social organization of the living, I have been interested in exploring what they can tell us about treatments of the dead body as ritualized practices. Based on the practice-theory-focused ritual theory described above, I have further argued that the repeated, reproduced practices constitute unreflected or non-negotiable responses to death that can be traced within the so often mentioned variability. In Skateholm and Vedbæk in particular, it is the significant lack of variation in the treatment of the dead body that suggests a core of practices that appears to have been almost non-negotiable in the community's response to death – that is, a set of practices that seems to have produced a good death repeatedly succeeding in defining a social separation from the dead body and a redefinition of the identity of the dead. What is striking from the taphonomic/archaeoethanatomical analysis is that the vast majority of burials involve primary burials in simple filled-in grave pits. The body would usually have been placed in the grave, supine or on its side, or sometimes seated, and then buried by filling in the pit with sediment. Thus, as staged by the mortuary practices, the dead individual would have maintained its integrity, still resembling the living, with the processes of decomposition remain-

ing mostly hidden, buried underground. The last image created of the body before the final separation was ritually staged as life-like. To summarize:

- The bodies were interred as primary burials (with very few exceptions).
- The burial pit was immediately filled.
- The bodies were placed on the back or on the side with limbs flexed. At Skateholm several individuals were buried in a sitting position. The positions can be described as life-like.
- Occasionally, bodies were wrapped or placed on platforms.
- Artefacts and ochre were placed in the burial with the dead.

Respect for the integrity of the body is also indicated by the fact that earlier graves were rarely disturbed by later graves; the mortuary ritual would have been a focus for the production of memories of the dead, and the location of the grave appears to have been remembered and respected. In those very few cases of later disturbance, however, the dry bones were simply left scattered, and this suggests that at least after some time, the integrity of the individual in death was not associated with the integrity of the dry skeletal remains. In one grave in Skateholm (grave 13) taphonomic analysis reveals that an incomplete body had been placed within some kind of container, possibly a sack. This burial constitutes a stark contrast to the prevalent mortuary practices, and I have suggested that it could be either the remains of an individual who had been deliberately treated in a different way at death, perhaps as a sanction for some kind of transgression, or, conversely, that the containment of the remains inside the sack actually shielded the onlookers from the state of the incomplete body and thus provided a burial as close to the norm as possible, by denying the actual state of the body. This interpretation allows us to understand the variability of practices within the mortuary programme as strategic choices made in exceptional cases, exceptions that only would strengthen the overall structure. In Skateholm, it has been possible to trace a change in some of the mortuary practices over time. In particular, the older burials show greater variation in the artifacts deposited in the grave, while the younger burials show more variation in the position of the body (*Larsson 1988*). It thus seems that, while some things were negotiable over time, other elements remained the same – in particular, respect for the integrity of the body.

But my analysis also highlighted a different kind of inner tension within the ritual system that, while de-

nying the processes of decay, clearly exploited and controlled these very processes that the dominating rituals were intended to hide. For example, compared to the over one hundred primary burials at Skateholm and Vedbæk/Bøgebakken, we find three cremations, all at Skateholm (there are some additional cremations at sites in the immediate vicinity of Vedbæk/Bøgebakken, but none were encountered at Vedbæk/Bøgebakken proper). While rare, the ritual practice of cremation followed by the interment of the dry, charred and calcined, fragmented bones were intentional manipulations of the process of skeletonization. Against the backdrop of repeated primary burial over centuries of structured and structuring ritual practice, I suggest that the examples of cremation may point to situations where ritually staging death was no longer unreflected, and the apparently unusual practice of handling and separating from the body through cremation may have been part of a social process of tension, conflict, negotiation, or change. The taphonomic analysis revealed a more striking, albeit singular case – that of grave 28 in Skateholm, where several bones, including the right radius and ulna, the right os coxae and the right femur had been carefully removed from the burial, only after even the more resistant articulations had decomposed; the removals had been done without disturbing the surrounding remains. I have argued that this is only possible with a precise knowledge of the processes of decomposition and the location of the grave, in combination with a preparation of the burial feature at the time of the initial deposition of the body that would allow for the grave to be reopened at a later stage. The intentional and planned removal of isolated bones from this burial within a tradition that emphasizes the integrity of the body at the time of burial is interesting. When considered, along with cremation, as a rare break with the repeated staging of death as involving separation from the dead those who still resembles the living, the partial and deliberate fragmentation of the individual in grave 28 may, in fact, have been more common in the late Mesolithic than we understand today. Human remains have been encountered in many different kinds of context, including residential deposits. Perhaps we see a precursor here of the extensive manipulation of human remains that we have come to expect during the practices of periods to follow in the region, including the Neolithic Funnel Beaker culture. The focus on what people were actually *doing* when burying their dead allows us to reflect on some of the boundaries that the archaeological discipline has created when deciphering the record. The manipulation of human remains

within the tradition of primary burial in South Scandinavian Mesolithic may indicate that the transition to collective burial may not have been as dramatic as we have tended to see it.

The significance of place in Zvejnieki

When I started working on the burials at Zvejnieki, a large cemetery with 329 burials (and counting) ranging primarily from the Early Mesolithic to the Late Neolithic (*Zagorskis 1987; 2004*), the similarities to the South Scandinavian cemeteries struck me at first as significant. Again, we could see the dominant pattern of primary burials, with bodies placed in positions similar to those found at Skateholm. Again, the natural processes of decomposition were hidden and the dead buried in a way that respected the integrity of the body, at least at the time of deposition. But after a while, and especially after starting the new excavations there, I began to observe a rather different picture, translating into very different concerns that these Mesolithic and Neolithic communities had concerning death and the dead. It soon became apparent that the concern for the integrity of the body after deposition was not as systematically observed as it appears to have been in Southern Scandinavia at approximately the same time (Late Mesolithic in Southern Scandinavia corresponds to what in Latvia is called Middle Neolithic, a ceramic hunter-gatherer culture). Many burials were disturbed when stratigraphically younger burials were dug into the ground. It is common for isolated human bones to be included in the filling of later burials. A dramatic example of this can be seen in the double grave 316–317 (*Nilsson Stutz et al. 2008*). This deep and very rich double grave was located in a very densely used part of the cemetery, and it cut through at least five older burials. Large, disarticulated human bones, including a femur, several vertebrae and a sacrum were found throughout the filling. Their position indicates that they were either thrown in with the sediment as part of the filling, or possibly initially belonged to a third individual deposited in the grave with the others, which at a later stage had been significantly disturbed (the analysis of grave 316–317 is ongoing). It appears as if the focus on the integrity of body was linked more to a concern over the place of burial in general, possibly relating to a preoccupation with being part of ‘holy ground’ mixed with the remains of one’s predecessors. As the number of interments on the slopes of Zvejnieki increased, the most central concern became, perhaps, simply being a part of that place, a process which might even have been facilitated

by a fragmentation caused by many generations' reuse of the place. However, just as in Scandinavia, it is possible to see some inner tension and potential contradiction in the practice. The significant depth of some of the later burial pits (up to 60cm in the case of grave 316–317) might indicate that precautions were being taken to prevent a similar destruction by later generations.

In the analysis of documentation from the older excavations, I was also able to demonstrate that wrapping of the body at the time of burial was more commonly practiced at Zvejnieki, when compared to the Southern Scandinavian sites (*Nilsson Stutz 2006*). Wrapping may be viewed as a strategy to reinforce the protection of the body, and I initially viewed this practice as being part of a concern over the integrity of the body, something similar to what I had observed in Southern Scandinavia. However, the frequent wrappings can also be viewed as reflecting something else. Through the wrapping of the body before burial, the dead body is transformed in a way that sets it apart from the living, a practice which contrasts with the 'life-like' arrangements of the bodies in Southern Scandinavia (*Nilsson Stutz 2006*). For the wrapped individual in the double grave described here, the transformation did not end with the shielding of the body, but also involved a covering of the face with a layer or mask of red clay. This practice has been described for other burials at Zvejnieki, sometimes in combination with the placing of amber rings at the level of the eyes of the dead (*Edgren 2006; Zagorskis 1987; 2004*).

This impression of an altered state or transformation at the time of burial would have been an example of the powerful production of a good and controlled death, one that constitutes a stark contrast to what appears to have been the practice in Southern Scandinavia. The body appears to be radically transformed at the time of separation from the living.

It thus seems as if what initially appeared to be a similar mortuary practice is, in fact, a complex web of practices that show both differences and similarities that we can try to trace across time and space in the archaeological record.

Them and us: decoding difference and shared identity

When extending these observations over longer time spans and greater geographic scales – as archaeologists are in the habit of doing – an interesting possi-

bility appears. Perhaps the Mesolithic groups around the Baltic initially shared a sense of affinity and identity, which was expressed in the mortuary practices that contrasted with those of surrounding Neolithic groups, thus reinforcing a sense of shared identity among these hunters and gatherers. But the strategies for the production of social similarity and difference through highly ritualized mortuary practices would eventually change. In southern Scandinavia, contacts with continental Western Europe resulted in a gradual adoption of domesticated animals and plants – and eventually, collective mortuary practices were adopted, which show some similarity to the megalithic practices in Western Europe. While, on the one hand, this is radical, in the sense that the burial in individual pits in the ground is replaced by a deposition of decomposed skeletal remains in a collective grave; the experience of the survivors, on the other hand, may not have been as radical as we may think today, when we consider the archaeological traces of the practices. In fact, we know little about who in the community actually interacted with the remains of the dead and participated in their fragmentation. These practices also seem to have a precursor in the Mesolithic, as bones were deliberately removed from burials in at least one case in Skateholm. In Southern Scandinavian Neolithic rituals, new concerns could have been articulated with the old, which were simply given a new form. This complex relationship between the old and the new allows us to understand how such a transition may have been possible. As the mortuary practices shifted, so did the sense of community, belonging, identity and identification thereby reinforcing a notion of shared experience in Southern Scandinavia and Western Europe.

Along the Eastern shores of the Baltic, in the Comb Ware and Pitted Ware Cultures, and in places like Zvejnieki, mortuary practises showed greater continuity with the previous, widespread Mesolithic core of practices of primary burial. However, new practices and structures, including the covering of the face with clay, the wrapped body and the strong emphasis on place (to the point of overriding other concerns) may suggest transformations shaped by social interactions originating from Neolithic cultural and population expansion from the Near East and South-eastern Europe. Maybe the strongest cultural influences at this time occurred along a route from the Southeast, rather than via North-western Europe.

While some of the points made in this paper are explicitly speculative, the argument made here is that

by being flexible and ambiguous, the ritual production of death holds the capacity for different outcomes at moments of change, like the transition to the Neolithic. Here we can see how cultural change occurs over the long term and takes different directions in different places. In Southern Scandinavia, the primary burials give way to fragmentation and depositions in multiple episodes in collective burials. In Zvejnieki, primary burial continues, but takes on a new shape as the body is transformed at the time of burial. At the same time, the focus on place

intensifies, which results in a redirection of concern away from the body itself. Despite the very preliminary character of this paper as a work in progress, I want to emphasize that by looking at the treatment of the dead body as a central ritual practice, we can start to understand ritual as a process in the past. It provided a structured and structuring tool for mourners to deal with the dead body, and at the same time reconstruct society and community, producing identity and difference.

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The archaeology of death: from 'social personae' to 'relational personhood'

Mihael Budja

Department of Archaeology, Faculty of Arts, Ljubljana University, SI
miha.budja@ff.uni-lj.si

ABSTRACT – *In order to understand rituals in the past, archaeology has long relied on theories and concepts developed in other disciplines. This paper presents concepts concerning burial practices and funeral rituals, ancestors, personhood, and individual and dividual identities.*

IZVLEČEK – *V članku predstavljamo in analiziramo interpretativne koncepte, povezane s pogrebni-
mi in ritualnimi praksami. Posebno pozornost namenjamo ritualom prehoda in konceptom sebstva.*

KEY WORDS – *Mesolithic; Neolithic; rites of passage; personhood; individual; dividual*

Introduction

The burial ritual is a symbolic practice *par excellence* (Žižek 1989.249). The postulate relates to Hegel's 'Phenomenology of Spirit'. Žižek's argument is that the social subject by means of a compelled choice takes upon himself the processes of death and disintegration, and symbolically repeats them, pretending that they resulted from his own free decision as he 'confers the form of a free act on an irrational, contingent natural process'. In other words, there is no denying that we are mortal beings, but we give this 'irrational' natural process a meaning by burial rituals. By repeating such symbolic practices, we try to 'transform' something traumatic, over which we have no control, by pretending that we have a free choice. The basis for Žižek's argument is to be found in social readings of Lacanian theory, and in a triad of psychoanalytical concepts – the symbolic, the imaginary and the Real. Death and disintegration are facts in the realm of the Real that we have to internalise as a ready-made symbolic order. It is left to us to create our own set of imaginings that obscure the ugly, which is often too traumatic to be reproduced without subtle alterations or sublimations, and by our actions that sustain or alter a symbolic order. The bone and skull, passive objects that we can hold and manipulate, are transformed into a 'little piece of the Real' that gives a skeleton an 'immediate effectivity of the Spirit' and makes the buri-

al 'the medium of social domination and power' (Žižek 1989.227–241). The burial ritual is thus a manifestation of ideology – that is, a collective imaginary mask – and empty symbolic gestures that make us accept a given, meaningless reality as our own social construct.

The 'social persona'

In 'new archaeology', an intellectual movement advocating logical positivism as a guide to research philosophy (Earle *et al* 1987.501), the premise that differences in mortuary treatment vary directly with the status of the person within the living community was introduced in the 1970s. Lewis Binford (1971. 19–20) embodied the anthropological concept of 'social persona', suggesting that mortuary customs and beliefs were determined in part by representations of the social identities of the individual, and in part by the extent to which other members of the social group recognised responsibilities to the deceased. It is not only that as the number of social roles an individual held during life increased, so too would the number of symbolic representations of those roles, and that they would be adequately mirrored in the treatment of the body, in grave architecture and in grave goods, but also that the variation in the structure of mortuary data reflects the degree of so-

cial structural complexity characterising the society itself. He argued that (i) 'hunters and gatherers should exhibit more egalitarian systems of status grading, while among settled agriculturalists we might expect more incidences of ranked or stratified non-egalitarian systems of status grading', and that (ii) 'age and sex should serve more commonly as bases for mortuary distinction among hunter and gatherers; while among agriculturalists, social position, as varying independently of age and sex as well as sub-group affiliation, should more commonly serve as the basis for differential mortuary treatment'. Thus 'among the agriculturalists, there are more societies that could be classified as tribes and chiefdoms, while among the hunters and gatherers, bands and tribes of minimal complexity are more common'.

Emphasising the social context of mortuary practices, Binford put forward Hertz's idea that within the same society the emotion provoked by death 'varies wildly in intensity according to the social character of the deceased'. After examining sample data from forty non-state societies Binford (1971:18) premised that 'there should be a high degree of isomorphism between (i) the complexity of the status structure in a socio-cultural system and (ii) the complexity of mortuary ceremonialism as regards differential treatment of persons occupying different status positions'.

In his dissertation *Social Dimensions of Mortuary Practices* Arthur Saxe introduced the spatial dimension of mortuary practices. He proposed in 'hypothesis 8' that 'to the degree that corporate group rights to use and/or control crucial but restricted resources are attained and/or legitimise by means of lineal descent from the dead (*i.e.* lineal ties to ancestors), such groups will maintain formal disposal areas for the exclusive disposal of their dead, and conversely' (*cf.* Carr 1995:122).

Both approaches were based on middle-range statistical generalisations of the variability in mortuary practices acquired from ethnographic and archaeological data. Both interpreted their results as indicating that as societies move from hunter-gatherer or shifting agricultural strategies to settled agricultural strategies, burial practices increase in complexity.

Meanwhile, the Marxist anthropologist Claude Meillassoux proposed the idea that 'subsistence indebtedness' is the agency which in small scale agricultural, kinship based social groups perpetuates permanent and stable links to the ancestors. This maintains

the social hierarchy of the group, and legitimises claims to the land they have settled and cultivated. He explains the idea thus: "*At all times the workers of one [agricultural] cycle are indebted for seed and food to the workers of the previous one, and this cyclical renewal of the relations of production theoretically never ends. As time goes on, it amounts to a change in generation. But at any moment, one man, the oldest of the group, owes his subsistence to none of the living members of his community, but only to the dead ancestors, while all the other members of the community are indebted to him.*" (Meillassoux 1972:99).

The status of ancestors, it has been suggested, is achieved. The dead are required to undergo a series of rites of passage before they can be considered ancestors. They are elected among those dead whom later generations regard as important. The elections vary according to patterns of kinship and property holding. Societies with strong patrilineal descent principles have different ancestors from those with bilateral kinship patterns. Jack Goody (1976; 1990) has thus suggested that ancestors and property are linked among hoe cultivators in household subsistence strategies, but kinship and marriage can be associated with plough agriculture, as part of a strategy of inheritance which safeguards property transmission. Hunter-gatherers have been hypothesised as having 'nothing to gain from a person's death'. As ethnography shows, among the Hadza, Mbuti, Baka and !Kung, ideas about ancestors are weak, and funerals less formal. Among the !Kung, the spirits of the dead (not particular ancestors) are even believed to be a serious danger. Woodburn (1982:207–208) has thus suggested 'that an immediate-return system does not provide fertile ground for the ideological elaboration of death beliefs and practices in general', nor a link between death and fertility or ancestors and community.

Lynne Goldstein (1981:61) reformulated Saxe's 'hypothesis 8', suggesting that "*to the degree that corporate group rights to use and/or control crucial but restricted resources are attained and/or legitimized by lineal descent from the dead (*i.e.* lineal ties to ancestors), such groups will, by the popular religion and its ritualization, regularly reaffirm the lineal corporate group and its rights. The maintenance of a permanent, specialized, bounded area for the exclusive disposal of their dead was suggested to be one means of ritualization*". If a permanent and bounded area for the exclusive disposal of the group's dead exists, then it is likely that this re-

presents a corporate group that has rights over the use and control of crucial but restricted resources. Corporate control 'is most likely to be attained and legitimized by means of lineal descent from the dead, either in terms of an actual lineage or in the form of a strong, established tradition of the critical resource passing from parent to offspring'. The more organised and formal the area for the disposal of the dead, the more conclusive is this interpretation. Goldstein (*l.c.*) admits that when "*considering the wide range of variability in cultures, there is a low probability that certain groups, even when in similar economic and environmental conditions, will symbolize and ritualize aspects of their organization in precisely the same way*". She recognised, nevertheless, that the hypothesis was both significant and useful for archaeologists, as it "*appears that if a particular situation is discovered archaeologically, then statements can be made about social structure as well as the nature of the resource utilised by the society*", and that "*if there is a formal bounded disposal area, used exclusively for the dead, then the culture is probably one which has a corporate group structure in the form of a lineal descent system*".

'Hypothesis 8' was revived in the 1990s, in the period when archaeology became 'a broader, more catholic discipline' (see Earle and Preucel 1987:501). In an atmosphere of strong criticism of 'new archaeology', when the consensus against socio-economic determinism was so strong that the names Saxe and Goldstein did not even appear in post-processualist discussions of the origins of Neolithic burials and funeral practices, Ian Morris (1991:154) reinterpreted the hypothesis such that "*the lineage members do not behave as it is predicted they should, but both ancestor cult and mortuary rituals are conducted in terms of the lineal transmission of property within the descent group: the former stressing the role of the lineage as a whole, the latter the role of household and class interests within it*". Burial contexts thus act as 'arenas' where ancestor cults and mortuary rituals work to mediate the transmission of rights to power and property. The 'cemetery-descent-power argument' was only one of several that bound relationships between people; one person's freedom of access is another's lack of freedom.

Detailed cross-cultural worldwide surveys statistics of mortuary practices of societies characterised by both 'social complexity' and 'agricultural intensity' have suggested that "*social organization and social personae are often not expressed directly in mor-*

tuary practices, but rather are filtered through the framework of philosophical-religious beliefs, world views, and their symbolic codes... Local grave location and formal demarcation of the cemetery most frequently indicated the horizontal social position of the deceased, including his/her lineal descent group". At the same time, these areas are also determined by many other social factors and beliefs about the nature of the soul, nature, cosmologies, and the nature of the afterlife (Carr 1995:189, 191–192).

Binford's premise that 'heterogeneity in mortuary practice would vary directly with the complexity of the status hierarchy' was indeed strongly criticised within the 'post-processual' intellectual milieu. Ian Hodder, Michael Parker Pearson, Michael Shanks and Christopher Tilley among others stated that mortuary rituals are frequently utilised by the living to negotiate, display, mask, or transform actual power or social relations. Parker Pearson (1982) developed these criticisms in his focus on the role of ideology in expressing or concealing the real relations of power within society. Rather than mortuary practices directly reflecting such relations, he argued that the living could manipulate the dead for their own interests. Hodder (1982:141, 146) has emphasised that a burial ritual was not a passive reflection of other aspects of life, and the dead often become what they were not in life. He found Saxe's hypothesis disregards the cultural context that is so central to ideology and ideological functions. He rejected the cross-cultural perspective on principle, saying that "*When individuals act socially, and represent their action to others, they necessarily do so within a framework of meaning, and this framework is relative and historically constructed. Without consideration of the cultural context, one cannot hope to understand the effects of past social actions.*" (Hodder 1984:53). Introducing active individuals, Hodder (2000:25) turned to the practice theory of Bourdieu, Giddens and Foucault. Within this theory, social agents are frequently conceived of as individuals with goals, intentions and subjectivities, and as historical moments in the negotiation of social structure, strategies and relations. Discussing burials, houses, women and men in the European Neolithic, Hodder argued against Renfrew's (1976) and Chapman's (1981; see also 2003) 'processual' interpretation of the social role of Neolithic megalithic monuments in western Europe as territorial markers in segmentary societies, and/or as markers of periods of imbalance between society and critical resources. He suggested instead that megalithic tombs are arenas where 'female reproduction was appropriated

by the lineage', and 'competition between maternal and paternal claims to reproductive and productive resources was resolved'. All aspects of burial and ancestral rituals can be linked to 'the same concern with legitimating control of reproductive and productive resources through an ideology of communal work and participation for the lineage resources' (Hodder 1984:66).

Parallel to this, Julian Thomas (1988) studied the social significances of burial practices in megalith chambered tombs in southern Britain. He recognised 'the transition from the newly dead person to the ancestral bones' and associated secondary burials and feasting through the manipulation of human remains and 'circulation of people, bones, livestock and other material items, in both a symbolic and a real sense'. While the ancestors were hypothesised as 'an omnipresent factor in social relations', social structuring is less evident, relating to gender and, above all, to age categories.

'Rites of passage', secondary burial and 'liminal personae'

The suggested transition from body to bones clearly relates to 'rites of passage' and to the achieved ancestors status that was discussed earlier by the L'Année Sociologique group. Hertz's and van Gennep's processual concept of 'rites of passage' relates to transition rituals that move individuals from one social status to another, reflecting physical changes and altering responsibilities. Funerary rites extend this to the other world and to the ancestors' 'invisible society', affecting both the living and the dead and involving potential danger for each as ritual changes in identity occur. Hertz's concept of 'secondary burial' associates the premise that physical manipulation of corpse relates to beliefs about the soul and the afterlife, and the active remembrance of the dead ancestors. Mortuary rites were to be understood like other rites of passage as marking a transition in the status of individuals, in this case to the 'society of souls'. The English translations of Hertz's essay *Contribution à une étude sur la représentation collective de la mort* [1907], and Van Gennep's work *Les Rites de Passage* [1909] were published in 1960¹. They are now basic and key theoretical reference points for sociological, anthropological and archaeological 'processual' and 'post-processual' work on death. Both emphasised collective representations rather than the individual self.

Robert Hertz's (2004; for the comments see Davies 2000) main focus was on the triad of the body of the deceased, their soul, and the mourners on the one hand, and on the social construction of emotion with the relationship between the biological individual and the social collectivity on the other. The life of a person, he suggested, is a 'succession of heterogeneous and well-defined phases, to each of which corresponds a more or less organised social class'. Each promotion of the individual implies 'the passage from one group to another', which implies collective attention and 'a deep change in society's mental attitude toward him'. The death was interpreted as a 'lasting procedure and that it is a transition that changes the status of a person from being a living member to being a departed member of society'. The corpse is not only a biological entity, but also a social one, closely associated with the moral obligations that attend the treatment of the dead. For Hertz, the word 'moral' is practically synonymous with 'social'. There is a 'natural connection', he suggests, between 'beliefs concerning the disintegration of the body, the fate of the soul, and the social positions of the mourners.' The soul "only gradually severs the ties binding it to this world: it finds a stable existence again only when the representation of the deceased has acquired a final and pacified character in the consciousness of the survivors. There is too deep an opposition between the persisting image of a familiar person who is like ourselves, and the image of an ancestor, who is sometimes worshipped and always distant, for this second image to replace the former immediately. That is why the idea of an 'intermediary state between death and resurrection' imposes itself, a state in which the soul is thought to free itself from the impurity of death or from the sin attaching to it. Thus, if a certain period is necessary to banish the deceased from the land of the living, it is because society, disturbed by the shock, must gradually regain its balance; and because the double mental process of disintegration and of synthesis that the integration of an individual into a new world supposes, is accomplished in a molecular fashion, as it were, which requires time." (Hertz 2004:210). The reduction of the corpse to bones that remain more or less unchangeable relates to the transitional phase, when death has no further impact on the body. It seems to be 'the condition and the sign of the final deliverance', the final act of changing identity. The body is now 'similar to those of its ancestors', and there is no longer 'any obstacle to the soul's entering their community'.

¹ Hertz R. 1960. *Death and The Right Hand* (trans. Rodney and Claudia Needham). Cohen and West, London and Van Gennep A. 1960. *The rites of passage*. Chicago University Press. Chicago, IL.

Hertz correlates the change in identity of the dead with primary and secondary burials. The first relates to the 'wet stage', when the body has decomposed and the identity of the dead is removed from the status it held in life. The second, 'dry' stage confers a new identity pertaining to the realm of the ancestors. He describes a variety of means by which the 'first burial' takes place, whether this involves earth burial, storage in large pots until dissolution occurs, excarnation, or even endo-cannibalism, in which relatives eat the flesh of the dead. In terms of time, mummification and cremation are interpreted as the two extreme forms of funerary rites – the one a very slow and the other a markedly rapid means of coping with the immediate corpse. Secondary burial is associated with the exhumation and transfer of bones to the final burial place and the final ritual ceremony. It is not "*a mere change of place; it brings about a profound change in the condition of the deceased; it delivers him from the isolation in which he was plunged since his death, and reunites his body with those of his ancestors.*" (Hertz 2004.205). This act 'liberates the deceased from the isolation in which he was plunged since his death, and reunites his body with those of his ancestors, and frees the mourners from their mourning obligations, permitting them to return to normal social life'. Secondary burials and their associated rites thus focus on the new identity and status of the deceased and on the changed relationship between the dead and the living. Secondary burial and the recreation of life were later intensively discussed by anthropologists (Bloch and Parry 1982; Metcalf and Huntington 1991).

Using cultural data on the Dayak of Borneo, Hertz suggests that the transitional period between the initial disposal and the final burial lasts from eight months to six years. This provides time for the decomposition of the body, the purification of the bones, the soul's journey, and the liberation of the mourners. In this liminal period, the soul lives marginally in two worlds. It does not belong to the ancestor's world, nor can it resume its existence on earth. The mourners are in a precarious state; they no longer can live as others do; they do not dress or adorn themselves, or eat the same foods as their neighbours, and they may not leave the village. Hertz (2004.204) suggests that "*the final ceremony has thus three objects; to give burial to the remains of the deceased, to ensure the soul peace and access to the land of the dead, and finally to free the living from the obligations of mourning*". In some Indonesian societies, souls are worshipped and set-

led near the domestic hearth in consecrated statuette of the deceased which they animate. Among the Ostyak in Siberia, female relatives make a doll in the image of the deceased. They dress, wash, and feed it every day for two years if the dead person was a woman and, for two and a half years if a man. They then place the doll in a tomb. Mourning lasts four months for a woman and five months for a man. But it seems that the transitional period correlates with the period of doll keeping (*van Gennep 1960.149*). Among the Giriama and Miji Kenda in a Bantu area in Kenya, ancestors are regenerated and embodied in carved wooden posts; some are sculpturally modelled. They animate the power once possessed by the ancestors. While the smaller and simplified posts are placed inside family houses or in the spirit house, some others are inserted at the foot of the grave. These are never moved; even when the people move to a new site, the posts must be left undisturbed (*Brown 1980; Parkin 1991.207–208*).

Writing just before Van Gennep introduced the concept of rites of passage, Hertz based his analysis of Dayak mortuary ritual on ethnographic data in the British Museum that relate to one area of the world. In contrast, van Gennep's approach was based on a wider cross-cultural survey and on the diversity of embodied practices which constitute rites of passage in various cultural contexts. Because of this, Marcel Mauss accused him 'of the British anthropological tendency to go galloping off through the whole of history and ethnography, instead of bringing analysis to bear on a few typical and accurately studied facts'. The critique closely relates to the view of members of *L'Année Sociologique* in the early twentieth century contra Tylor's and Frazer's notions of universal laws based on evolutionary principles as explaining social practices, for example, as historical 'survivals'. It was suggested instead that social practices should be understood in terms of their function and meaning in the present. Levi-Strauss also took this view, stating, "*Explanations by survival are always incomplete, because customs do not vanish or survive without reason. When they survive, the reason is to be found less in the viscosity of the historic process than in the durability of a function that analysis of the present should make it possible to discern.*" (*cf. Hockey 2002.210*).

Hertz and Van Gennep interpret funerary rites in a similar way. They identify the transitional phase, which is central to the trajectories in which individuals move between social positions, and are concerned with how individuals produce and manage

social change on the one hand, and how to regenerate and stabilise the social order on the other.

For van Gennep, rites of passage are transition rituals that move individuals from one social status to another, from one social and personal identity to another. They are performed in critical periods in the life of the individual, e.g., at birth, social puberty, marriage and death. He described the status passage rituals as a threefold process with phases of separation, segregation, and integration. He proposed (1960.21) “to call the rites of separation from a previous world, *preliminal rites, those executed during the transitional stage liminal (or threshold) rites, and the ceremonies of incorporation into the new world post-liminal rites.*” In other words, the tripartite ritual structure comprising: passage out of a previous phase or social status; a liminal or, an ambiguous time and space between fixed positions; and an entry into a new social position or period. The spatial element is important, since change of status often involves a change of locality.

The liminal phase is central in funerals, since the individual and their survivors undergo extended processes of transformation prior to eventual incorporation into new social contexts such as the world of the ancestors. Mourning is also a transition. “*Mourning, which I formerly saw simply as an aggregate of taboos and negative practices marking an isolation from society of those whom death, in its physical reality, had placed in a sacred, impure state, now appears to me to be a more complex phenomenon. It is a transitional period for the survivors, and they enter it through rites of separation and emerge from it through rites of reintegration into society (rites of the lifting of mourning). In some cases, the transitional period of the living is a counterpart of the transitional period of the deceased, and the termination of the first sometimes coincides with the termination of the second – that is, with the incorporation of the deceased into the world of the dead.*” (van Gennep 1960.146–147). Van Gennep suggested that during mourning, the living mourners and the deceased constitute a special group embedded between the world of the living and the world of the ancestors. Social life is suspended and the length of the period depends on the closeness of their relationship and/or degrees of kinship, but not on the period of physical composition, as Hertz suggests. However, both suggest that funeral rites involve a parallel process in which the individuals become ‘part of each other’ in a way that each identity is made up of other people’s agency.

Following Van Gennep’s conceptualisation of limen, Victor Turner (1969.95) introduced the concept of ‘liminal personae’. These are not embedded anywhere, “*neither here nor there; they are betwixt and between the positions assigned and arrayed by law, custom, convention, and ceremonial. As such, their ambiguous and interminate attributes are expressed by a rich variety of symbols in the many societies that ritualize social and cultural transition. Thus liminality is frequently linked to death, to being in the womb, to invisibility, to darkness, to bisexuality, to the wilderness, and to an eclipse of the sun and moon*”. Turner attached this anti-identity to ‘liminal entities, such as neophytes in initiation or puberty rites that may be represented as possessing nothing’. They may be ‘disguised as monsters, wear only a strip of clothing, to demonstrate that as liminal beings they have no status, property, insignia, secular clothing indicating rank or role, position in a kinship system; nothing that distinguish them from their fellow neophytes or initiands’.

‘Relational personhood’

In the intellectual milieu outside archaeology, the concept of the person discussed since Marcel Mauss ([1938] 1985.20) is that the idea of the individual is unique to Western thought. “*Up to the seventeenth and even up to the end of the eighteenth century, the mentality of our ancestors is obsessed with the question of knowing whether the individual soul is a substance, or supported by a substance: whether it is the nature of man, or whether it is only one of the two natures of man; whether it is one and indivisible, or divisible and separable; whether it is free, the absolute source of all action, or whether it is determined, fettered by other destinies, by predestination.*” According to Mauss the idea that the ‘person’ equals the ‘self’, and the ‘self’ equals consciousness, and is its primordial category, are Cartesian notions. And there were philosophers – Hume, Kant and Fichte – who conceptualised the person as a well-defined, stable entity with impermeable boundaries and a unified and essential core. The concept of the bounded individual as the paradigm of the person thus gives jural, moral and social significance to the mortal human being, the empirically observable entity. It was suggested that this view was irrelevant to past communities with different conceptions of death, the body and personhood, on the one hand. On the other, we need to distinguish between the ‘individual’, ‘self’, and ‘person’ as biologist’s, psychologist’s, and sociologist’s

conceptualisations of human beings. The concepts differentiate the individual as a human, the self as the locus of experience, and the person as the agent in society (Harris 1989). The concept of personhood that recognises the important social and collective component of one's identity – although surviving in such contexts as the recognition of social persona expressed in mortuary rituals (see Gillespie 2001) – was favoured over the individual as an actor and not a reflection of the social order (Hodder 1986).

In his plea for an 'anti-humanist' approach in archaeology Julian Thomas (2002.34; 2004; for discussion see Knapp and van Dommelen 2008) suggests that the greatest importance is that "once we recognise that no aspect of identity or embodiment is sufficiently knowable for their universality to be established, the potential difference of the past can be more fully appreciated". When we cast aside the 'image of the autonomous individual' a series of 'other possibilities for ways of being human' appears. He suggests that, on the basis of an examination of Neolithic burial contexts in which human bones and artefacts were deliberately broken and rearranged in secondary deposits, a Neolithic embodied person can be understood as partible and dividual, as temporary combinations of substances 'tied into encompassing flows and processes of circulation' Human bones, he suggests, "continued to have a 'life' of sorts following their transformation in mortuary ritual", and the dead were still integral parts of society (Thomas 2002.42; see also Thomas 1996). It is worth noting that a similar proposal was introduced by John Chapman (2000a; 2000b). The social relations between the living, the deceased and the ancestors are mediated 'through many material forms, one of the principal are bones', he suggests. In this interpretative paradigm, human bones and/or fragmented artefacts do not simply symbolise kinship, but constitute it with the aid of two parallel processes, of 'enchainment' and 'accumulation'. The practice of the manipulation and selective removal of body parts, with or without recombination, is "a statement about the continuity of social relations across the frontier of death" (Chapman 2000a. 144). The removal of bones to selected domestic or mortuary contexts redefines the social relations between the living and those dead who become ancestors by keeping the essence of the dead alive through the materiality of their bones. This attitude to the body relates to the constitution and transformation of identities and ways of living, to what have come to be called different aspects of personhood that are not identical to or compatible with modern

western notions of bounded individuality. Discussing the Neolithic sense of personhood, Chapman and Thomas actualise Strathern's and Wagner's concept of personhood and notion on 'dividuality'. Strathern summarises personhood as "what is drawn out of the person are the social relationships of which it is composed: it is a microcosm of relations" (cf. Kirk 2006.344). In the treatment of the dead, Chapman recognises a distinction between 'dividual' and 'individual' notions of personhood. While the 'individual' person is represented undivided in the burial of the complete articulated body, the 'dividual' can be associated with the burial of body parts or bone deposits (Chapman 2000a.145; see also Chapman and Gaydarska 2007.53–70 and Jones 2005).

The association of bodies with other substances, animals, and pottery and stone artefacts is to be related to the fragmented and multi-faceted 'dividual'. Marilyn Strathern (1988; 1998) describes how Melanesian people exist as 'dividual' and 'partible' persons, and that persons are constituted through social action. She argues that persons are composed of relations with others and the ongoing relationships in which each person engages. The dividual perception (feature) of the person stresses that each person is a composite of the substances and actions of others; each person encompasses multiple constituent things and relations received from other people. It is not only substances that are parts of each person, but also objects or even animals that are incorporated into the person by the agency of ceremonial gift exchange. In a funerary rite, all of these different elements of the person are brought together around the deceased. The rite thus brings the person together. The implication is that, while alive, the person is distributed throughout the social and material world, and only becomes a whole person temporarily during this mortuary rite. All the things that the person embodies are brought together and made explicit for everyone to see. They are then divided again, and these parts are redistributed through mortuary exchanges (for details see Fowler 2004). Thus personhood is neither fixed nor stable; it is a composite and partible 'artefact' that marks the handling of relationships through the possession and manipulation of things, especially those that conceptualise wealth and exchange.

It would be interesting at this point to introduce what Knapp and van Dommelen (2008.20) recognised as 'taking the same ethnographic cases for arguing and opposing points of view'. They point out a different reading of Strathern's understanding and

interpretation of the dividual and of the partibility of persons. They suggest that “*Thomas (2002a.34) maintains that the concept of ‘individuality’ is incomprehensible in the Melanesian situation where ‘dividual’ identities emerge from various pre-existing relationships, and persons are conceptualized only as amalgams or hybrids of different relations and substances.*” For Thomas (2002.34), Strathern is arguing that individual agency can only be understood in relational terms, and that one person’s actions can only be seen in terms of another’s: the corollary is that “*no aspect of identity or embodiment is sufficiently knowable for universality to be established*”. For Meskell (1999.33), Strathern is describing “*multiple selves that are aspects of individual persons: the corollary is that agents act within relationships and are revealed as a result of those actions.*”

In an interview published recently in the *Journal of Social Archaeology*, Marilyn Strathern elucidates the dilemma, suggesting “*In fact, that is very much like one colleague’s complaint that he has never met a dividual. No, of course, of course dividual and partibility are to do with how people discriminate and classify different dimensions of the person. So, yes, I can look at this colleague and if I were a Papua New Guinean, I would probably be very interested in his relationships with his maternal kin and his paternal kin and be interested in how he embodied these two relations... because the way you relate to your paternal kin is very different from the way you relate to your maternal kin. Here is the dividual. When the difference becomes materialized, and you then give gifts to your maternal kin that you derived from your paternal kin, and you then trace that chain of relationships, there is a sense in which the maternal kin have extracted those gifts from you, but it does not imply my good colleague cutting off his arm... I comment on my understanding of the partibility of persons, and the way the person in Melanesia is in a sense owned, not in the sense of property but in the sense of being owned by another person. Let me give you an example. If you are in a patrilineal context your maternal kin are very important because they supply supplementary nurture, so without your maternal kin your paternal kin cannot flourish, and you cannot flourish. You are forever in debt. So you repay with wealth and whatever, giving pigs and food and money, and so forth. The gifts stand for that bit of you that your maternal kin own and own completely. That is, you are them, so this goes back to Eduardo Viveiros de Castro’s perspectivism. The*

maternal kin have a perspective on their nephew: this is my man, this is my nephew, and that relationship is a complete one. So, how the nephew appears is as a whole entity, you know, the nephew isn’t at that point divided, the nephew appears complete and totalizing in the regard of his maternal kin. And, reciprocally, they to him. Which is very different from the fact that he can then switch perspective, and he can then think about his paternal kin, to which his maternal kin are simply an adjunct – this is changing perspectives. So, the kind of literalism of parts and wholes that we English-speakers have, that language won’t do; in other words even when one starts to talk about parts and wholes, we are introducing a whole trail of assumptions from our own cultural nexus.” (Borić 2010.286–287).

Strathern argues that the irreducibility of the individual is a peculiarly modernist notion. Not all cultures regard the individual as a single entity “*bounded and integrated, and set contrastingly against other such wholes and against a natural and social background*” (Strathern 1988.13, 57, 131). The Melanesian ‘person’ is conceptualised as a ‘composite of relationships, a microcosm homologous to society at large’. Thus, in contrast with the ‘western individual’, this ‘dividual’ person objectifies relationships and makes them known.

Nurit Bird Dawid (1999) has introduced into the discussion the concept of relational personhood. The notion is based on an agency of ‘relatedness’ that creates personhood by producing and reproducing sharing relationships with neighbouring others, humans and spirits. Bird Dawid relates this concept to the Nayaka, forest dwelling hunter-gatherers of Tamil Nadu in South India. By maintaining relationships with other beings to reproduce their personhood, they reproduce the ‘devaru’ – a dividual person – of the other beings with whom they share. The ‘devaru’ is drawn into interrelating and sharing, and so into Nayaka kinship relations. Nayaka thus refer to both the spirits that inhabit the landscape and the spirits of their own predecessors by terms that translate as ‘big father’ and ‘big mother, and to themselves in relation to these spirits as sons and daughters. Relational personhood makes the Nayaka descendants of the spirits of the landscape. Grandparent are ancestors, because they were there before you, and because they guide you through the world, but you are not descended from them. A certain stone and/or animal may reveal itself to be ‘devaru’ if it ‘comes towards’ or ‘jumps up onto the lap of Na-

yakas'. The stone is brought back to its places 'to live' with them.

It is important to note that Strathern and Bird-Dawid have focused on systems of relations and their role in the constitution of both person and culture, and have been dealing with abstract forms of relationality, or modes of relating which make persons composed dually of 'dividual' and 'individual' elements. We must be careful, Andy Jones suggests, totalising neither the 'dividual' nor the individual (Jones 2005: 196). He focuses on social practices, on the ways in which persons are produced and performed through networks of relationships, differing in each historical context and involving both people and materiality.

It seems that Whitley's (2002) intervention in post-processual archaeology in terms of saying that Neolithic ancestors are 'omnipresent and omnicompetent' correlates accidentally with the new interpretative trajectory in which the dead body can be seen as another form of material culture manipulated by the living, perhaps mourners. Both artefacts and bodies were governed by the principles of the agency of partibility and circulation. Thomas has suggested (2002: 42), similarly to Brück (see below), that artefacts and bodies "...formed elements in a more general 'economy of substances', which involved other materials. Both artefacts and bodies could be broken down into parts, and artefacts at last were made by putting different substances together. The strong inference is that human bodies were not understood as bounded and separate entities, but as temporary combinations of substances, tied into encompassing flows and processes of circulation. The fleshed body of a living person might not have been perceived as the 'normal' state of affairs, or even as the only configuration of the body which had a social presence."

Joana Brück (2001a) has conceptualised 'relational personhood' archaeologically. She emphasises power as an agency which is located either 'within the wider set of social relationships', or 'in the natural world or in gods, spirits, and ancestors'. This leads her to hypothesise that not only a 'number of different sources of power and the range of social identities' existed in the Neolithic, but also that different agencies of power 'produce socially adept and active persons who work within the flexible milieu that constitutes society'. The practices carried out at Neolithic monuments thus might have 'produced forms of authority and identity that were contingent or temporary' parallel to those within areas of profane

practice. She argues that the social technologies of pottery, animal and crop husbandry and metalworking were also technologies of the self, conjoining the person and the world. (Brück 2001b; 2004; 2009). She has postulated that the exchange and circulation of both artefacts and the remains of the dead, "*facilitated biological, social, and material reproduction through sequences of fragmentation, mixing, and amalgamation. As such, the circulation of objects during the British Bronze Age did not result in the production of elite individuals. Instead, it constituted the person as a relational entity, an aggregate of substances that could be combined, reordered, and dispersed through exchange with others.*" (Brück 2006a: 93)

Despite critics who suggest that recent archaeological studies of death and burial have perpetuated the hegemony of the living over the dead in understanding past mortuary practices, and that the tendency to see the dead body as simply another form of material culture manipulated by the agency of mourners is "*one of the most unhelpful cross-cultural generalizations implicit within contemporary archaeological theory*" (Williams 2004: 265), the interpretative postulates of 'relational personhood' remain stable (see also Ingold 2000: 132, 151).

Treatment of the dead has been shown to be important for the realignment of personhood after death. It is believed that the manipulation of dead bodies was associated with ancestral rites and monuments on the one hand, and was used to reinforce the existing social order through the construction of collective memory on the other. It was recently demonstrated how body parts or bones acted as metaphors for the dividual nature of the person, and how they were central to the affirmation of identities, and the power of the living (Berggren and Nilsson Stutz 2010; Brück 2001; 2004; Chapman 2000b; Morris 2000; Fowler 2001; 2004; Fahlander 2008; Fahlander and Estigaard 2008; Graham 2009; Guerrero et al. 2009; Kuijt 2008; Nilsson Stutz 2003; Thomas 2000). It has been suggested that in the re-creation of a new body for the deceased, objects with metaphorical connections to the maintenance of the person were used; and artefacts, and human and animal bones acted as extensions of the body, and as metaphors for the transformation of the deceased and the realignment of the self of both the living and the dead, and the reproduction of society through cyclical processes of fragmentation, dispersal and re-incorporation (Williams 2003; Brück 2004; 2006a; 2006b).

Instead of a conclusion

Hertz argued long ago that death is not an event, but a process of transition in which the physical body and the changing identity of the deceased continue to be closely connected throughout the primary and secondary funeral and within ancestral rites. In different cultures the dead are often believed to influence and control the manner of their treatment, their identities and remembrance through a dialogue with the living during the mourning. Recently, in relation to this dialogue, perceptions of bounded and autonomous individual have been rejected in favour of persons who are not static, but socially relational. They are 'dividual', owing 'parts of themselves to others'. They may be 'partible' and reconfigurable through the extraction or receipt of objects or substances; or they may be 'permeable', permea-

ted by qualities which alter the composition of their own substance (Fowler 2004.8–9). In other words, it has been suggested that "*the person was thought of as a fractured and relational entity interpermeated with other selves and containing traces of past places, people and events brought together in novel combinations*" on death (Brück 2006b.311). This certainly has implications for an understanding of both social reproduction and social transformation. The exchange of artefacts and of human bones facilitates the production of the self and the reproduction of society through cyclical processes of fragmentation, dispersal and reincorporation on the one hand. On the other, both people and artefacts 'can be thought of as materialized memory, where memory is neither fossilized nor static but a constant productive process'.

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Monuments and monumentality: the cosmological model of the world of megaliths

Magdalena S. Midgley

School of History, Classics and Archaeology, The University of Edinburgh, UK
Magda.Midgley@ed.ac.uk

ABSTRACT – Neolithic monuments are physical and conceptual expressions of ideas about the nature of the world inhabited by early north European farmers. This contribution explores the complex symbolism encoded in megalithic architecture, and the socio-ritual interactions within which megaliths offered venues for public gatherings in which individuals participated singly or as members of larger groups. By bringing communities together – be it in thanksgiving, worship or pilgrimage – megaliths bridged the gap between the immediate, quotidian and local realities of life and the anomalous entities of the multi-dimensional universe in which past, present and future were given tangible permanence.

IZVLEČEK – Neolitski spomeniki so fizični in konceptualni izraz idej o svetu zgodnjih severno evropskih kmetovalcev. V razpravi se ukvarjamo s kompleksnim simbolizmom megalitske arhitekture in socialno-ritualnih interakcij, povezanih z javnim zbiranjem in delovanjem posameznikov ali večjih skupin na treh prostorih. Z druženjem pri molitvi in čaščenju ali romanju so megaliti premostili vrzel med vsakdanjo in lokalno življenjsko stvarnostjo ter nenavadnimi entitetami v večdimenzionalnem svetu, v katerem so preteklost, sedanost in prihodnost otipljiva stalnica.

KEY WORDS – *architecture; burial; duality; megaliths; symbolism*

Introduction

Among the various monuments built by the Neolithic communities in northern Europe, none are more evocative than the megalithic tombs. Their dramatic presence and aura of mystery have aroused curiosity, vestiges of which survive in ancient folklore and superstitions, with megaliths variously seen as resting places of kings and heroes, or as abodes of mischievous spirits. Mediaeval chronicles and early epics convey the more scholarly engagements with these monuments, followed by the interests of antiquarians, whose images, as well as early speculations, provide a rich source of knowledge still waiting to be explored (*Midgley 2009*).

With the emergence of the discipline of archaeology in the nineteenth century, a new scientific climate created an intellectual framework which enabled

scholars to explore novel directions. This was a time when the formal characteristics of megalithic architecture in Europe began to be defined, among which morphology, typology and ideas of diffusion dominated the field of megalithic research until the middle of the twentieth century. The subsequent impact of radiocarbon dating, accompanied by changing paradigms of processual and subsequently post-processual approaches, have shifted the emphasis towards the consideration of Neolithic views of the world, as they display themselves through forms of megalithic architectural diversity, local ancestry and shared images and metaphors (*Bradley 1998; Renfrew 1973; 1976; Sherratt 1990; Tilley 1996; 1999*).

Megalith building in northern Europe, as elsewhere, may be considered as one of the great Neolithic

crafts. The craftsmen – master builders and their apprentices – combined exceptional technological expertise with an equally important symbolic knowledge. Not only were they designing complex monuments and solving architectural problems; they also understood the symbolic requirements of such structures and possessed the esoteric knowledge of rituals needed for the megaliths to function within the cosmological order of the Neolithic world. It is this symbolic aspect of the megalithic monuments that is explored in this paper.

Megalithic architecture: brief chronology, site location and principles of construction and use

Megalithic tombs in northern Europe were built by communities known in archaeological terms as the Funnel-necked Beaker Culture (*Trichterbecherkultur*, or in its abbreviated form TRB; Midgley 1992). The construction of monumental funerary architecture commences, towards the end of the fifth millennium BC, with earthen long barrows: monuments characterised by timber burial chambers, wooden facades and huge earthen mounds. From about 3700 BC onwards, the timber chambers are progressively replaced by stone chambers, and this tradition continues until 3100/3000 BC (Dehn and Hansen 2006; Persson and Sjögren 1996).

The distribution of megaliths in northern Europe displays an interesting pattern, with concentrations (for example, on the Drenthe plateau, in Mecklenburg, along the coastal regions of Scania, on the Danish isles or on the Falbygden plateau, Västergötland) which are interspersed with areas where tombs appear more scattered (Bakker 1992; Ebbesen 1975; 1978; Schuldt 1972; Sjögren 2003). This clustered versus scattered distribution reflects the historical cultural development across different regions of northern Europe and is further augmented by variations in topographical locations involving coasts, moraine ridges, river valleys and navigable passes, related to the local geographical and social conditions. Moreover, in both coastal and inland locations, megaliths appear to have been closely associated with the movement of people and may have played an important role in the overall network of contacts and communication within and between different regions.

The classification of north European megalithic tombs conventionally follows the Scandinavian sequence, first fully defined by J. J. A. Worsaae in 1843, employing the earlier antiquarian terms such as

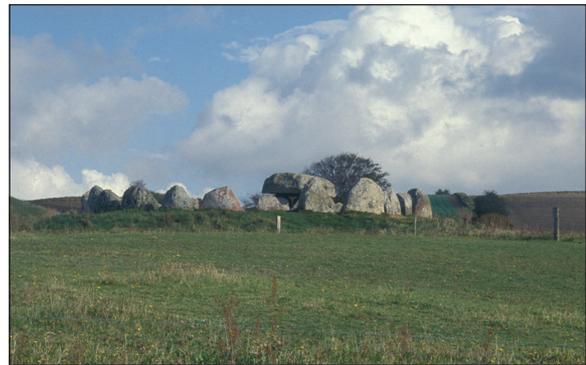


Fig. 1. Principal types of megalithic tomb in northern Europe: a) Long dolmen at Munkwolstrup, Schleswig, b) Round dolmen at Poskær Stenhus, Jutland and c) Passage grave at Grønnehøj, Zealand.

Stendysse (dolmen, further divided into *Runddysse* – a dolmen in a round mound – and *Langdysse* – a dolmen in a long mound) and *Jættestue* (passage grave; Fig. 1; see Midgley 1992.Ch. 9 and 2008. 23–28 for further discussion of typology and terminology).

The building of a dolmen or a passage grave is an extraordinary engineering feat demanding great skill and expertise, as well as a profound knowledge of the different properties of building materials. Megaliths could be substantial structures, requiring months of work and a skilled workforce – foremen

and master builders – to oversee the building projects. The design of some chambers required particular skills: standing boulders on end; allowing – already at ground level – for the pressure which the capstones would exert on orthostats or, indeed, manoeuvring those huge capstones onto loose intermediary stone layers (Fig. 2).

The early, mostly closed dolmens, constructed from 3700 BC onwards, may well be stone replicas of the earlier timber chambers, whose own architectural complexity must have been substantially greater than the surviving vestiges suggest (Midgley 2005). The transition from a closed to an accessible chamber heralds not only an architectural, but also an important functional change, facilitating repeated access to the interior. In northern Europe, this is most dramatically demonstrated in the emergence, at about 3350 BC, of a new and sophisticated architectural form, the passage grave (Bakker 1992; Hansen 1993; Hoika 1990; Schuldt 1972). The culmination of this architectural form is the highly sophisticated twin passage grave, a form comprising two chambers – each with its own passage – pivoted around a common wall consisting of one or two orthostats (Dehn et al. 1995; Dehn and Hansen 2000); some of these chambers are mirror images of one another in shape and ground plan, underlining not only the skill and ingenuity of the builders, but also the symbolism associated with Neolithic concepts of duality.

The refinement in architecture was accompanied by an increased complexity in burial practices: the initial emphasis on individual interments within the timber chambers and closed dolmens gave way to a greater concern with the dead in their ancestral capacity, which involved, among other things, the deposition of fragmentary human remains. Some

tombs continued to receive complete bodies (for example, the passage graves of the Falbygden plateau, Ahlström 2003; Sjögren 2003), while elsewhere secondary burial was important (Andersen 1997; 2000; Kaul 1994; Midgley 2008.Ch. 4); in most cases ancestral bones were subject to various manipulations involving further selection, rearrangement and display.

The provision of entrances to the chambers also created foci for ceremonies outside the tombs. The intentional deposits of pottery, stone and flint tools placed in the vicinity of entrances – at the foot of the kerb, in niches or along the stone shelves – suggest that communication with the dead was important, and public ceremonies may have involved many participants. The ritual scenarios could have included festivals of the dead, vigils for the ancestors and supernatural beings. The bones of the dead, especially the skulls, may have been brought out of the chambers in awe-inspiring display, accompanied by dancing, singing, feasting, recounting of myths and initiation ceremonies.

Symbolism of megalithic architecture

There are a number of interesting aspects of megalithic architecture which suggest that megaliths, together with other contemporary sites, were the physical and conceptual manifestations of the multi-dimensional universe of Neolithic farmers, and that a closer analysis of some of these aspects may lead us to a better understanding of Neolithic cosmology.

Modern ideas on aesthetics, which have developed mainly since the Renaissance, may not be entirely appropriate for the analysis of colour, texture and design of the megalithic tombs. While we should not assume that aspects of beauty would not be pleasing

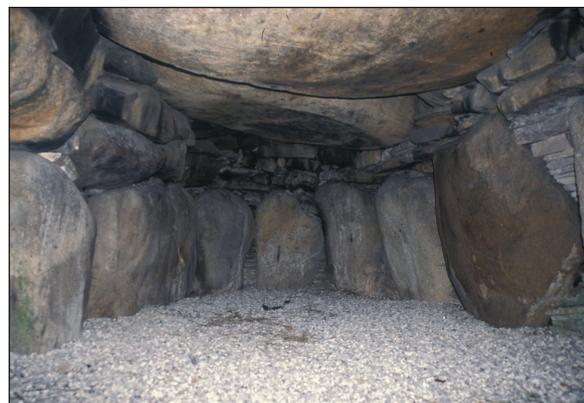
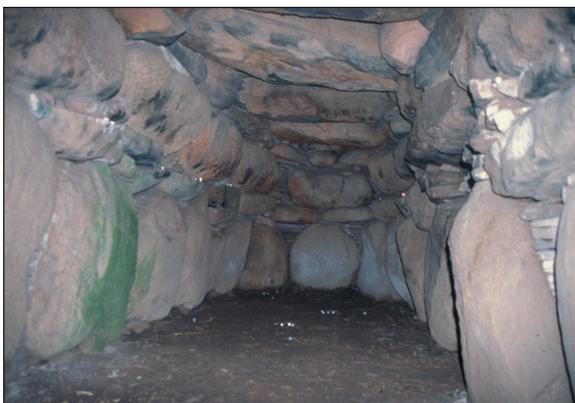


Fig. 2. Examples of construction using intermediary layer in passage graves: a) Røvehøj, Zealand b) Øm, Jutland.

or appreciated, it is more likely that they offered a medium through which one could symbolise the mysteries of the world and the powers of the supernatural. In this context, we may consider some unusual aspects of megalithic architecture: the texture and form of the raw materials and the significance of colour, as well as other features which cannot be explained by the exigencies of structural necessity.

Megalithic architecture may be said to be full of contrasts and contradictions which need not relate to structural requirements, but rather may have been symbols of social and religious aspects of Neolithic cosmology. Thus it has both visible and hidden aspects: we see the mounds and chambers, but we do not necessarily see other elements which ensure that megaliths functioned both physically and symbolically.

Megalithic architecture contrasts the light of the exterior with the darkness of the interior, and it also juxtaposes the horizontal and vertical – the upright orthostats linked by the horizontally arranged dry-stone walling (Fig. 3). The hard boulders contrast with the softer materials such as the earth or clay used on the floor and in the construction of mounds, perhaps reflecting the composition of the human body – the hard bones and the softer flesh.

There is also a powerful colour play: dark grey, red or white – the latter particularly seen in major structural elements such as boulders, dry-stone walling, burnt flint on the chamber floor or white sheets of bark which, inserted between the dry-stone slabs, cushioned the impact of the weighty capstones, but also added to the symbolic and aesthetic aspects of the chamber interior.

Quartzite capstones – for example, at Grønøjagers Høj on the island of Møn, or Bakkebølle on Zealand – must have been selected for their dramatic impact not only in terms of colour, but also on account of their massive shapes. The desire to create colour-specific facades is demonstrated at megaliths across the whole of northern Europe: at Kong Svends Høj the granite, porphyry and pegmatite boulders combine to make a red-coloured south-eastern façade, and contrast with the grey character at the opposite end (Dehn *et al.* 1995:142). The western facade of

the Grønøjagers Høj dolmen employs tall red stones that contrast dramatically with the white capstone covering the burial chamber (Fig. 4); the long dolmen at Nobbin, on Rügen, is flanked with massive red guard stones (Midgley 2008: Figs. 3.10, 3.13).

Recent investigations of the orientation of passages in a sample of Danish and Swedish passage graves suggest that they may relate to certain celestial events such as sunrises and the first full moonrises after spring and autumn (thus coinciding with such important agricultural activities as the sowing and harvesting of crops; Clause *et al.* 2008; Hårdh and Roslund 1991). The dramatic colours of the facades and other visible colour components may therefore have enhanced further the already theatrical settings for ceremonies outside the tombs that took place at such defined times within the annual cycle.

Another important architectural element was burnt white flint, commonly used in places where it could be seen: on the floor of the chamber or as a mantle covering votive deposits outside (Midgley 2008: 153, 158–159). Apart from architecture, artefacts used in burial ceremonies bring the colour scheme to the interior of the chambers: amber beads and necklaces placed with the dead vary in colour from white, yellow-green, brown, orange to very dark red. Such shades, especially on amber discs, could symbolise the sun and moon at different times of day and night.

The significance of colours in the Neolithic is difficult to ascertain, but clearly there was a mythical and symbolic relationship between the colour and architecture of the tombs. It has been argued that the famous triad of red, white and black – which ap-



Fig. 3. Orthostats and dry-stone walling at the passage grave of Knudshoved, Zealand.



Fig. 4. The red-coloured western façade of Grønjægers Høj dolmen, island of Møn.

appears universally in many cultures past and present – was among the earliest and most emphatic symbols, related to a vivid interpretation of life on earth and in the hereafter.

The view commonly endorsed by archaeologists follows the work of the anthropologist Turner on the metaphorical significance of these colours related to the products of the body: white symbolising semen or mother's milk, red symbolising blood, bloodshed and animals; and black, associated with excreta, being symbolic of death and fertility (Turner 1967).

However, there may be other schemes based on universal human experience which offer wider interpretations: white could denote day, black signify night, red fire, yellow the sun, and so on (Wierzbicka 1990). Greens and blues were present everywhere: the multiple blues of the sky or water of the lakes, rivers and sea, and the many shades of green in the forests, fields and meadows. While such colours do not feature in artefacts or the surviving structures we see today, they must have been part of the general cosmology of the Neolithic and imbued with symbolism related to gods in the sky and spirits of the forests and fields; indeed, the north European bogs and mires – with the spontaneous combustion of marsh gas – also provided ideal abodes for supernatural beings.

Expressions of duality

Recent research in Denmark (Dehn and Hansen 2000; 2006) has shown that under half of Danish megalithic chambers contain stones which were deliberately split from a single erratic – a fashion which may have continued from the original splitting of tree trunks for use in timber-built chambers. Such split stones were, in fact, already noted in the 19th century (Reverend William Lukis spotted them in 1878 while investigating some of the Drenthe megaliths with Sir Henry Dryden; Bakker 1979), but only ever considered in purely technological terms. A search through the megalithic literature reveals this splitting of stones to have been a common phenomenon throughout northern Europe. Indeed, along the Atlantic façade, the splitting of large menhirs taken from stone alignments and subsequently used as capstones in passage graves emphasises the idea of continuity and the symbolic significance of incorporating older monuments into new (Cassen 2009; Cassen et al. 2000; L'Helgouac'h 1983).

In northern Europe, the employment of these stones is far from erratic: in simple dolmens, such twin stones are commonly placed opposite each other. They may form capstones: the twin from the Poskær Stenhus dolmen is to be found on another dolmen, 2km away (Eriksen 1999). In passage graves, they

are arranged in complex fashions: they may serve as corner stones, and sometimes they stand side by side opposite the entrance, or placed as alternating capstones; an exceptional arrangement comes from Kong Svends Høj on the island of Lolland, where five pairs of twin stones were used in important positions (*Dehn et al. 1995.Fig. 57*).

However, the most dramatic expression of a concept of duality is found in the construction of so-called twin passage graves, of which about thirty examples are known from north-west Zealand, with a few scattered on the islands and in north Jutland. The twin passage graves are all very complex architectural forms which were conceived and executed as a single building project: either built as one long chamber, with two passages divided by two orthostats, or in the most elaborate version, built around a common orthostat. These chambers have interesting architectural features which cannot be regarded as essential to their construction, and so must express symbolic requirements. Thus, the left chamber is generally larger and better built: the orthostats are taller, more regular in shape; the dry-stone walling is of superior quality and the common orthostat is better integrated (*Dehn and Hansen 2000; 2006*).

In the twin passage grave at Troldestuerne in north-west Zealand, the two chambers are, in fact, mirror images in shape and ground plan, making it clear that existing differences were by design and not mere accidents of construction (Fig. 5). In western Zealand, this principle was also applied in the construction of two single chambers: Grønnehøj and Ubby Dysseod, which stand 70m apart and also display identical, mirror-image ground plans (*Dehn and Hansen 2006.59–60; Dehn et al. 2000*).

Such forms of duality are difficult to account for, but since they clearly are not functional, they must relate to the social or religious aspects of communities. In the simplest terms, they could represent the coming together of two separate groups, to form an alliance through marriage or some other form of partnership which was then symbolised in such a joint venture. By erecting a truly ambitious architectural structure, the communities could gain prestige and, through the mutual veneration of ancestors, express their commitment to one another.

But there are other exciting possibilities. The cosmological structure of the later Nordic Bronze Age society, especially the concept of the Divine Twins – a pair of principal divinities in the pantheon of Proto-

Indo-European religion who rule the upper realm – has recently been explored in great detail by Kristiansen and Larsson (2005) in their book ‘The Rise of Bronze Age Society’. While they tentatively suggest that some elements of twin rituals may date further back, to the third millennium BC, they curiously conclude that there was little to suggest anything precise on the nature and role of twin male ritual.

Although we know virtually nothing of the religion of northern Neolithic communities, simple duality pervades all life and would have played a role in their cosmology: the duality of nature and culture, day and night, right and left, man and woman, kin and stranger, life and death. The later concept of twins ruling the upper realm may have been rooted in the Neolithic – initially reflecting the normal life experiences of day and night, sun and moon, timber and stone, and the agricultural cycle – eventually acquiring the more specific meaning familiar to us from Bronze Age mythology.

While this is a topic which merits exploration at greater length elsewhere, one may note the double burials of children at the cemetery of Borgeby in Scania, not far from the Gillhög passage grave, as one example of such pairings. While the excavator’s idea of at least one burial being that of twins cannot be proven, the children’s necklaces with amber beads in the shape of double battle-axes provide a very poignant example of paired symbolism (*Runcis 2005*).

The so-called stone packing graves from north Jutland – linear cemeteries of double rows of single graves arranged in up to three pairs – offer another powerful example of duality, irrespective of whether they were created to express a religious or a social concept (*Becker 1996*). Moreover, duality in the juxtaposition of building materials – most emphatically of timber and stone – may further emphasise cognitive notions linking and separating the important spheres of the living and the dead.

Primal religions comprise several notions of duality. There are, for example, harmonies of opposites which cannot exist without one another: black/white, light/dark/ male/female, sun/moon. Further, there are dualisms characterised by a cosmic conflict between opposing forces – right and good opposed to wrong and evil. And, finally, there are dualities representing differences between spirit and matter, as expressed through conflict between body and soul (*Whaling 1985.46–47*). Thus, duality in the context

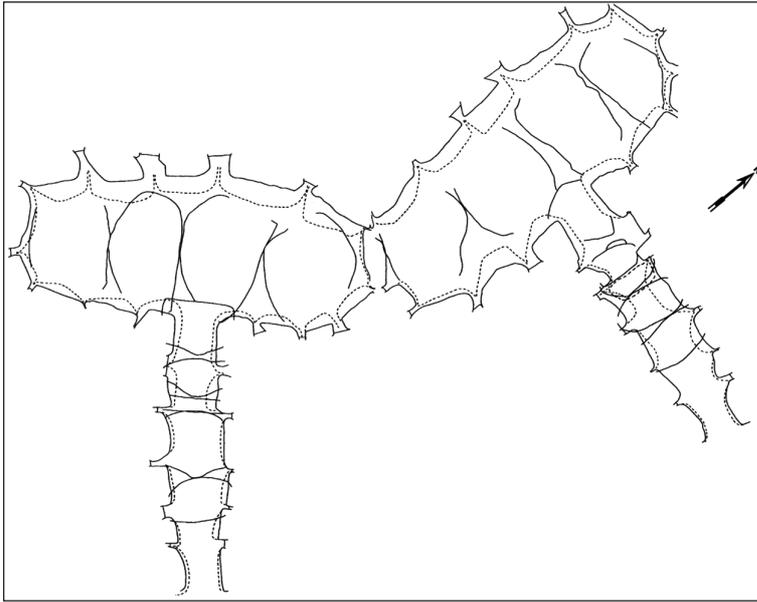


Fig. 5. Ground plan of the twin passage graves at Troldestuerne, Zealand; the two chambers are mirror images of each other, rotated along the main axis running through the common orthostat (Source: Dehn et al. 2000).

of north European megalithic burials – in the form of different yet complementary pairings expressed in raw materials and architectural elements – may reflect several notions brought together.

Beliefs about the soul

Discussion of beliefs about the soul in the Neolithic is naturally fraught with difficulties, but religious beliefs may have been quite important. Ethnographic evidence suggests that different communities have different ideas with respect to the fate of the individual after death. Some do not believe in any form of afterlife: the Hadza or the Pygmies, for example, say that “*When you’re dead, you’re dead, and that’s the end of you*” (Woodburn 1982:195). On the other hand, many communities, implicitly or explicitly, have a view of an afterlife and, in particular, on the fate of the spirit or soul of the departed. Indeed, the manipulation of secondary human remains – especially skulls – may be related to the veneration of ancestors, but may also reflect the beliefs of the living about the spiritual element of the dead – the soul.

The classic ethnographic exposition by Hertz emphasised the significance of the relationship between the decomposition of the body and the journey its soul is making to the world of the dead (Hertz 1960). The transit of the soul – as mirrored in the process of bodily decomposition – is often seen as

difficult, fraught with trouble and danger, and the funerary practices are designed to facilitate this process. Notions about an afterlife often seem to be idealised versions of life on earth: grave goods such as tools and utensils, or favourite jewellery and dress, were actually meant to accompany the dead to the other world and, indeed, food offered to the dead was the valued food of the living.

Votive deposits in front of megalithic tombs

That people came to the megaliths at times other than burials is shown by the intentional deposits of artefacts – pottery, stone and flint tools – placed at various times in the vicinity of entrances (Midgley 2008: 148–154). Such activities formed

part of a much wider practice that involved placing items in bogs, at lake shores, at causewayed enclosures and possibly even on settlements – relating the various sites to one another and creating a network of ritual acts which, at different times, may have involved large communal gatherings, small groups or even individuals.

Communication with the dead was clearly important. While single acts of communication between the living and the dead are archaeologically virtually unidentifiable, ethnographic evidence from many parts of the world suggests that conversation between individuals and their dead relatives – taking place outside the formal ritual framework – is an almost daily occurrence, and that it forms an important element in the life of individuals and offers a medium through which personal requests and solicitations can be made.

Public forms of communication that involved larger numbers of participants, on the other hand, are attested not only through the accessibility of the chambers and the manipulation of the bones of the deceased, but also in the numerous acts which took place in the vicinity of the megaliths. Pots outside the tombs – either singly or in sets – were placed on stone shelves arranged on top of the kerb at either side of the entrance, in niches between the kerbstones or on stone pavements in front of entrances. In the later part of the TRB, most likely after mega-

liths were no longer built, but still used by descendant communities of the original builders, the pottery was replaced by stone and flint tools – most typically axes, which were also destroyed: broken or, more commonly, burnt.

As Hertz (1960) argued a long time ago, sacrificed objects must be destroyed in this world if they are to pass to the next. The broken pots outside the megaliths (the kinds mentioned here) may have symbolised the fragmentary bones in the interior; being made of earth, they may have emphasised concepts of fertility and the agricultural cycle, already marked by the siting of tombs on ploughed fields. The destruction of flint tools by burning changed the usable ‘living’ flint into a white ‘dead’ matter – another apt metaphor of transformation in the context of burial ritual.

Such acts in the vicinity of the tombs would have been accompanied by feasting and dancing, with songs and the recounting of myths, and the scenarios associated with such activities may have involved festivals of the dead, vigils designed for the ancestors or even for higher-order deities, access to whom was mediated by the dead resting inside the chamber.

While megaliths are, without doubt, the most enduring and visible structures of their time, the investment in ceremonial landscape extended well beyond their construction. Indeed, Neolithic life in general – in addition to quotidian activities – appears to have been punctuated by a vast range of ritual and ceremonial acts at different places, in which individuals could participate either singly or as members of larger groups. We may include here cult houses, sites in bogs, mires and waterlogged areas, where votive offerings were placed, or enclosed ceremonial sites that provided venues for larger public gatherings, bringing several communities together for thanksgiving, worship, pilgrimage and possibly even facilitating social and economic encounters with strangers (Midgley 2008:167–175).

The tradition of votive offerings in waterlogged environments began in the Late Mesolithic, continuing throughout the Neolithic. The votive deposits may comprise just one category of items, or a combination of artefacts together with human and animal remains. While bogs and mires may have been liminal and numinous environments, they were also places in which to deposit goods – food, tools and ornaments – beneficial to communities. Indeed, such

votive offerings – while perhaps designed to appease powerful spirits – could also be considered as acts or rituals carried out by, or on behalf of, skilled craftsmen.

Skilled craftsmen in non-industrial societies are frequently at the interface of different cosmological worlds, and form a link with the “ancestral” master craftsmen, with the source and origin of a particular craft. Skilled crafting – be it the manufacture of objects or performance of acts such as oratory, dance, myth-telling, body painting, navigation, to name but a few – is the ordering of nature for cultural purposes (Helms 1993). Thus, acts of crafting are important social transformations, just as the objects themselves are transformations of raw materials into things beneficial to the community: amber into amulets, flint into useful tools, wet clay into containers, tree trunks into canoes, stone and timber into massive structures, plants and animals into food. The outside realm provided raw materials which were transformed into social good. Returning some of these to where they metaphorically belonged, to the world from which they originated (ancestrally), may have been at the very core of such votive acts.

Similarly, while causewayed enclosures were places where burial rites and ancestor worship took place, other activities brought the world of human existence into a relationship with the outside realm. Dance, music, songs, the telling of myths and recounting of heroic exploits may also have featured prominently in ceremonies conducted at these sites. Enclosures may also have served as places of exchange, where strangers could arrive with desirable exotic items to exchange them for locally available goods. Indeed, transactions and relationships with strangers demand behaviour and attitudes different from those that operate among kith and kin, and enclosures may have provided suitable places where such formal encounters were possible.

Conclusion

This paper has highlighted some of the complex problems which face us in our interpretation of the north European megalithic tombs and other sites which form part of the vast ceremonial landscape. The adoption of agriculture and of an increasingly sedentary lifestyle was accommodated in northern Europe by an important cosmological restructuring, in which a temporal dimension was added to the already existing spatial dimensions.

The natural landscape was not only being transformed through new agricultural practices, but new structures were being placed upon it. Natural and cultural forms and notions were placed together: land was ploughed, ancient rocks – gathered on the surface or extracted from quarries – were moulded into new shapes, and life, death and rebirth became incorporated into one never-ending cycle.

In the cosmological model of the Neolithic world, the megaliths bridged the gap between immediate, quotidian and local realities and the anomalous entities of a multi-dimensional universe in which the dead, the living and the spirit world constituted the physical and conceptual expressions of the very core of Neolithic ideas about the nature of the world.

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In search of rituals and group dynamics: correspondence analyses of Neolithic grave fields on the Island of Gotland in the Baltic Sea

Paul Wallin

Department of Archaeology and Osteology – Gotland University, SE
paul.wallin@hgo.se

ABSTRACT – *In this paper, I analyze two Neolithic grave fields on Gotland (at Visby and Västerbjers) belonging to the Scandinavian Pitted Ware culture. The burials at the two sites are of males and females from all different age groups. They were buried with some variability concerning grave rituals and grave gifts. The aim of this paper is therefore to make a relational multi-varied Correspondence Analysis of the individuals and their artefact variations to enable new contextual interpretations.*

IZVLEČEK – *V članku analiziramo dve neolitski grobišči na Gotlandu (Visby in Västerbjers), ki pripadajo skandinavski kulturi jamičaste keramike. V grobiščih so pokopani moški in ženske vseh starosti. Opazne so razlike v pokopnih ritualih in grobnih pridatkih. S pomočjo multivariantne korespondenčne analize posameznih pokopov in sprememb v artefaktnih zbirih predstavljamo novo kontekstualno interpretacijo.*

KEY WORDS – *Gotland; Neolithic; Pitted Ware; burials; correspondence analyses*

Introduction to relational archaeology

The Neolithic graves and grave fields of the Pitted Ware tradition on the island of Gotland were discovered at the end of the 19th century. The graves have been studied both in general ways (*Stenberger 1943; Burenhult 2002*), comparatively (*Janzon 1974*), and in more detail (*Fahlander 2003; 2009*). However, this is the first time two of the grave fields (at Visby on the West coast and Västerbjers on the East coast) have been compared by using relational statistics. Relationships in archaeological material remains can be observed both at local and regional levels, and statistical aids can give guidance towards *relevant similarities* and *differences*. Such relations can also be compared with general or particular features observed locally or regionally, and perhaps beyond these levels. Studies of relationships, resemblances and differences are of course the basis of all archaeological studies, and have been so since the early days

of archaeology (*Montelius 1885*). Relational concepts that stress individual and local stories have been discussed since the 1980s within contextual approaches in archaeology. This removed the focus from the material remains, and statistical methods were considered not applicable when dealing with cultural studies and, therefore, questioned (*Hodder 1986; Shanks and Tilley 1987*). This was a reaction against the hypothesis testing processual use of statistics as a method. The acceptance and dismissal of such hypotheses were used as interpretations of the past and presented as the results of objective science (*Clarke 1968; Binford 1983; Renfrew 1973*). It was argued that statistics could produce more or less true models of past societies. As a reaction against this view, Shanks and Tilley (1987:27) wrote: "*Interpretation cannot be reduced to a methodology. We decry methods as a way back to an absent past*

and refuse a rigorous methodology. Method must instead be understood to arise out of a practical confrontation with the object”.

From this position, the object (material remains) is the core of analysis, but the object studied can only tell us something about how it is interpreted in the present view of the past. However, from this point of view, it seems that some of the meanings of contextual archaeology may be lost. Hodder later argues that material culture was also produced in a narrative experience in the past, which means that two narratives have to be considered – ‘my’ and ‘their’ narratives (Hodder 1993:279). In this study, I therefore confront the graves – the object – and make a construction of the graves’ relations to other graves; and their variations and similarities are observed. Of course, this gives me a present view of past relations, but at the same time, the object observed was produced in the past, where it also had its own narrative. The expressions or narratives communicated in the past were practised differently at different times, which means that as an interpreter, I also present different narratives of past events. These differences, I argue, are due to the different rhetorical expressions also produced in the past. Therefore, the aim of this paper is to discuss what was communicated through the material culture observed, based on the graves (at two defined grave fields) from a certain time horizon. However, in this study, the individual graves are seen not just as individual cases, but rather as parts of how communities in the past expressed their group dynamics and identity through individual agents (*cf.* Hodder 1993).

Methodological and theoretical aspects: relational statistics – correspondence analysis

The theoretical foundation of relational archaeology is, I believe, tied to French relational sociology developed mainly by Pierre Bourdieu (Bourdieu 1977; Bourdieu & Wacquant 1992). The starting point in Bourdieu’s sociological method is the construction of the studied object into a field consisting of all possible relations between the individuals and variables investigated (Broady 1991:485–513; Bourdieu & Wacquant 1992:232). In my view, relational archaeology is also closely tied to the practical side of Bourdieu’s work (not only his theories), where Correspondence Analysis (CA) is a vital element that has to be included. Therefore, some background to the method needs to be presented for a better understanding of why and how I will use CA.

The French statistician Jean-Paul Benzécri (1992) developed CA as a method for social studies in the 1960–70s (Broady 1991:473). This French origin may be the reason it has not been used in an extensive way in Anglo-Saxon dominated archaeological research until more recently (Baxter 2003). Attempts have been carried out (Bölviken *et al.* 1982; Madsen 1988), but the approach used was of the Anglo-Saxon processual kind, and there is a fundamental difference in the use of statistics in these two traditions, principally in how they use statistics. The French school takes the position that statistics produce new hypotheses (Broady 1991), while the Anglo-Saxon approach has been to use statistics to produce answers to specific questions that can be answered or not (Madsen 1988). The use of statistics is then quite different, and in this paper, I favour the French approach.

CA investigates relations between individuals and variables within a defined field. This means that the individual (the find unit) is treated in the same way as the variables to which it is linked, as well as contrariwise. Furthermore, the graphic presentation that is part of the outcome of the analysis gives a visual and clear view of the relations detected in the material studied. Generally, the field studied consists of a system of relations among the positions individuals and variables given by the analysis. The main part of the analysis discusses and reflects on the importance of the relations given (Broady 1991:462). This may result in hypotheses about the visible relationships illuminated through the analysis. When using CA as a method, different kinds of field – for example, cultural, social/status and spatial – can be constructed and considered in the analysis. Within the fields analysed, the individuals and/or variables can be identified and studied in detail.

Age and sex are important variables when it comes to aspects of social organisation in egalitarian societies, or in classless/unstratified societies. The importance of gender has been discussed by, for example, Godelier (1986) in his studies of New Guinea tribes. He claims that in classless societies, differentiations are made firstly between males and females, as well as within the sexes – in his case, especially among the males (Godelier 1986:xi). The biological determinations of sex are clear, but it is not equally clear how gender is culturally constructed and used within local groups, and the tribe. A way to understand such constructions is to analyse certain specified contexts (Conkey 1991:65) – in this case, the individuals buried at two Neolithic grave fields. The division

of age is also a fundamental biological fact in social construction. Age is also of importance beyond the kinship structure, and can be divided in different ways: for example, into age sets, where certain persons of the same age are placed in groups (who are linked to each other for the rest of their life), and age grades, which consists of a series of life stages visible in, for example, different rites of passage (Keesing 1981.275–278; Bernardi 1985; van Gennepe 2004).

When it comes to the Neolithic graves on Gotland, the field has been defined (constructed) in the following way: the buried person – and the artefacts found in association with them – is placed in a relation to other buried individuals and their artefacts. The buried individual is also placed in a space of relations, given the individual's, for example, age, sex, grave orientation, and body position/arrangement. This means that the individual buried is a find unit, and that the artefacts, and other characteristics are variables to which that individual is linked. This information is tabulated and finally analysed by CA. The free software program WINBASP (that, among other things, includes CA analysis) can be used and downloaded. The result provided by the analysis is subsequently presented in a graph made with the same program. The result of the graphic presentation must be studied carefully, and it can be necessary to make decisions concerning certain variables that are too extreme. Such variables are identified as outliers in a cluster and can be excluded and, instead, described outside the analysis as unique. Such corrections are necessary to make other discrete relations among the remaining variables visible.

Ritual activities and group identity

A burial is the result of social praxis expressing ritual behaviours. In this act, certain conventions are expressed. This can be observed, since the act was repeated and expressed with some variations at each burial. The death of a family/lineage member, of course, created a turbulent situation that had to be controlled in some way. Here, certain rituals known (for generations) by group members helped stabilise the situation. In this situation, rituals also deal with possible conflicts that can arise as a result of death; however, rituals also deal with both social and individual expression in the internal as well as external spheres (Bell 1992.171–173). Ritual also exposed wealth, which can be expressed both at an economic as well as a symbolic level. The Neolithic grave ritual dealt with both these expressions, but

when different artefacts are placed in the grave they are turned mainly into symbolic expression, except when certain imported objects that also have economic value were deposited. Here, it is time to return to some theoretical tools which Bourdieu uses in research dealing with the symbolic side of wealth. His concept of *symbolic capital* (or symbolic wealth) has been defined by Broady as follows: “*Symbolic capital is recognised by groups in society as valuable, and is therefore ascribed value*” (Broady 1991.169 my translation). This means that value and wealth can be expressed by all those actions that are recognised and valued by a group closely which is closely linked by family or kinship ties or other group identities. This relation between values and group ties has also been described as social capital (Bourdieu and Wacquant 1992.119). This could explain the different treatments and body orientations observed in grave material, and differences are suggested to express different statuses and group attachments. Such expressions involve competition between the families/groups that are involved to maintain and heighten the groups' or certain individuals' relationships (Broady 1991.179). Closely tied to the wealth/capital concept is habitus: it is through habitus that symbolic/social wealth works. Habitus can be expressed as social experiences, collective memory, and sets of thoughts and how people act in group and as individuals. It is a structure that people are supposed to follow without being aware of it (Broady 1991.225).

Local and regional Correspondence Analysis analyses of Gotlandic grave fields

In this analysis, two grave fields from the Pitted Ware tradition on the island of Gotland were selected for further analysis. The sites are located at Visby on the West coast, and at Västerbjers on the East coast of the island. The Visby site was discovered below medieval layers and has been known since 1865. Parts of the site were excavated during various construction works in the city streets *etc.* Most of the graves were published in the thesis ‘*Gotlands mellanneolitiska gravar*’ (Janzon 1974); additional graves were subsequently described by Flyg and Olsson (1986). The grave field at Västerbjers was published by Stenberger (1943) and has also been discussed by Malmer (1975; 2002) and Zaers (2007). This study is based on data published in these studies.

Both sites have fifty-one osteologically analysed graves; the grave fields each cover an area of about 90

x 60m, or some 500m² (Fig. 1). This makes the two sites relatively comparable. The variables used that are tied to the units (the grave, see typical Pitted Ware grave in Fig. 2) in the analysis are as follows:

- ① Grave rituals expressed by body position, orientation, stone packing, indications of fire and red ochre.
- ② Determinations of individual biological characteristics such as sex and age.
- ③ Finds of artefacts associated with the buried individual; artefacts can be divided into working/hunting tools (both locally made and imported), ornaments or cloth applications (of teeth, bone and amber), and other animal bones and ceramic vessels.

Correspondence analysis of the Visby graves

The total number of graves at the Visby grave field that could be used in the analysis is fifty-one; of these, eight are osteologically determined as women and twenty-four as men; eight were young individuals of around 0–18 years (not determined to sex). Eleven others derived from partly destroyed graves, or for other reasons their sex remains undetermined. In general, this indicates an uneven distribution of the population in favour of males. A likely high mortality rate among infants is not observable in the preserved grave material. This could indicate that not all individuals were buried in the same grave field, or that some graves have not been found, or destroyed *etc.* Another explanation may be that there were different ways of treating the dead. There might have been open exposures on platforms to decompose the corpse, and the bones scattered around the area, which may explain the existence of scattered human bones found on Pitted Ware sites (Wallin and Martinsson-Wallin 1996). Another possibility is that some individuals were disposed of in the sea. The individuals actually buried in the ground (generally at a depth of only 25–60cm from the present surface) indicate a unified expression of their status, with some individual distinctive features.

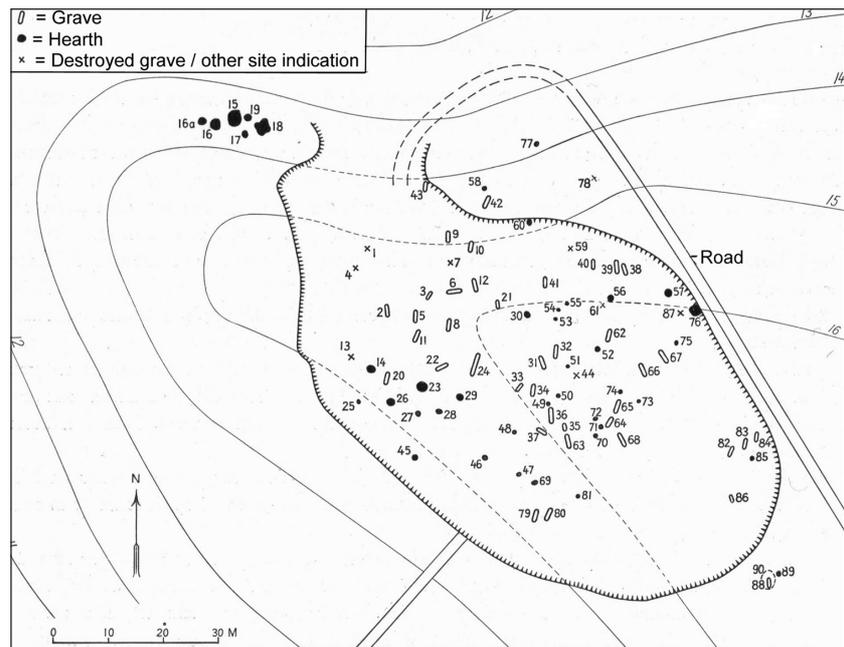


Fig. 1. Overview of the Neolithic grave field at Västerbjers (after Stenberger 1943).

As indicated in the Visby case, three clusters are defined by the CA analysis: (1) an adult female cluster, also including infants below seven years of age; (2) an adult/mature male cluster; and (3) a cluster indicating children over seven and juveniles up to about twenty years of age (Figs. 3 and 4). One can clearly see the sex and age differentiation in the material. Clear status indications are more difficult to determine among the buried individuals. However, let us make a closer observation within the defined fields to make further distinctions within/between the graves.

The female/infant cluster (Cluster 1)

This cluster indicates that all women that have been osteologically analysed are adults (18–44 years). This cluster also includes the youngest children, infants (0–7 years). These individuals were usually supine with the head in a northerly orientation. Ochre pigment was also used in the graves of some individuals. Artefacts especially linked to these women are imported polished south Scandinavian flint axes and flint flakes. Other artefacts associated with these individuals are beads made from teeth (mainly seal canines), arrowheads (of flint and bone), ceramics and pointed bone tools and pig-boar tusks. The fact that small children also appear in this cluster (they may all still have been nursing) indicates that they were treated similarly to these women. This may indicate that, since they were close in life, they were also close in death. Another general fact concerning this grave field is that there were no mature female

burials, which strongly indicates that they were treated in some other way. This may indicate that there were age grades, and the construction of female gender at Visby may be indicated by the presence of certain artefacts (imported flint axes) and the ritual use of red ochre, and the absence of mature (old) women.

The male cluster (Cluster 2)

The buried and osteologically analysed males belonged to adult individuals, also including the mature/senile age groups (approx. 35–64 years). The males were mainly supine, with heads to the north; however, some were also placed on the side or in the hocker position (mainly among the mature), and some individuals were placed in different orientations, with the head to the south, east, and west, which was rarely the case among the females. Artefacts especially associated with males are stone axes (greenstone), bone/antler harpoons/barbed points, and large stabbing-pointed antler tools (*Malmer 2002*). However, males were also found with ordinary artefacts, such as pointed bone tools, pig tusks, ceramics *etc.* If following the idea that the artefacts in some sense thus reflected what the individuals did in life: the adult males which were given harpoons and the stabbing tool of antler are associated mainly with seal hunting or hunting in general. The stone axes indicate woodwork/clearing of woodland *etc.* No males were buried with flint axes, although a few graves included flint flakes. The gender construction of males indicates or confirms the general view of adult males as hunters. All age grades among males are present, and differentiations may be visible in the fact that young boys are under-represented and that mainly mature males have differing body positions and orientation.

The children/juvenile cluster (Cluster 3)

This cluster indicates persons whose sex could not be identified. The age within the cluster varies be-



Fig. 2. Typical Pitted Ware grave on the Gotland Island (Photo: G. Burenhult).

tween around 7 to 20 years. Some of the older juveniles have sex indications, which suggest that both males and females are represented here. Artefacts associated with this cluster are fish hooks, tooth beads, long bones removed from birds (some are dress applications/necklaces, some are bird calls/whistles), arrowheads (bone/flint) and amber beads. The grave ritual preferred for these individuals indicates that they were placed supine with the head to the north, but there are also some placed with the head to the south. There are also traces of fire, stone packing, and the use of ochre. The finds of fish hooks, bird calls and arrowheads indicate that fishing and bird/small game hunting can be associated with young individuals of both sexes. The presence of mixed field of young individuals may strengthen the idea of age sets, as well as age grades. A gender mixed age group that might have been specialised indicates that the society was arranged so that its members did different things at different ages, which means that the age sets were ‘trained’ together (*cf. Keesing 1981.275*). It also indicates that these individuals may not have gone through a certain rite of passage/initiation into the adult world (*Godelier 1986.31–36*).

Correspondence analysis of the Västerbjers graves

In total, fifty-one graves at Västerbjers could be included in this analysis. Of these, sixteen were women, nineteen men, and eight young individuals from around 0–20 years whose sex could not be determined. Eight persons derived from partly destroyed graves, or were in other ways not suitable for sexual determination. Generally, this indicates an even distribution between the sexes within the studied population. A likely high death rate among infants is not present in the preserved grave material and the number of children/juveniles may therefore be under-represented, since they comprise only 20% of the total.

The same division into three clusters appears in the CA of the graves at Västerbjers, as follows: there is a cluster of females (Cluster 1), a cluster of males (Cluster 2), and a cluster indicating children above seven and juveniles up to about twenty years of age (Cluster 3) (Figs. 5 and 6). Sex and age differentiation is therefore visible in the material, as it was at the Visby site. Some general status indications can also be traced in the material, mainly in the male field, but there are also indications that certain females were favoured and given certain grave goods

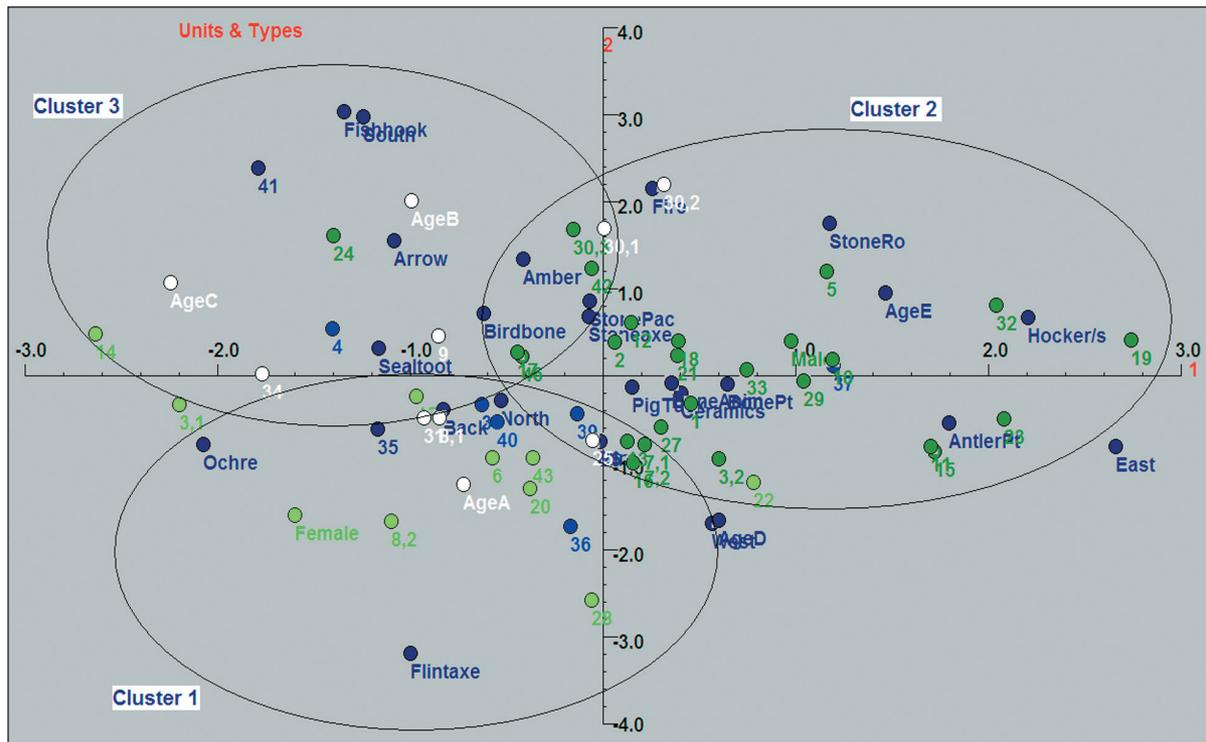


Fig. 3. The correspondence analysis of the Neolithic grave field at Visby. Legend: light green dots – females; dark green dots – males; white dots – children; light blue dots – sex undetermined individuals; dark blue dots – different variables tied to the individuals.

on an individual basis. Some graves may also be described as ‘poor’ in terms of the amount of preserved grave goods. This general description indicates that there was age grading and differentiation within the sexes. The inequality is also visible in the low representations of children/juveniles, which raise questions as to who are they, and why some of them been buried in this way and others probably not. And, was parental status transferred to these children, or did they in fact qualify themselves in some way?

The female cluster (Cluster 1)

This field indicates that osteologically analysed women are mainly adults (approx. 18–44 years), but thirty per cent of these are mature/senile individuals (approx. 35–64 years). The adult individuals were placed supine, oriented with the head to the north; among the older individuals, there is an easterly orientation. Artefacts especially associated with females are stone axes (greenstone), fishhooks, tooth beads (canines, mainly from seals), bone scrapers/chisels, pointed bone tools and ceramics (small bone tools like ‘chisels’ and points *etc.* can possibly be used as ceramic decoration tools, to make pits and lines on the surface of pots) (Wallin 1995:4). The females can thus be associated with fishing, hide processing, and ceramics. The stone axe may be seen as a gene-

ral female status indicator given to 50% of the women – eight of eleven stone axes were found in female graves, (only one of this kind was found in a male grave). Three women were also given flint axes, then in combination with a stone axe. The female gender construction at Västerbjers indicates activities carried out in the domestic sphere. An age grade differentiation is visible, and material status is expressed among the young adult group, from which a few individuals can be singled out (Malmer 2002; Stenberger 1943). Older females were subjected to a different burial ritual, including different body orientation.

The male cluster (Cluster 2)

The adult age group dominates the field (75%), which means that the mature age group is represented by only 25%. Males are mainly placed supine, with the head towards north, or south among some of the old individuals. Artefacts associated with males are flint axes/blades, harpoons/barbed points, amber beads, flint/bone/slate arrowheads. General artefacts like bone scrapers and pointed bone tools are also represented among the males. The male population at Västerbjers may mainly be associated with hunting, but also with leather preparation/work. It is also noticeable that imported goods such as flint, amber and possibly slate are status indica-

tors. For the males, the flint axe/blade is a general status indicator. The male gender construction here is the same as at the Visby site, since they can be associated with big game hunting – of seals – but probably also pigs for ritual feasting, as indicated by the bone material found at the site (*Wallin and Martinsson-Wallin 1992*). Age grading and material status is clearly visible through the representation of imported south Scandinavian flint axes and amber. Status indications are not only visible in relation to the lower rate of old males, but also seen within the younger adult group (*Malmer 2002*) and expressed in some graves rich in artefacts, such as graves 24 and 67.1 (*Stenberger 1943*).

The children/juvenile cluster (Cluster 3)

This cluster indicates persons whose sex could not be determined; the age within the field varies between approx. 7 to 20 years. They are mainly buried supine, or on the side/hocker, with various head orientations. The children placed in the side/hocker position also had fewer artefacts (1–3); this is also in common among adults placed in this position. Few finds is, however, a general feature among the youngest individuals (with a few individual exceptions). Artefacts especially associated with this field are long bones cut from birds (some are dress applications/necklaces, some are probably bird calls/whistles), tooth pearls (especially seal canines, possibly used as dress applications), bone plates that may have been archery protection, or used in a belt (*Malmer 1975; 2002*). These artefacts indicate that

the children/juvenile individuals may have hunted for birds and small game. This mixed field is in some ways similar to that at Visby and may be an indication, as mentioned above of, certain age sets with special activities carried out by them which trained them to work together.

Correspondence analysis of regional trends

To make a regional analysis, all graves were analysed together as a unit. This CA produced a quite different result. The general picture is that there seems to have been a quite common way of conducting the grave ritual, in the sense that the buried person was given artefacts and often placed on the back, with the head to north. However, male and female are not distinguished in the regional analysis, since different artefacts were associated to construct male and female gender expressions at the two sites.

Three different clusters are distinguished in the CA (Fig. 7). There is a central cluster (Cluster 1) representing adult males and females. There is a widely spread cluster to the right in the diagram (Cluster 2) indicating children and juvenile individuals, and there is a lower cluster of individuals dropping out below the other two clusters (Cluster 3) that represents the mature/senile age group.

The central cluster (Cluster 1)

As can be seen in the CA diagram (Fig. 7), males and females merge together in the regional analysis. This cluster is also dominated by the adult age group (approx. 18–44 years). Males and females merge for the following possible reasons: at Visby, flint axes and flint flakes were associated with females, and stone axes (greenstone) with males; the reverse was the case at Västerbjers. At Visby, side/hocker deposition, with eastern head orientation was mainly associated with males, which is a more mixed feature at Västerbjers. At Västerbjers, a body position with a southerly head orientation is seen among some of the males, whereas this

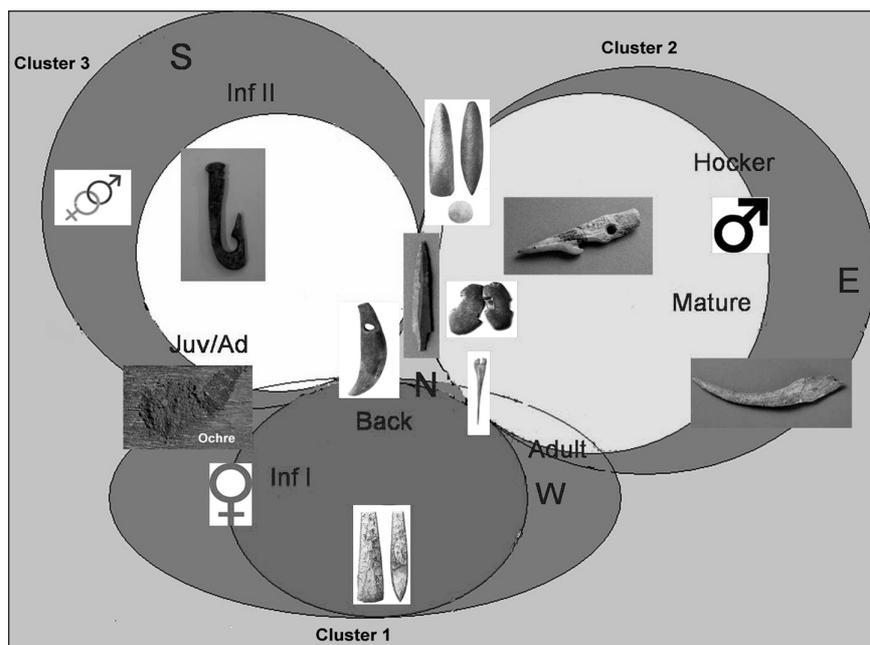


Fig. 4. The interpretative figure of the correspondence analysis of the Neolithic grave field at Visby.

These are variables associated with the burial ritual, which means that this age group was generally not distinguished by grave goods, but instead by the ritual itself. However, tooth beads are commonly found in children's graves, and were possibly applied to clothing and thereby followed the child into the grave. Questions that need to be further discussed elsewhere are why this age category is under-represented, and who qualified for burial. Furthermore, a few children were deposited with grave goods – was this an expression of status, and if so, what gave certain children status?

The lower cluster (Cluster 3)

To this cluster we ascribe the oldest individuals in society, the mature/senile group. The most prominent variables associated with this group are variable grave orientations with the head to the north, but as in cluster 2, also significant representations to east, south and west, as well as the side/hocker position. A couple of different find categories also appear – the large stabbing antler point (imported status indication) and a 'round stone'/grinding stone. As with the children, importance seems to be expressed in the grave ritual and not in the artefacts present in the graves. Importance also may have been attributed to organic objects. It is also clear that this group was under-represented, especially by females at Visby. Here, some questions also arise: why did old people in general have fewer grave goods com-

pared to the adult group, and why do non-material values appear to give status in this group, are they placed outside the status rivalry that is shown among the productive adult age group?

Discussion of regional and local distinctions

When analyzing the total regional population, age differentiation seems to be the fundamental distinction, and it is expressed quite similarly in the two populations. This is seen in that the adult group, which is the productive/reproductive group, have a quite uniform grave ritual expressed mainly by placing the body in a supine position, with the head oriented to the north (with some exceptions). In this group, the artefacts indicate distinctions and, in some cases, also express status through imported objects. Furthermore, the youngest and oldest individuals are associated with distinctions expressed in certain grave rituals. This suggests that if age grades were a sign of differentiation, this was expressed in a way that was visible among the younger adult men and women due to their greater involvement in the daily social life of the community (*Legesse 1979:61*). The artefacts for everyday use may express activities with which females, males and juveniles were associated in society, both locally and regionally. Age seems to have been deeply rooted in the habitus of the collective mind of the entire 'Pitted Ware' population. Linked to this, there may have been

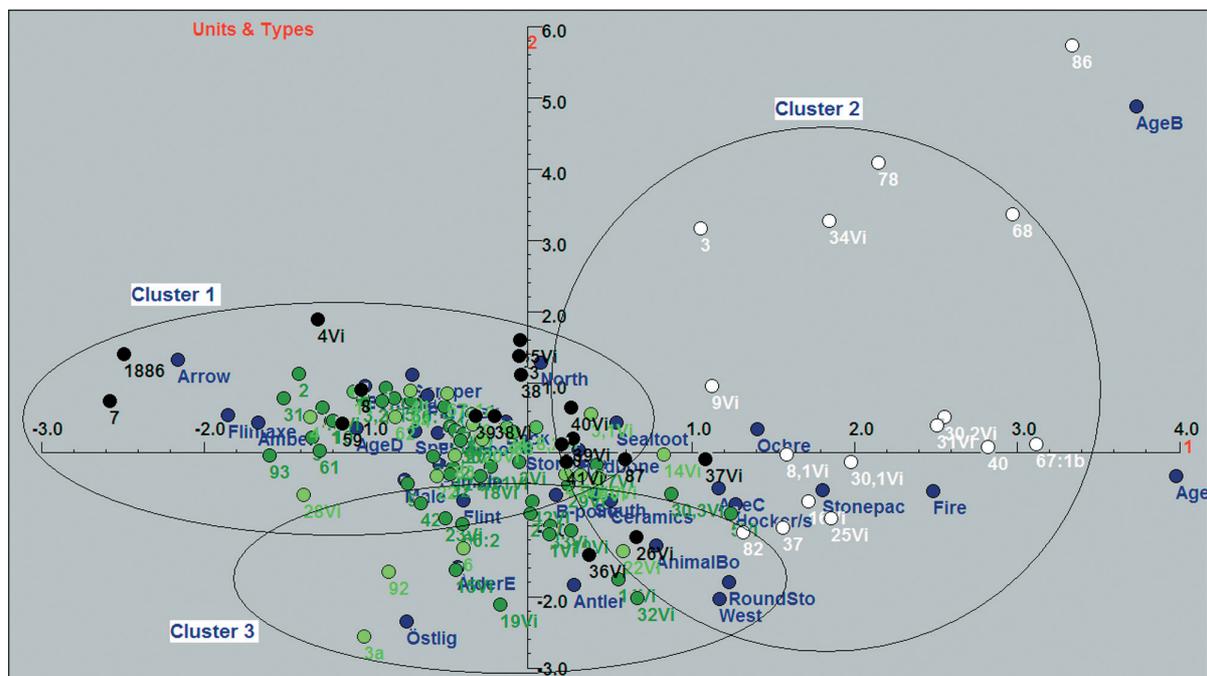


Fig. 7. Regional correspondence analysis of Neolithic grave fields at Visby and Västerbjers. Legend: light green dots – females; dark green dots – males; white dots – children; black dots – sex undetermined individuals; dark blue dots – different variables tied to the individuals.

strong symbolic expressions in the funeral itself, also deeply rooted in the habitus of the action.

Regarding local status expressions, Västerbjers indicates greater gender differentiations than seen at Visby. Here, males were associated with imported objects. Side/hocker position burials were associated with fewer objects, which may indicate materially 'poor' graves. However, individual prestige was expressed, as may be seen mainly in some rich female graves at Västerbjers. At Visby, there was a tendency to a more even distribution of grave goods, where females are associated with flint axes, and males and juveniles with amber. However, at Visby, individual prestige was also expressed, both among males and females, among persons having significantly more grave goods. The grave field at Visby indicates an imbalance in the proportion of males and females, which may indicate that certain individuals, mainly old women and children, were not buried there, but treated in some other manner. Regarding distinctions expressed by grave goods, symbolic and social capital seems to break out of the general habitus, in the sense that the supposed gifts sometimes go beyond the traditional norms (habitus) in favour of social status expressions associated with certain individuals.

In conclusion, it can be stated that CA can be a guide to new hypotheses, especially concerning the age sets visible among the mixed children/youth group. There is a question as to whether such groups that were linked together already at a young age can also be detected among the adults, as well as among the oldest individuals. Perhaps adult individuals buried with similar sets of artefacts belonged to groups of individuals that were trained for certain activities. Perhaps the expressions visible in the local construction of gender distinctions seen in this analysis are the results of such age sets. Another problem that needs to be further analysed is the question of selectivity among the buried individuals seen in the material. What happened to some of the children and some of the old individuals? However, these questions are details that have to be considered further in future analyses of grave fields on Gotland and beyond.

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The story of the only (?) megalith grave on Gotland Island

Helene Martinsson-Wallin, Paul Wallin

Department of Archaeology and Osteology – Gotland University, SE

helene.martinsson-wallin@hgo.se

paul.wallin@hgo.se

ABSTRACT – *In this paper, we discuss the easternmost material expression of the Funnel Beaker Culture – a megalith grave on the west coast of Gotland Island in the Baltic Sea. The people who built and used the megalith brought the Neolithic lifestyle to Gotland. The biography of this monument includes two excavations, of which we participated in the latest in 1984. Our osteological analysis confirms that some thirty individuals of both sexes and various ages were buried there. The structure of the monument is that of a rectangular dolmen. This paper discusses the discovery of this specific site, and explores the existence of this type of monument in a Gotland context. Furthermore, is this really the only megalith on Gotland, or are more of these structures yet to be recognised? Finally, one may ask if the Neolithic way of life really was successful on Gotland..*

IZVLEČEK – *V članku analiziramo najbolj vzhoden materialni izraz kulture lijakastih čaš – megalitski grob na zahodni obali Gotlanda na Baltskem morju. Ljudje, ki so ga zgradili, so na Gotland prinesli neolitski način življenja. V biografijo spomenika sta vključeni dve izkopavanji. Pri zadnjih leta 1984 smo sodelovali. Naše osteološke analize so potrdile, da je bilo tam pokopanih približno trideset oseb obeh spolov in različnih starosti. Spomenik je oblikovan kot pravokotni dolmen. Predstavljamo odkritje tega posebnega mesta, kjer smo raziskali nastanek tega spomenika na Gotlandu. Vprašamo se, ali je to edini megalit in ali jih je mogoče na Gotlandu prepoznati več? Lahko se vprašamo tudi, ali je bil neolitski način življenja na Gotlandu uspešen.*

KEY WORDS – *Gotland; Early Neolithic; megalith grave; dolmen; Funnel beaker culture*

Gotland Island and the Neolithic process

Gotland Island is the largest island in the Baltic Sea. It was first populated c. 9000 years ago by hunter-gatherers whose subsistence was based on a marine diet in which seal and fish played a central part. Due to isostatic uplift, the land area of Gotland increased with time. The Island rose more rapidly in the north than in the south. During the Early Neolithic time frame, c. 4000–3300 BC, the land area had become extensive (Fig. 1) and contained larger areas for pasturage and/or farming than before, even if the landscape also contained many lakes and water ways. An abundance of stone axes has been found – especially on the western side of Gotland as surface finds during ploughing on light soil areas – which

date to the Late Mesolithic (Fig. 2). The interpretation is that the increase in axe finds indicates large-scale forest clearing (Österholm 1989,20). This is also supported by pollen diagrams (Österholm 1989, 16–17). About ten sites (Fig. 1) featuring Early Neolithic pottery, (Funnel Beaker Pottery) have been found on Gotland. As is seen in Figure 1, the sites are situated on the west part of the island, mainly on light soils that are suitable for farming and pasture land. It is likely that the Neolithic way of life and the megalith grave concept were brought in as novelties to Gotland by a population group who migrated here during the Neolithic. Towards the middle Neolithic (3300–2300 BC), the salinity of the

Early Neolithic	c. 4000–3300 BC
Middle Neolithic	c. 3300–2300 BC
Late Neolithic	c. 2300–1700 BC

Tab. 1. The Neolithic in Scandinavia (calibrated values).

Baltic Sea increased, which again favoured marine resources and subsistence based on seal hunting and sea fishing. At this time, Gotland was settled by people who made so-called Pitted Ware Pottery. The Pitted Ware groups lived from hunting seal, fish and sea birds. However, they continued to make pots, and were familiar with domesticated animals such as pig (probably almost wild), cattle and goat/sheep; in other words, having a sub-Neolithic subsistence pattern. Sedentary occupation in Pitted Ware settlements is suggested, including extensive cemeteries (Österholm 1989). However, extensive investigations of the Pitted Ware site at Ajvide (Burenhult 2002) have rendered data that could point to the fact that the Pitted Ware site cemetery was placed in a secluded ritual landscape close to the sea, and the domestic landscape is therefore yet not fully understood. Österholm, who carried out in-depth studies of the Pitted Ware sites, favoured an explanation whereby Pitted Ware groups lived by the coast, but to some extent also used the hinterland as resource procurement areas (Österholm 1989:166; Carlsson 1998:59). Whether the Pitted ware groups were descendants of the initial Mesolithic hunter-gatherer groups who still remained on the Island, or came as a new population on the island is still to be discussed. This discussion arose in the wake of recent DNA studies on Neolithic populations from Gotland and the mainland carried out by Malmström *et al.* (2009). These analyses indicate that the the Pitted Ware population on Gotland are closely related to modern populations in the eastern Baltic region. The ancient DNA research by Malmström *et al.* (2009) supports hypotheses that propose Neolithic or post-Neolithic population replacement in Scandinavia. The researchers indicate that the megalith builders probably originated from farming groups from areas of southern Europe. Of special importance, according to the genetic studies, was the ability to tolerate lactose, and the studies indicate that the current population in Scandinavia originate from these south European farmers who were mainly lactose tolerant (Malmström *et al.* 2009).

However, this raises questions about the population of Gotland, since the megalith tradition seems to have been less pronounced there. Did the Pitted

Ware population migrate, or disappear in other ways, and subsequently make way for yet another population group from the south known as the Battle Axe culture? The Late Neolithic migration and who lived on Gotland at the time is a question beyond the scope of this paper. However, the aim of this paper is to present the results of the only secure and investigated megalith tomb on Gotland. The people who built and used this structure brought a Neolithic lifestyle to the Island, and there are still many questions as to who these people were and whether they spread and survived there.

The Megalith Grave at Ansarve, Tofta Parish, Gotland

A megalith structure can be described as a collective grave built of large stones usually erected on end, close together, and covered with one or more cap stones, thus forming an inner chamber where corp-

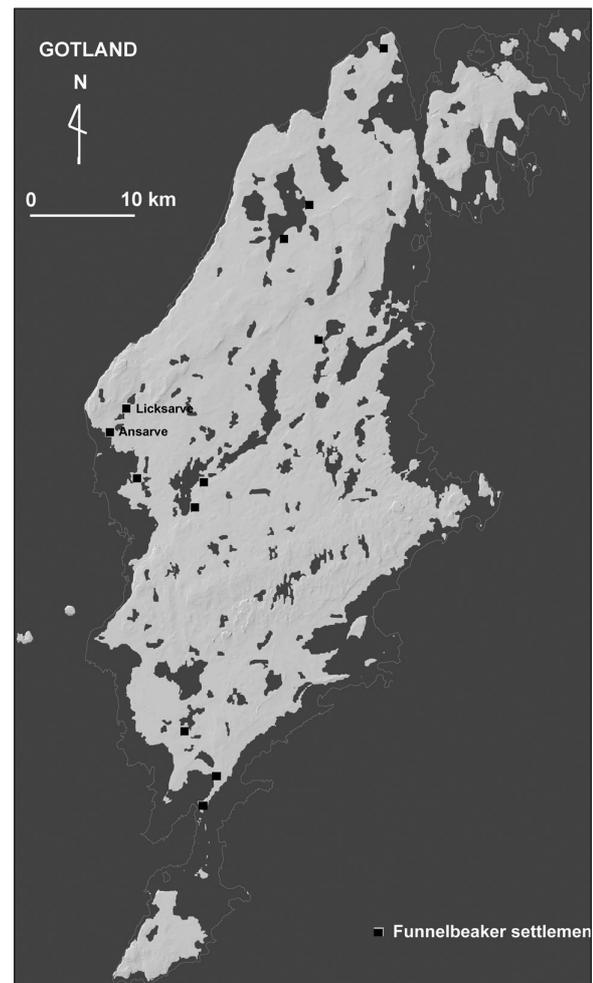


Fig. 1. Map of Gotland Island during the Scandinavian Early Neolithic, with the location of the Ansarve megalith, the possible megalith at Licksarve, and other Funnel Beaker Settlements.

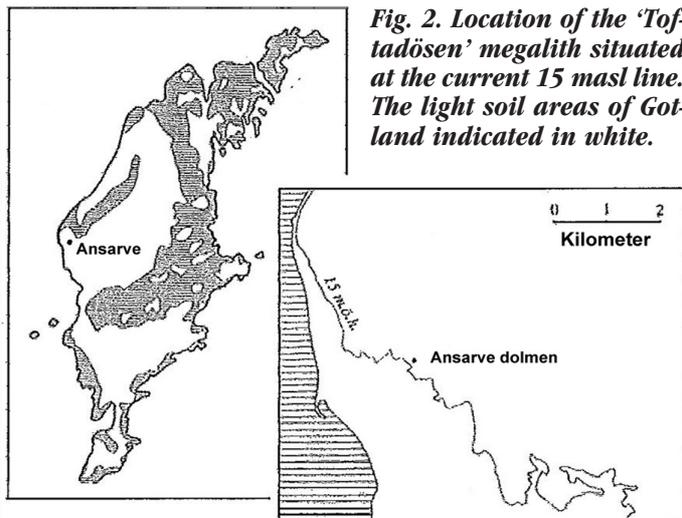


Fig. 2. Location of the 'Tof-tadösen' megalith situated at the current 15 masl line. The light soil areas of Gotland indicated in white.

ses were deposited. They were collective graves for an extended family or corporate decent group, and used over an extensive period. Such graves are found mainly in Western and Northern Europe (Portugal, Spain, France, Britain, Ireland, West Germany, Denmark and Sweden). They are often located close to the coast, and in Scandinavia they are often associated with a Neolithic way of life, including cultivation, domesticated animals and a certain type of pottery (Funnel Beaker Pottery). They usually have initial dates to the Scandinavian Early Neolithic 3400–3300 BC.

The only megalith construction on Gotland (Fig. 3) which archaeological excavations confirm as being such a structure is located on the western part of the Island, in Tofta Parish, about 20km south of Visby. Due to shore line displacement and isostatic uplift, it is situated about 1km from the current coastline, beside the road leading to the old fishing camp-site at Gnisvärd (Fig. 2). When it was built and used, it was located directly on the shore. Today, the grave consists of four 1.2 metre high granite blocks. Three stones make up the wall of the chamber on the northern side (Fig. 4). Approximately 1.5m to the south stands a single large block, which comprises the southern wall of the same chamber. There are vertical entrance stones on the east corner side of the chamber, and the grave is bounded by a rectangular outline of limestone slabs bordering a stone pavement which surrounds the chamber stones. Based on its typological features, this structure is interpreted as a rectangular dolmen dating to the end of the Scandinavian Early Neolithic c. 3400–3300 BC (Bägerfeldt 1992.7).

Despite the archaeological excavations and their conclusive results, the structure is still not entirely

recognised as being a megalith. It is situated close to two of the largest Bronze Age stone ship settings on the Island, which makes up one of Gotland's main archaeological tourist sites. The County Administration have set up a board which gives information about the stone ship settings and Bronze Age society, and as a small remark at the end of the text, the 'possible' megalith structure situated on the other side of the narrow road is mentioned: "...if it really is a Megalith, it is the most Eastern megalith structure found in Northern Europe". In the Swedish archaeological digital site inventory, FMIS (hosted by the National Board of Antiquities), the grave is descri-

bed as a 'stone setting', with a cist/chamber, and it is not indicated as a dolmen. The description was written in 1976, is vague, and has not been updated since, although earlier (1912) and subsequent (1984) archaeological investigations have been carried out at the site.

Several archaeological excavations have been carried out on both the megalith and the stone ship settings at this important prehistoric site, but the results have not really been placed in a context together, since the structures have been treated separately, due to their disparate chronology. In a way, the narrow road which divides the large stone ship settings and the megalith structure today also divide this site, even though the remains are only thirty metres apart. However, the site, including all the remains, is collectively known as Ansarve hage (pastureland). It must have been an important ritual site, since monuments of a ritual nature from various periods are located here, and re-use of the dolmen is also indicated. It appears as if the stone ship settings are 'moored' at the megalith structure, and in doing so, they are both attached to an ancient important



Fig. 3. The current state of the megalith at Ansarve (photo Paul Wallin).

place, but also, due to the monumentality of the ships, distract attention from the older site.

The megalith: discovery, description, excavations and results

The megalith was first ‘discovered’ in the early 1900s by an army doctor, Karl Bolin. He and a head-teacher, Hans Hansson, excavated the site in 1912. They excavated (scooped out!) (Fig. 5) the chamber and found three human lower jaw bones, which according to Nils Lithberg (1914.94) they collected from this excavation. They also mentioned a smaller cist inside the chamber made from sandstone plates (Lithberg 1914.94). Such internal structures are common in megalithic graves on the mainland (Blomqvist 1989). Based on the geographical dispersal of flint artefacts on the Island of Lithberg, it was concluded that “As regards finding such megalithic graves on this island, this is the ultimate spot” (Lithberg 1914.94).

A few notes on the excavation from 1912 are included in Lithberg’s dissertation *Gotlands stenålder* (The Stone Age of Gotland, 1914), and additional information on bone remains from the site was discovered by Lindqvist in 1990s (1997). We recently rediscovered a note on these bones in a museum store-room, which states, “*Tofta parish, Ansarve hage, 3 graves with unburned bones (1717 and 2511 grams) and one grave divided in three divisions of (29, 38 and 76 grams). Found at excavation in 1903. No osteological analysis. Stored in box 6818*”. The 1903 date is nine years earlier than the excavation by Bolin and Hansson, which might indicate that an earlier excavation may have been carried out by Bolin and Hansson, or possibly Oscar Wennersten, who was active at that time. However, this is speculation, and the date may simply be a later error.

It was not until 1984 that the next archaeological investigation was carried out at the site. A re-excavation was initiated by Göran Burenhult within the project ‘Archaeological prospecting methods’, which was linked to Inger Österholm’s project ‘Stone Age Gotland’. The excavation was carried out by students from Stockholm University, including the authors of this paper (Wallin and Martinsson-Wallin 1997). The aim of the investigation was to “shed light on whether the megalith tradition had been adopted on Gotland” (Bägerfeldt 1992.7).

The structure consisted of a rectangular chamber (approx. 1.5 x 3m) of four granite boulders on edge

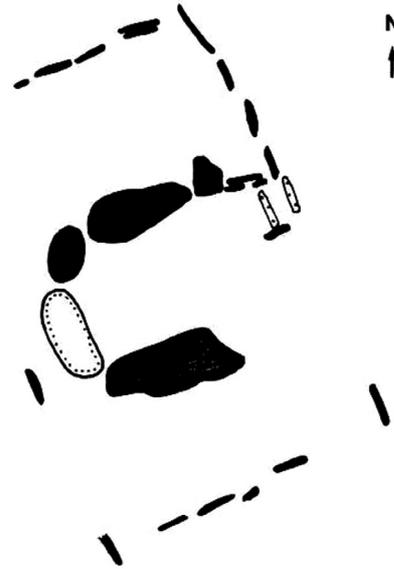


Fig. 4. Plan drawing of the Megalith at Ansarve. The dark stones are the boulders making up the structure today; the dark stones on the edges outline the pavement surrounding the megalith stones. A boulder which was removed is indicated in an outline; the two threshold stones at the dolmen entrance are dotted.

(Fig. 3). One of the side stones and the cap stone are missing, but according to oral tradition, at least, the cap stone was removed to a nearby farm, probably during the second half of the 19th century (Lithberg 1914.94). The chamber is surrounded by a rectangular frame (approx. 5 x 7m) of limestone slabs on edge (Fig. 4). The structure was interpreted as a rectangular dolmen which on typological grounds was dated to the late Early Neolithic to Middle Neolithic, c. 3600–2900 BC (Lang 1985.38–39; Bägerfeldt 1992.7–22; Wallin and Martinsson-Wallin 1997.23). It has been suggested that the impetus to build such a monument (or a group of immigrants carrying this tradition) came from the nearby Island of Öland to the south, directly from Western Scania, or possibly from Schleswig-Holstein in North Germany.

Among the interesting features found in situ in the structure are two lime stones placed on edge, indicating an entrance facing east (Fig. 6). A rectangular slab of sandstone with zigzag ornamentation was also found close to the short side enclosure (Bägerfeldt 1992.22) (Fig. 7). The artefacts from this excavation consist of 249 flint flakes, of which three are of south Scandinavian flint (one scraper), four stone axes (trindyxor), and four amber fragments, of which two were found in the chamber. A bronze tutulus dated to Montelius period II (c. 1500–1300 BC), was also found inside the chamber.

The main bulk of the bone remains recovered in the 1984 excavation derived from the 'scoop-out' in the 1912 excavation, found outside the chamber in the north to north-eastern sectors of the structure (Fig. 5). Thus there is no way of knowing in what positions the bodies were placed in the grave. The bone remains recovered in the excavation consisted of 547 teeth, and 5950 bone fragments, with the total weight of the latter being about 23kg (Wallin and Martinsson 1986; 1992; Wallin and Martinsson-Wallin 1997). These remains were osteologically analysed and were shown to derive from a total of thirty-one individuals, of whom sixteen were adults, four juveniles, eight infants II, and three infants I. Of the adults, four could be determined as female and three male. The dental condition was generally good: only five teeth had caries, although tartar was found more frequently, and heavily abraded teeth were very common. Only a few fragments were identified as faunal remains: pig (1), seal (8), dog (3), and fish (4) (Wallin and Martinsson-Wallin 1997).

A subsequent inventory in the store at The Historical Museum in Stockholm in the 1990s, yielded 4371 grams of bone remains (SHM inv. 31173), which were analysed by Lindqvist (1997:362). This bone material consisted of fourteen teeth and 246 bone fragments, with the total weight of this material being 4371 grams. Lindqvist did not mention or question the discrepancy regarding the years of discovery - 1903 was indicated for these bones, as mentioned above - but took for granted that the material came from the 1912 excavation. All types of bone from the human body are represented, but fragments of the large bones are most common, and small bones such as finger and toe bones are under-represented. Lindqvist (1997:362) was able to identify at least eight individuals among these bones. However, judging from the total MNI, this does not necessarily mean that there are individuals in addition to the thirty-one that the previous investigation indicated. The estimation is that the megalith was a collective burial site for between thirty to thirty-five individuals of both sexes and all age groups. The bones were generally in good condition, but osteophytis was found on vertebrae, scapulae and phalanges pedis. A clavicle has a cut which had healed, and some of the cranial bones are unusually thick, which according to Lindqvist (1997:364) could indicate anaemia due to tapeworm, for example, which that cause loss of vitamin B-12.

To the east of the chamber, but still within the outline of the rectangular demarcation, a complete hu-



Fig. 5. Picture from the 1912 excavation (photo from Inger Österholm's collection).

man skeleton was discovered in the pavement. The remains are of a woman, aged approx. 40 years (Fig. 8). She was on her back, and the remains differed from others in that her dental condition was poor - three molars showed traces of caries; all the lower molars on the left side were missing (pre-mortem), since the alveolus had re-ossified (closed). During reconstruction of the crushed cranium, a rounded hole was noted in the left side of the parietal bone (Fig. 9). The suggestion is that this was a trepanation, with signs of an ongoing infected healing process, which may have caused death. The skeleton was ¹⁴C analysed, and dated to the late Bronze Age; if correct, this makes the burial an anomaly, since cremation was the prevailing method of disposing of the dead in this period. Trepanations occurred in Scandinavia



Fig. 6. Threshold stones found during the 1984 excavation (photo Paul Wallin).

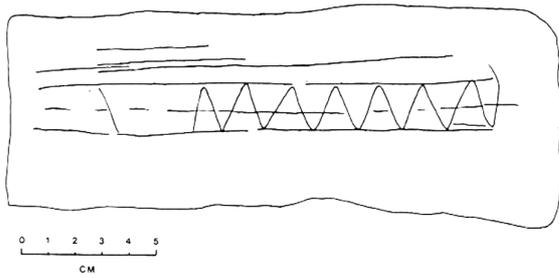


Fig. 7. Sandstone slab with zigzag pattern.

during the Neolithic, but as far as we know, they are not known in Bronze Age settings. This needs to be investigated further, and further dating of this skeleton is needed to verify the Bronze Age connection, since the date had a range of ± 230 years, and may be erroneous. If the woman has a Bronze Age connection, this monument may have been re-used when the stone ship settings were being erected in the vicinity. The find of the bronze tutuli and the combined dating of bones from the chamber (c. 1980–1400 BC) are also indicative of subsequent re-use of the site. The dating of the megalith is based on six bone samples that have been radiocarbon dated. Three were carried out by conventional ^{14}C following the 1984 excavation, and three additional AMS-dates were carried out by Lindqvist on the earlier excavated material. The earliest date on mixed bone material from the 1984 excavation indicate a date to the early Bronze Age, a date in line with the bronze tutulus. A bone from the female outside the chamber indicates the late Bronze Age, which is in line with the stone ship settings erected directly adjacent to the megalith. A charcoal sample from under one of the stones indicates a date to around AD 500, but seems to be out of context. However, the later AMS dates show great agreement with the typological dating of the grave type, and all three dates fall within the time frame 3300–2900 BC cal. 2 sigma. The date of the bones indicates a late Early Neolithic or early Middle Neolithic initial phase of the structure (Lindqvist 1997:356). These bones also show ^{13}C values that indicate a higher intake of terrestrial food in comparison with the analysed skeletal remains from the Pitted Ware burials (Eriksson 2004).

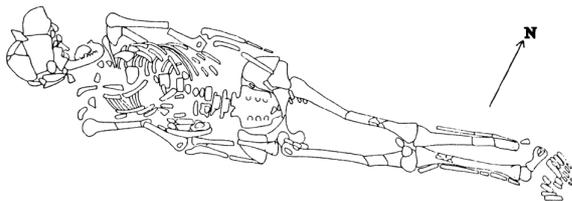


Fig. 8. Skeleton of woman found in the pavement outside the chamber.

The investigations thus suggest that this site was utilised as a burial site, and possibly for ceremonial/ritual activities from the Late Early Neolithic/ Middle Neolithic until the Late Bronze Age. At least, the Bronze Age connection is reinforced by a stray find in the vicinity of another Bronze Age tutulus (Mn 945, SHM inv. 6207) and an Early Bronze Age cairn situated in the vicinity. This gives us another perspective on the characteristics and complexity of this site that goes beyond the scope of this paper, and which has been discussed elsewhere.

Other possible megalith structures on Gotland – a detective story...

In the early 20th century, the archaeological literature on Stone Age sites on Gotland indicates that there may have been another megalith, situated at Licksarve farm (Fig. 1) approx. 3.5km north-east of the Ansarve site (Lithberg 1914). The following was written on a photo taken by the archaeologist O. Wennersten, which we found in the Gotland Museum archives: “A Dolmen at Tofta, Lixarve” (Fig. 10). Further investigations in the archives and also a recent site visit have indicated that it is very likely that this was a megalith originally containing at least sixteen individuals of both sexes and various age groups (Sigvallius 2001; Wallin 2010). In the site inventory, it is described as a destroyed stone ship setting (FMIS), which are very common on Gotland, whereas megaliths are not. Documents also indicate that a farmer requested permission to remove the structure to make way for a barn, and compensation if not granted permission. The Board of National Antiquities denied his request, and compensation, but since the barn was built (see photo Fig.



Fig. 9. Possible trepanation and infection area on the skull of a woman found in the pavement outside the chamber (photo Paul Wallin).



Fig. 10. Picture from the possible megalith at Lick-sarve (photo Gotland Museum Archives).

10), the farmer probably moved the burials found at the structure and placed them in a heap of stones some 10–15m south of the megalith stones. Due to road works in 1999, the heap was excavated, revealing the skeletal remains of sixteen individuals. The bones were analysed and found to come from both sexes and various age groups, thus fitting the megalith concept of a burial site for an extended family or corporate decent group. The bones have not yet been dated, but dating could solve the puzzle. It is very likely that the farmer dared not move the actual stones, but moved the bones and surrounding pavement and heap of soil that is indicated to have been part of the structure. That the stones were surrounded by a heap of soil is indicated by a drawing in the letter to the authorities requesting the removal of the grave (Fig. 11). This discovery also poses further questions regarding other sites that feature stones of megalith dimensions that have nevertheless been classified as destroyed stone ship settings. Dating the bones from this site and re-dating the bones from the Ansarve site – as well as an inventory of ‘suspicious’ stone ship settings – are on the agenda for further research.

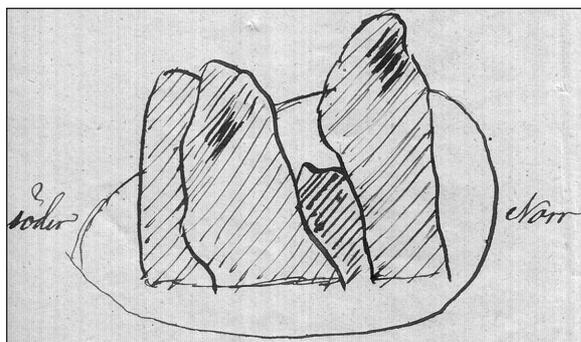


Fig. 11. Drawing of the possible megalith at Lick-sarve (from a letter sent to The Board of National Antiquities – ATA, Antiquarian Topographic Archive).

Megaliths and the Neolithic transition on Gotland Island – some concluding remarks

To conclude: it has now been established that there is one definite, and another very probable, megalith structure on Gotland Island, as well as at least ten locations with Funnel Beaker pottery. Both of these features are linked to the Neolithic process in Scandinavia. However, it is also possible that a complete Neolithic transition may not have occurred on Gotland, and due to the isolation of the place and the natural landscape and resources, it is likely that marine subsistence was important throughout prehistory. A combination of husbandry, small-scale farming and a hunting and gathering strategy probably prevailed even up to historical times. Gotland was populated c. 9000 years ago, but we do not know where these groups actually originated, and if the descendants of these original settlers were still in the majority on Gotland during the Neolithic and the Bronze Age. The finds from Gotland and the ancient DNA from people who lived on the Island in the mid-Neolithic point to the fact that Gotland had various contacts and interactions throughout prehistory. So far, it has been a matter of debate as to whether the Western Megalith Culture actually did spread to Gotland, but it has been established that this way of life did so, and that it probably originated from Öland, South Eastern Scania, or the German Baltic coastal areas. There might be other locations with megaliths that could feature destroyed structures that erroneously have been defined as destroyed stone ship settings. A new inventory of this type of site is also of interest in order to carry out more detailed osteological analyses, radiocarbon dating, isotope analyses and ancient DNA sampling on excavated bone material excavated from the Mesolithic and Neolithic, and the Bronze Age. This is needed to obtain in-depth understandings of the internal and external relationships of the people who populated Gotland and to see the importance of this island in the Baltic Sea region.

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We wish to thank: Göran Burenhult, who invited students to participate in a research project and inspired us to continue with these studies; the late Inger Österholm, who passed away all too soon, but supported us in various ways at Gotland University; and last, but not least, Prof. Mihael Budja, who invited us to the Neolithic seminar, which was most interesting and inspiring.

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Rituals and death cults in recent prehistory in Central Portugal (Alto Ribatejo)

Alexandra Figueiredo

Instituto Politécnico de Tomar, Landscape, Archaeology and Heritage Department, PT
alexfiga@ipt.pt

ABSTRACT – *The present paper aims to give a general outline of new data that contributes to a better understanding of cults and rituals in Alto Ribatejo, central Portugal, during recent prehistory. The Megalithic Complex of Rego da Murta is the only megalithic set known so far in the Upper Nabão region, and is therefore of crucial significance to understanding the population dynamics of the people who inhabited this region. The excellent preservation of deposition contexts – especially those in Dolmen II of Rego da Murta, and its relative proximity with the cave contexts – makes it the perfect case study for understanding the burial rites performed in this period.*

IZVLEČEK – *V članku predstavljamo nove podatke, ki omogočajo globlje razumevanje kultov in ritualov v Alto Ribatejo v osrednji Portugalski v mlajši prazgodovini. Megalitski kompleks Rego da Murta v regiji Nabão je ključnega pomena za razumevanje populacijskih dinamik. Odlična ohranjenost depozita v dolmenu II v Rego da Murta in bližina jamskega konteksta omogočata natančno analizo pogrebnih ritualov.*

KEY WORDS – *Central Portugal; Neolithic; Chalcolithic; rituals; megalithism; caves*

Introduction

Until the late twentieth-century, the whole Alto Ribatejo region was considered part of a different cultural world, whose population descended from the ‘Cardinal impressed pottery’ culture and performed their burial rituals inside caves; characterized as diverse as deposition from those in megalithic monuments recorded in the neighboring regions. The lack of knowledge of megalithic monuments in this area, as well as the records of artefacts found in cave burials and their apparent dissimilarity from monuments observed farther south, such as Dolmen I at Val da Lage (Oosterbeek 1997), led researchers to divide the Alto Ribatejo region into two ‘worlds’ – one of caves (Nabão River region) and one of megalithic monuments (Tagus River region) (Cruz 1997; Oosterbeek 1997). It was only after the first Rego da Murta monuments were found – at present, a set of eleven megalithic monuments – that the reformula-

tion of this theory was proposed in a doctoral dissertation, 2006 (Figueiredo 2006a).

As well as being located in the occupied area of the caves, these monuments reveal well-preserved contexts, particularly as far as bone remains is concerned.

The megalithic complex of Rego da Murta

The Megalithic Complex of Rego da Murta is comprised of a set of stone monuments which fits with the chronology from the later Neolithic to the early Bronze Age periods, within an area of about 1km², on the right bank of the Rego da Murta stream.

It stands on Mesozoic limestone terrains (Cunha 1990), which form the whole mountain range of Alto

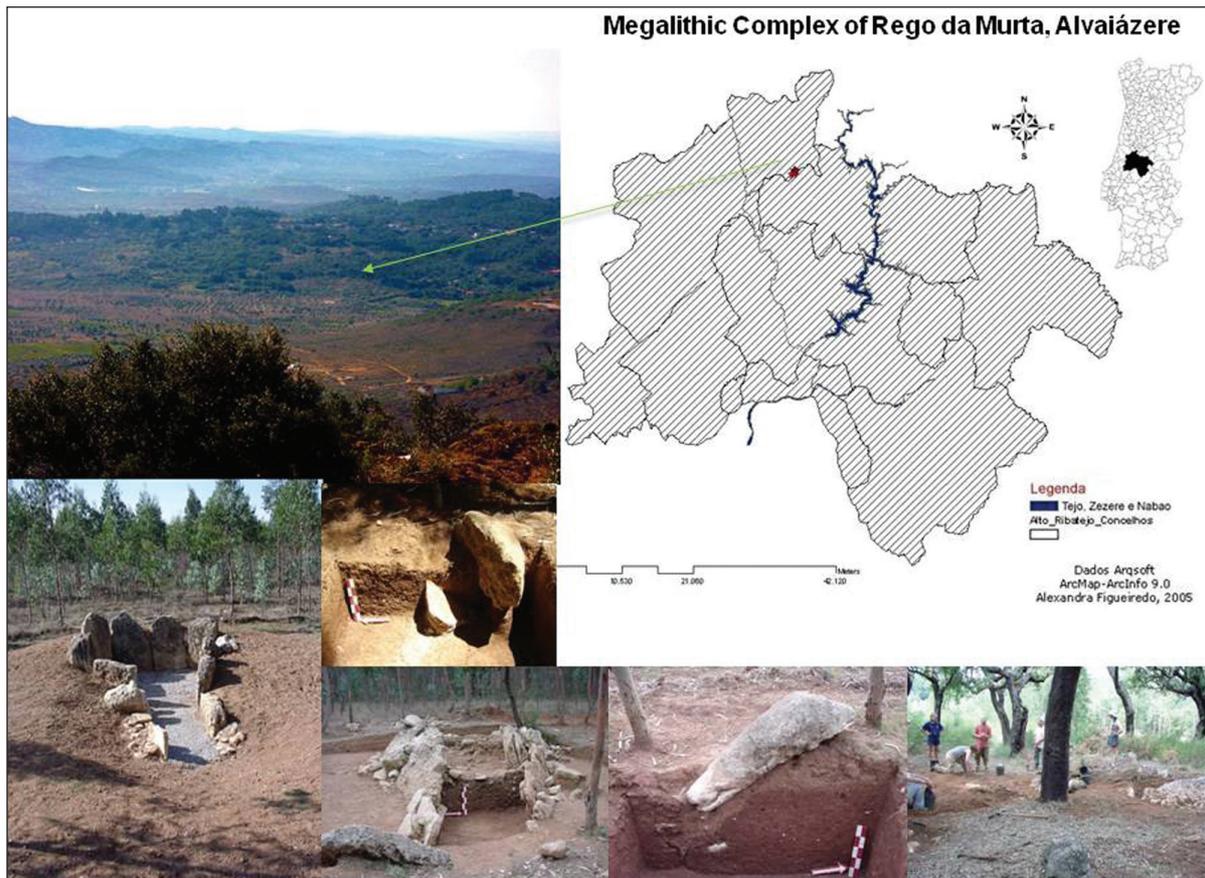


Fig. 1. The megalithic complex of Rego da Murta is situated in southern part of Alvaiázere country in Central Portugal.

Nabão, in the plain between the Zêzere and Nabão rivers. From the administrative point of view, it is situated in the inner centre of Portuguese territory, in the parish of Ramalhal, Alvaiázere county, Leiria District (Fig. 1).

Among the monuments marked (see Fig. 2) two dolmens – Dolmen I and Dolmen II at Rego da Murta – stand out (the last one is in an excellent state of preservation) and several small monoliths in which lithic material remains have also been exhumed.

The two dolmens differ morphologically; however, they fit the typologies established for those observed in central/southern Portugal. Both have a medium-size chamber and corridor and are built with limestone ortostats from outcrops in the region. However, in Dolmen I at Rego da Murta the chamber has a separate corridor, its ortostats are larger and there are two in the head. Dolmen II at Rego da Murta is an *allée couverte* type structure; there is no clear distinction between chamber and corridor.

The several papers already published on these monuments (Figueiredo 2002; 2003; 2004.a-h; 2005.a,

b; 2006.a, b; 2007.a, b) include them, as far as burial rituals and materials recorded is concerned, in a cultural context similar to that of contemporary occupations observed in caves identified in the region which can be paralleled with Gruta dos Ossos and Gruta do Cadaval (Oosterbeek 1985).

The small menhirs, also made of limestone, are small belly-shaped monoliths (rounded on one side and flat on the other) resulting from natural polishing of the surface of limestone rock and the cutting of rock outcrops. These are distributed in a circle around Dolmen II, delimiting a symbolic space, with the megalithic monument at its centre (Fig. 3).

As well as the menhirs, silex artefacts made of *chert* – a material found in the region – were found. These are mainly flints and cores, most of them without retouches or traces of usage. Near Menhir II, a small deposition consisting of a great number of seeds (still to be identified), silex materials and a small ceramic fragment was found. These depositions differ from the dolmens. These contain silex materials stemming from external areas to known mineral beds in the vicinity of the monuments, presenting a type of flint

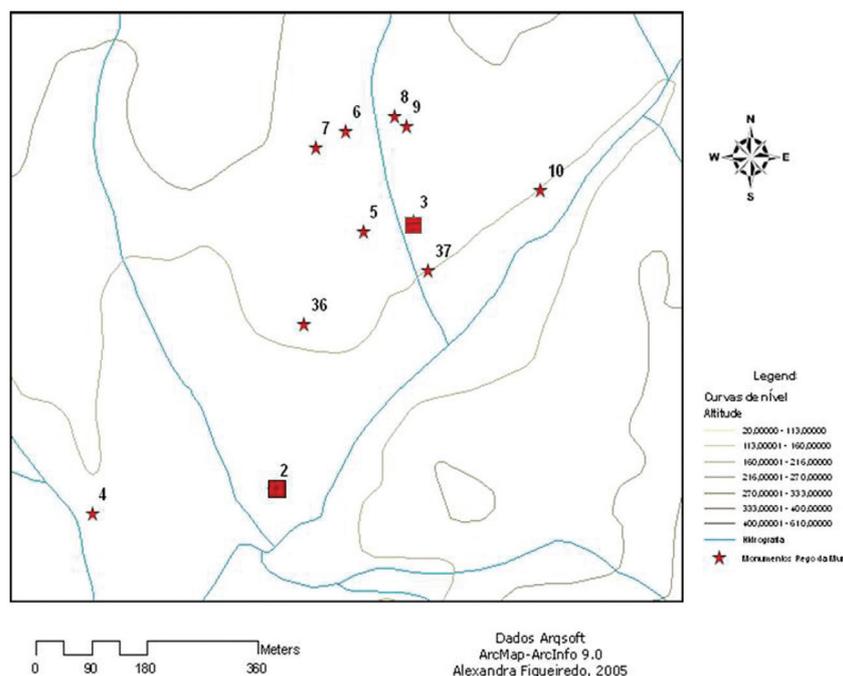


Fig. 2. Distribution of the monuments in Rego da Murta: 2. Dolmén I; 3. Dolmén II; 4. Dolmén III; 5.-10. and 36. Menhires; 37. Monolith.

of better quality, more characteristic of southern areas, near the River Tagus, as is the case of deposits at Rio Maior. The materials exhumed from Dolmen II include numerous arrowheads of different types and halberds, as well as collar beads, some of them identified as being made of crisoprase (raw material which cannot be found on Portuguese territory) (Gonçalves 2006). Associated with lithic and pottery materials is an interesting and significant bone industry, which contributes to understanding Portuguese archaeological contexts. Dolmen I at Rego da Murta, not so well preserved, evidences occupations characterised by larger pots and a lithic

remains in Dolmen II are concentrated in pits crowned at the top by a pile of stones (Fig. 4). Most artefacts are deposited inside the pit together with the bone remains; the pottery items being inverted at the top of the mound near the first layer of stones, topping each context. Similarly, the skulls also seem to be at the top of bone remains, dominating the cluster, followed by long bones. Around the bone deposition, other artefacts can be seen in a somewhat random arrangement. However, some of the remains examined suggest that the deposition followed an overall scheme. For example, so far, all polished artefacts (axes and adzes) have been found

close to the orthostats, both on the right and left-hand side. Also, the fauna found in Dolmen I was collected close to the orthostats or in the central area of the monument near the rounded structure identified as a support structure for any symbolic object (possibly a wooden monolith) which can be connected with the late Neolithic (Figueiredo 2006a) (Fig. 5).

So far, no anatomic connections in any of the monuments have been detected, considering that burial rituals between the late Neolithic period and early Bronze Age evidenced in the megalithic monuments of the Alto Nabão region are associated

Absolute datings were obtained through AMS bone dating techniques.

Dolmen I of Rego da Murta (first occupation phase)

Beta-90001	4520± 40 BP	3360 to 3090 calBC	(5310 to 5040 calBP)
Beta-189998	4490±60 BP	3360 to 2930 calBC	(5310 to 4880 calBP)
Beta-190003	4400 ± 40 BP	3270 to 3240 calBC	(5220 to 5190 calBP)
Beta-190002	4370± 40 BP	3090 to 2900 calBC	(5040 to 4850 calBP)

Dolmen I of Rego da Murta (second occupation phase)

Beta-190000	3640 ±40 BP	2130 to 1900 calBC	(4080 to 3850 calBP)
Beta-189999	3510±40 BP	1940 to 1730 calBC	(3880 to 3680 calBP)

Dolmen II of Rego da Murta

Beta-190007	4190± 40 BP	2890 to 2630 calBC	(4840 to 4580 calBP)
Beta-190004	4290± 40 BP	2930 to 2880 calBC	(4880 to 4830 calBP)
Beta-190008	4060± 50 BP	2860 to 2810 calBC	(4810 to 4760 calBP)

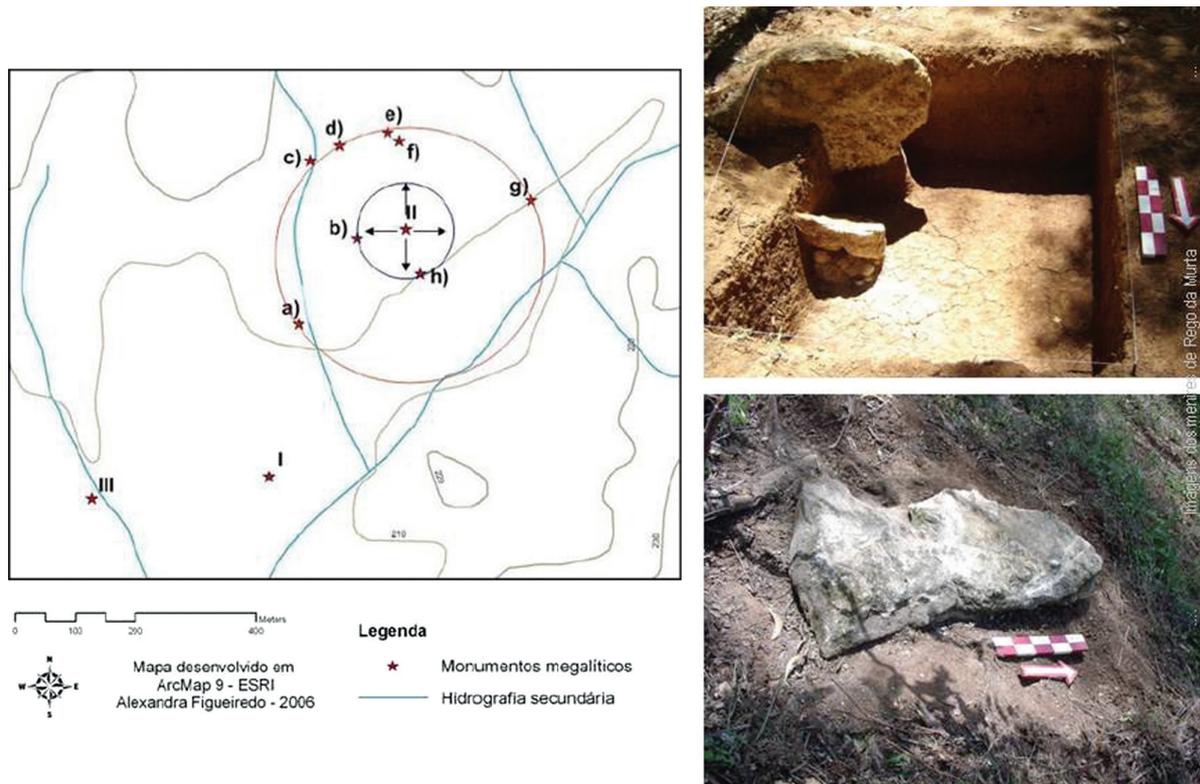


Fig. 3. Rego da Murta. Two small limestone menhirs (d and f) which circled the dolmen II.

with secondary depositions. This possibility is confirmed by sedimentary analyses which allowed the detection of a humus soil layer inside the monument, but not outside, which leads us to consider it an imported layer. This layer covers the whole burial assemblage; some isolated pottery fragments have been found which do not match any of the other elements found in the monument or at similar sites, where relatively complete pottery vessels have been found. This leads us to consider the possibility of materials and sediments having been transported from a previous burial location. In addition to the archaeological interpretation, some of the bones examined by the anthropology team (*Silva et al. 2005; Silva 2005; 2006; Pinto 2008*) reveal traces of manipulation, indicating the presence of previous rituals (Fig. 6). Also, we found non-cremated bones and small amounts of bones cremated to different degrees, but without a direct connection with the assemblages identified. It is worth noting that the number of complete long bones is very low and almost all of them are fractured. In addition, the data obtained enable us to sustain that there was no selection of individuals; each ossuary consists of bones of different age and sex in an amalgam, as if they came from a sort of common trench or collective burial site. Even if this possibility is considered, new studies will be needed to support these data. The

procedure of transporting materials, sediments and bones from a primary burial area to a secondary area is described in other studies of archaeological sites in the region (*Oosterbeek 1997*) and may be a possibility considered for pit burials in the Nabão caves (Fig. 7). Gruta dos Ossos (Tomar), located a few kilometres south of the Rego da Murta complex, is an example thereof (*Oosterbeek 1987; 1993*). It is a relatively small cavity extending west, where five stratigraphic layers have been observed (*Oosterbeek 1987.80–81; 1993.10–27; Oosterbeek and Cruz 1991.280–281*). Among them, two anthropic levels have been identified: one located in layer IV corresponding to the inhumation by the wall of the cave, and the other, possibly a more recent one, between layer I and III dated Beta-189996, 4240 ± 40 BP ($3020–2890$ calBC at 2 sigma); ICEN-465, 4630 ± 80 BP ($3628–3100$ calBC at 2 sigma) and I-17368, 4460 ± 110 BP ($3400–2880$ calBC at 2 sigma) comprising an ossuary containing several individuals. The primary deposition was confirmed by the presence of articulated bones. This cave has revealed a series of successive burials characterised by the initial presence of decontextualised bones of the lower limbs from several individuals, followed by burials of the upper limbs and, finally, the skulls – arrangements similar to those in Dolmen II at Rego da Murta. Between these deposition, earth layers could be obser-

ved. The artefacts were dispersed close to the entrance cave (*Cruz and Oosterbeek 1988*); similar artefacts have been found in Dolmen I at Rego da Murta.

In the vicinity of this cave is the Gruta do Cadaval (Tomar), which also shows some consistencies with the data already provided. It is a cavity which can be divided into two separate spaces, marked not only by the cave's internal morphology, but also by the two burial types observed: a collective one located near the entrance (just as in Gruta dos Ossos) and an individual one located in a more interior room, older than the former. The authors who studied it found evidence of 19 stratigraphic units, of which two correspond to the following burials: Layer C (collective burials) and D (single inhumation) (*Oosterbeek 1985*). Layer C was dated Beta-189995, 4550 ± 40 BP ($3520-3350$ cal BC at 2 sigma), and I-17241, 5180 ± 140 BP ($4354-3732$ calBC at 2 sigma). This level revealed the presence of a set of 'surface' burials 'without or virtually without a sedimentary layer' associated with a lithic industry of silex and amphibolite (consisting of polished, oval- and trapezoid-section artefacts, blades and bladelets without retouches and crescent-shaped microliths), incised pottery (with line and zig-zag motifs), long-neck notching edges and crenated vases parallel to those found in the Rego da Murta dolmens (Fig. 4), and also artefacts including woven objects and ribbed vases similar to those found in Gruta dos Ossos and Morgado Superior (*Cruz 1997:220*). Layer D was dated ICEN-803, 5390 ± 50 BP ($4350-4045$ calBC at 2 sigma) and

ICEN-464, 5160 ± 50 BP ($4212-3817$ calBC at 2 sigma). The single grave was observed in the second room on a block slumping which had been reset to receive it. Associated with the burial, various vases have been exhumed containing decorative patterns similar to those of the early Neolithic (sac-shaped and 'acacia leaf' print decorations), holed shells (*Theodoxus fluviatilis*), of polished stone artefacts, unretouched blades and bladelets, and trapezes.

Although the authors considered that, with the initial datings (ICEN-464, ICEN-803 e I-17241) the layers could not be identified (*Oosterbeek 1997*), the last dating obtained in 2003 (Beta-189995) of layer C enables us to match it with the earliest phase of Dolmen I at Rego da Murta.

Despite the scarcity of osteological data from other contexts in the region from which we can draw conclusions on the nature of the rituals practised during the early occupation stages of the megalithic monuments, it is possible to consider for the Calcolithic period the use of rituals based on pit depositions. Further south, by the River Tagus, other pit structures can be seen, either associated with atypical stone structures such as the Monumento dos Colos (*Baptista 2006*), or separately, such as the pits in Quinta do Paço (*Caron et al. 2005*), or connected with great natural rock blocks standing out from the landscape and overlooking the River Zezere, such as the Monument 5 at Jogada (Abrantes) (*Cruz 2003; 2004; 2006; 2007*).

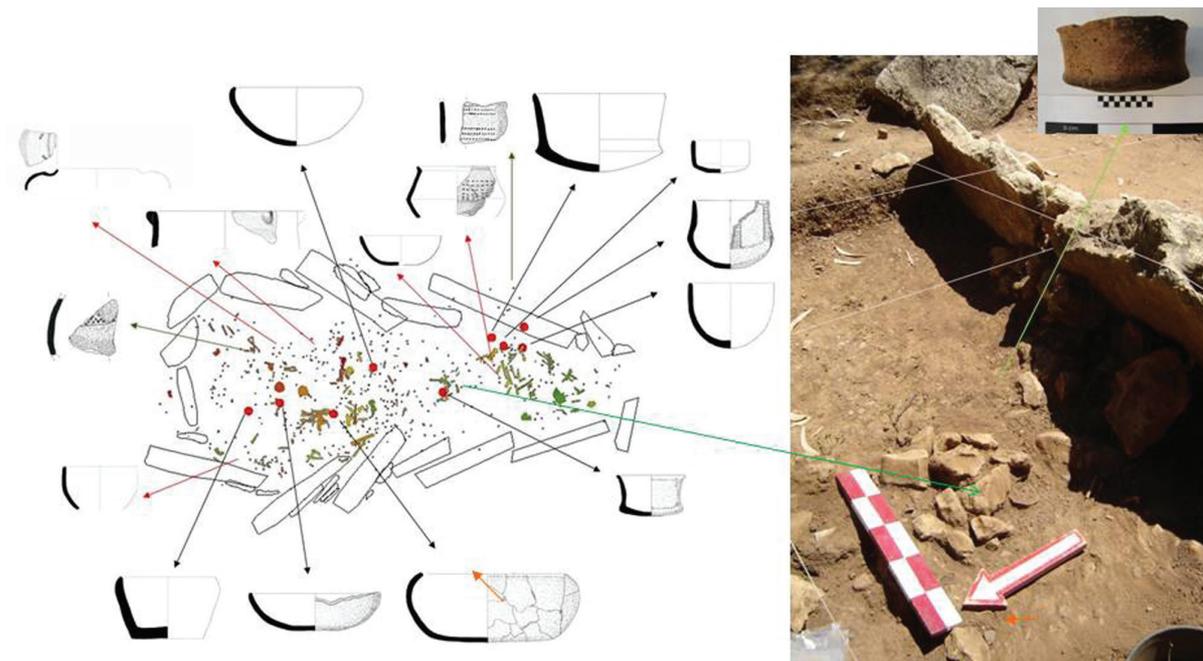


Fig. 4. Rego da Murta. Pottery distribution in dolmen II.

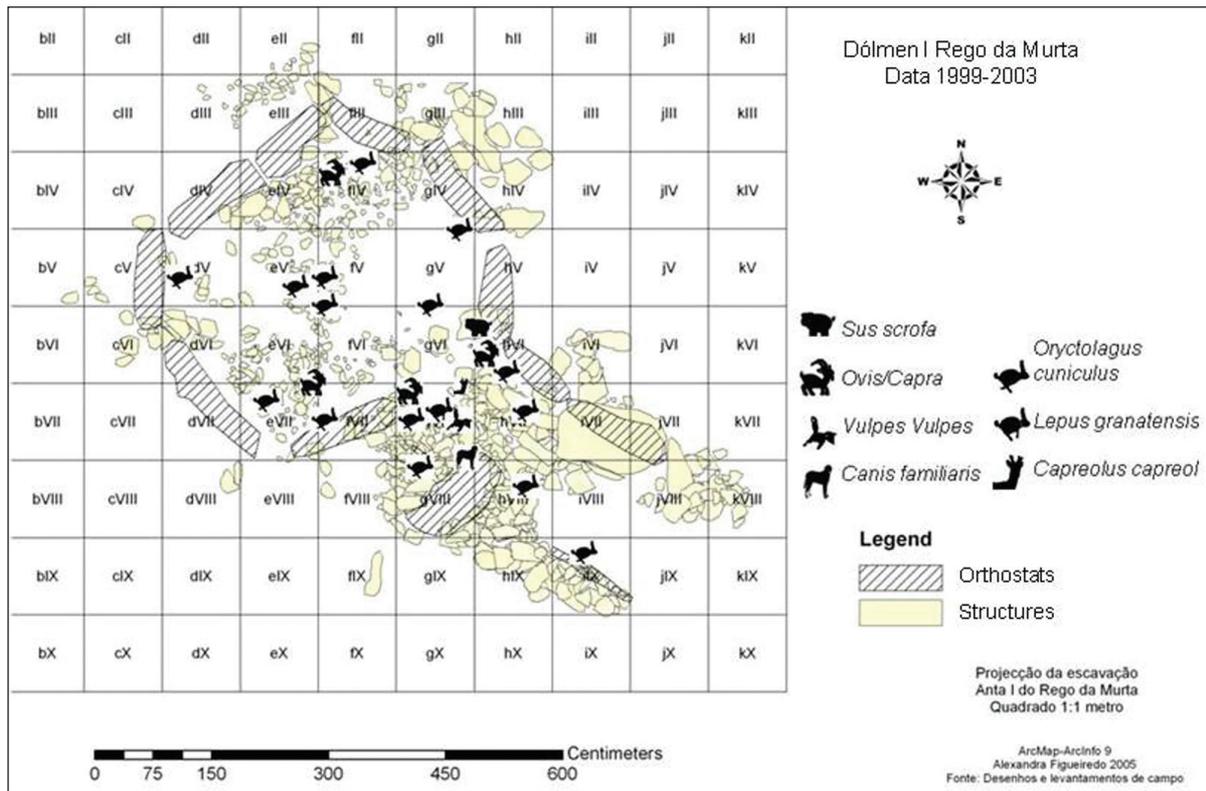


Fig. 5. Rego da Murta. Distribution of faunal remains in Dolmen I.

Anyway, all the data that we have to interpret rituals practised in the region lead us to consider the hypothesis of a behavioural change during the middle Neolithic characterised by a transition from primary burials to secondary pit burials, both in caves or in structures such as megalithic monuments. In some cases, these depositions would be covered by a stone structure, crowned at the top by skulls and some significant artefacts, within a global symbolic process.

Conclusion

In order to understand cults and rituals in Alto Ribatejo (Central Portugal), we can conclude that dolmens, especially those with corridors, are the most numerous and have the richest artefact and bone depositions. Although no consistent bone remains have been obtained in Zezere and Tagus region due to soil acidity, the amount of material observed in these monuments is very similar to those located in limestone areas such as Rego da Murta; Anta I at Val da Laje, Abrantes, by the Zezere River was considered to contain about 100 individuals (Oosterbeek 1997). As for caves, and in line with the chronological table observed in megalithic monuments, this number appears to be around 30 (Schalling 1995).

In the period prior to these constructions, the number of individuals is quite low, given the single burials observed in the first cave depositions. This situation observed in the Alto Ribatejo region during the early Neolithic has been also observed in proto-megalithic monuments identified throughout the whole peninsular: single burials accompanied by a very limited number of artefacts (Leisner 1965; 1998; Silva and Soares 2000.128) combined with animals, ochre and, in some cases, the use of fire.

As we go through the Neolithic in Alto Ribatejo, we can observe the presence of other burials, of a more collective nature, structured in more or less organised ossuaries related to rituals involving the disinterment of old depositions. This transfer ritual might have had numerous symbolic-sacred or even socio-cultural meanings which at some point started to be included in the cult practices of these populations. It is by this time that these cults started to be performed outdoors, both in the dolmens and in relatively atypical structures.

As far as cults and rituals in menhirs are concerned, most of the cases observed in the Alto Ribatejo region relate to areas containing burial monuments such as dolmens or pits. The same applies to other regions of Portuguese territory, where they are also

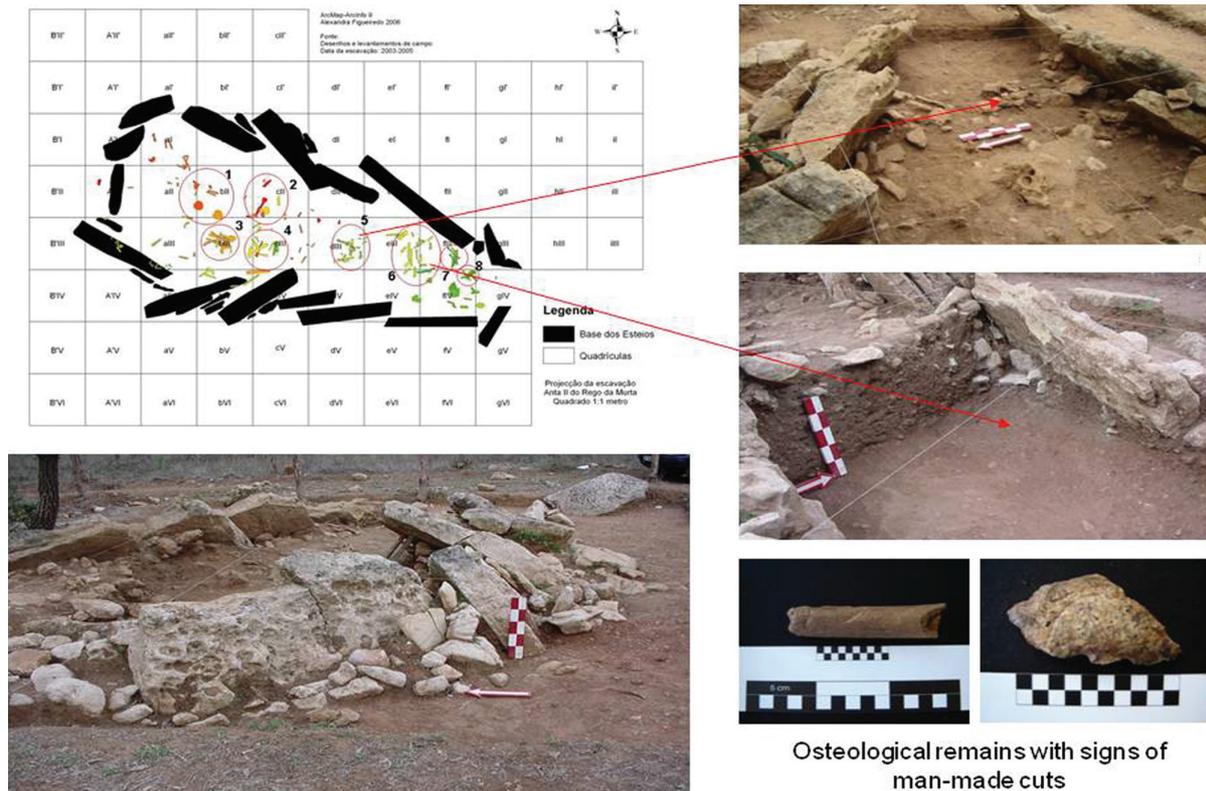


Fig. 6. Rego da Murta. Dolmen II. Distribution of human bone remains. Cut marks are visible on some bones.

considered as boundary or identity markers of these areas (Jorge 1977; Silva and Silva 1994; Leisner 1944; Almeida 1979.14; Bénéteau 2000), having only a marginal role in the understanding of the spatial-symbolic assemblage.

In Rego da Murta, procedures related to menhirs are still far from understood; however, there is no doubt that they are limited to a certain area where certain symbolic rituals and practices occurred, including debitage processes. The same happens with the set of menhirs at Quinta do Paço located at a few kilometres' distance further south (Caron *et al.* 2005). The remains observed (sets of menhirs and tombstone-menhirs associated with megalithic pits and artefacts such as schist plates spread across a relatively small area grouped in clusters and associated with vestiges of fire) lead us to connect them with symbolic rituals and concepts in the Rego da Murta set. The artefacts recovered in the vicinity of the menhirs also consisted of flints and cores mainly from the debitage of small nodes, with a significant percentage of cortex and barely any retouched artefacts (Caron *et al.* 2005).

If we consider menhirs and dolmens as part of the same spatial set, we can say that there was a clear intention in the choice of each object, as well as its

structure and manufacturing material. The rituals performed, such as the mere activity of making the artefacts or their deposition in the outer area of the monument, as well as inside the dolmens or even related architectural constructions, followed very specific rules. These depositions were perpetuated over time, and new structures and practices were added according to needs or rituals.

An in-depth analysis of the data leads us to conclude that, specially for Dolmen II at Rego da Murta, the different deposition moments (based on the absolute datings obtained) occurred within short periods of time (20 years on average) and reveal contexts containing artefacts of a wide range of typologies – a clear reflection of the intentions and ways of life of those ancient times. As far as we have observed, these depositions show unique characteristics that allow us to distinguish between each of them within the monument. Although this is not the main focus of this research, we recognise that this will be possible only if we consider that the choice of artefacts deposited by the communities was intentional and they were intended to convey a clear message.

Considering that the adoption of megalithism might have emerged from favourable structures, the causes may be related to social aspects, because the basic



Fig. 7. Cadaval cave in Nabao region.

parts of the puzzle (first, large-scale architectural structures requiring vast human resources; location in circulation or space-delimiting areas; rapid adoption by several communities; association with symbolic and mostly external artefacts with a relatively small number of individuals; the long occupation period of these monuments, and precise deposition procedures, among others) suggest collective, occasional contexts perceived by the surrounding environment. In the words of Debra Gold (2000:197) “(...) a secondary burial operates at a number of different levels and may create or transform the social environment as much as it reflects it”; it also requires greater “collaborative work” and is a process that “involves multiple corpses requiring specific physical

treatment and thus brings together the living and the dead in a powerful and protracted way.”

Apparently, the social aspect is obvious – the message passed on is acknowledged and perceived by local as well as external communities. Adoption is only accomplished if it is perceived and considered by the populations as necessary or effective for the purposes intended. Whether for sacred or profane motives, it must be respected and integrated into the population’s habits, and this is only possible within a society that confers meaning on it. Innovations could be assimilated and practised for the purpose of social integration in a wide contact network adapting symbolisms and concepts from neighbouring communities which, in their turn, had already adapted them from others by means of a sort of *universal language*. In addition, fashions would emerge that would change the practices adopted, eventually leading to entire communities adopting new habits. The practice of these innovations (activities, rituals and objects) would thus be shared by neighbouring communities in order to establish social agreements for integration into a *wide community*.

Megalithic monuments would then become a means of conveying that message, thus justifying the time and effort invested in the constructions and surround-

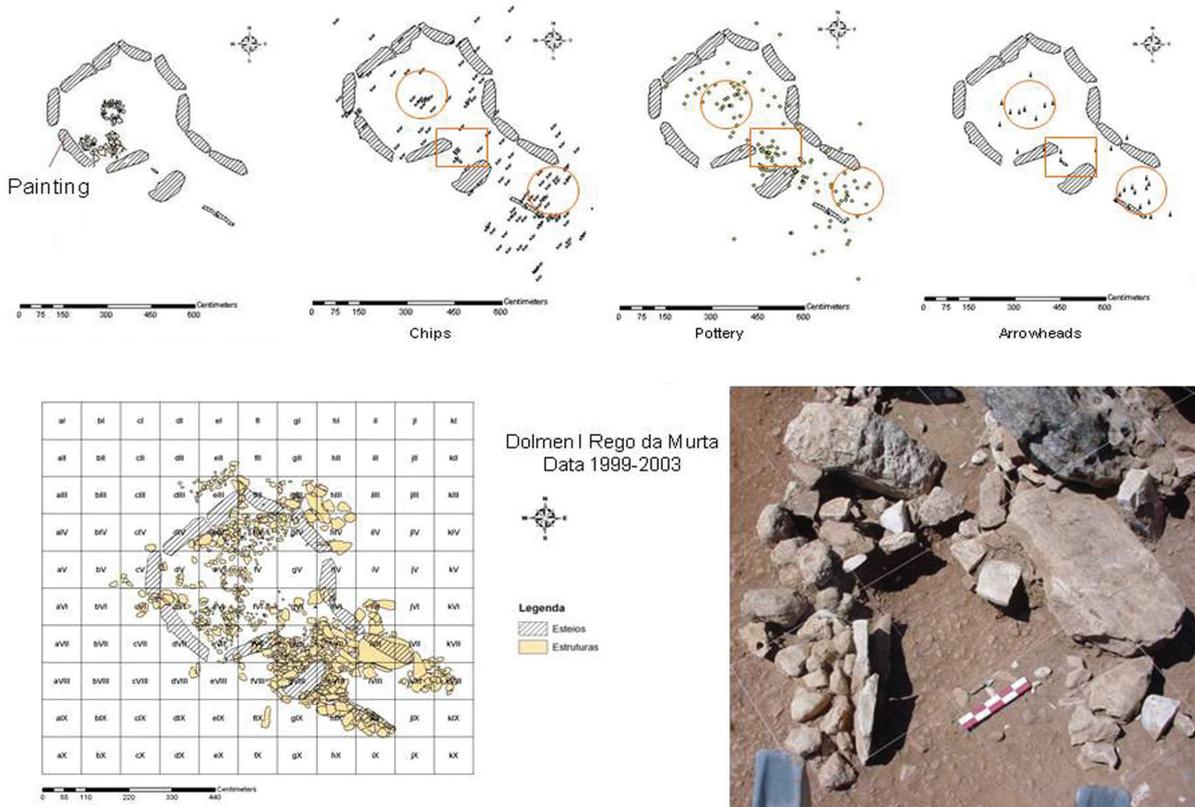


Fig. 8. Rego da Murta. Dolmen I. Paintings, pottery, arrowheads and flint debitage distributions.

ding area. The symbols (materialised in artworks and artefacts) – ideological conveyors – would be deposited in the interiors together with the ancestors (which would reinforce the intention and legitimate the action). In fact, these were not everyday burials, but symbolic practices with socio-religious meanings shared by the whole community.

These ‘innovations’ are not really new; some concepts applied to dolmens might have already been used in previous cult situations in cave burials, but around the 5th millennium were transferred and

adapted to the first monuments without having totally abandoned cave burials. After its exteriorisation, new structural elements were added, with the use in the Calcolithic of natural elements such as large outcrops, small discrete architectural structures indistinguishable in the landscape, or single pit depositions, whether or not associated with wider spaces containing menhirs. It was a phase of people’s conceptualisation of nature (*Guilaine 1998*) which was reflected in the economy and culture, but especially in the socio-religious system.

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The manipulation of death: a burial area at the Neolithic Settlement of Avgi, NW Greece

Georgia Stratouli¹, Sevi Triantaphyllou², Tasos Bekiaris³ and Nikos Katsikaridis³

¹ Hellenic Ministry of Culture & Tourism – IZ' Ephorate for Prehistoric and Classical Antiquities, Edessa, GR
59strat@otenet.gr

² Research Associate, Sheffield Center for Aegean Archaeology, sevitri@otenet.gr

³ Neolithic Avgi Project, Kastoria, Greece, anasbek@hol.gr, nikkat@mycosmos.gr

ABSTRACT – *In the Neolithic of Northern Greece the disposal of the deceased is strongly related to the community of the living, and in most cases to the built environment. Burials often occur in close proximity to, or underneath 'domestic' structures. The constant association of dead ancestors with the living social environment may indicate a particular desire by Neolithic people to negotiate their past by incorporating it into their own present. This paper addresses such issues, based on new evidence from the Neolithic settlement of Avgi, NW Greece. A group of cremations were recently located inside ten small pots buried in an open space in the Neolithic village. The burials consisted of tiny amounts of heavily burnt human bones and, in two cases, were accompanied by carbonized seeds. This paper will discuss the occurrence of the burial pots and the associated cremations as tokens of memory and of special links to the past represented by the dead ancestors.*

IZVLEČEK – *V zgodnjem neolitiku severne Grčije so umrli še vedno močno povezani s skupnostjo živih, v mnogih primerih z gradnjo naselji. Grobovi so pogosto blizu hiš ali pod njimi. Stalna povezava mrtvih prednikov in živega socialnega okolja lahko nakazuje željo neolitskih ljudi povezovati preteklost in sedanost. V članku predstavljamo nove dokaze z neolitskega najdišča Avgi v severozahodni Grčiji. Upepeljeni ostanki so bili najdeni v desetih majhnih posodah, pokopanih v neolitski vasi. Drobnji ostanki človeških kosti so močno ožgani; v dveh so našli karbonizirana semena. Analiziramo pojav grobnih posod in upepelitev, simbolov spomina in posebnih vezi s preteklostjo, ki jo predstavljajo mrtvi predniki.*

KEY WORDS – *Neolithic; Northern Greece; cremations; burial pots; mortuary practices*

Introduction

The disposal of the deceased in Northern Greece during the Neolithic period was closely related to the community of the living. In particular, burials in many Neolithic sites occur in shallow pits which are located in open spaces among houses or underneath their floors, while grave goods are few and simple (Hourmouziadis 1973; Demoule and Perlès 1993). Moreover, much of the evidence is consistent with a remarkable diversity in mortuary practices. Individual and group burials often disposed in a primary or secondary way were located either within the set-

tlements or in separate cemeteries. In particular, articulated inhumations, disarticulated scattered bones and a few cremations (Triantaphyllou 2008) have been found at Early Neolithic sites such as Nea Nikomedeia (Rodden 1962; 1964; 1965; Angel 1973) in Macedonia, Prodromos (Hourmouziadis 1971) and Soufli Magoula in Thessaly (Gallis 1975; 1982), as well as at many Late Neolithic sites, such as Makri (Agelarakis and Efstratiou 1996) in Aegean Thrace, Makriyalos (Pappa and Bessios 1999; Triantaphyllou 1999), Paliambela (Kotsakis and Halstead 2004),

Mandalo (*Pilali-Papasteriou and Papaefthimiou-Papanthimou 1989*), Toumba Kremastis-Koiladas (*Hondrogianni-Metoki 2001*) and Dispilio in Central and Western Macedonia (*Petroutsas 2009*), and Platia Magoula Zarkou (*Gallis 1982*), Ayia Sofia Magoula (*Milojčić 1976*), Dimini (*Hourmouziadis 1978*) and Pefkakia Magoula (*Weisshaar 1989*) in Thessaly.

For instance, at Early Neolithic Prodomos, in western Thessaly, successive layers of disarticulated skulls and long bones were found under a house floor (*Hourmouziadis 1971; Perlès 2001*), while at Late Neolithic Dimini, in south-eastern Thessaly, a series of cremations were found both underneath house floors, and inside clay pots placed next to hearths within the houses (*Hourmouziadis 1978*). On the other hand, at Late Neolithic Makriyalos, in central Macedonia, one of the two concentric ditches was used for primary and secondary burials (*Triantaphyllou 1999*). Cemeteries at some distance from the settlement also occur, such as the Early Neolithic cemetery at Soufli Magoula (*Gallis 1975; 1982*) and the Late Neolithic cemetery at Platia Magoula Zarkou (*Gallis 1982*) in eastern Thessaly, where cremation burials were placed inside pots and deposited then in shallow pits. Despite the great variety of burial customs, a common feature in the mortuary treatment of the deceased during the Neolithic period in Northern Greece is the domestic character of the burials, which is expressed through the incorporation of some of the deceased into the built environment of the living community.

Nevertheless, altogether these burials comprise a rather small number compared to the number of people considered to have lived in Neolithic villages. The scarcity of Neolithic burials cannot be attributed only to deficiencies in archaeological research (*Triantaphyllou 1999:128*). It is possible that a number of Neolithic burials have gone unrecognized, while other ways of manipulating the deceased, which left scarce, if any, traces in the archaeological record, should also be considered.

Recent excavations at the Neolithic settlement of Avgi, in Kastoria (*Stratouli in press*) (Fig. 1) shed light on aspects of mortuary treatment in the Neolithic of Northern Greece. A



Fig. 1. Map indicating the location of the site.

group of cremations was found inside ten small pots, buried at an open area of the Neolithic village (Fig. 7). Archaeological work at the site of Avgi provides enough evidence to support an interesting discussion with regard to Neolithic funerary behavior, and the association of the burial area with the built environment of the living community.

The site

The Neolithic site of Avgi¹ (*Stratouli 2004; 2005; in press*) is located in hilly terrain, rich in clay deposits, in the Kastoria region, NW Greece (Figs. 1 and 2). The site forms an 'extended' settlement (Fig. 3), a well-known type in the Balkan Neolithic and now widely recognized in the Neolithic of Northern Greece. The known size of the site is about 5ha of which some 2000m² were investigated during excavations (Fig. 4) carried out from 2002 to 2008 by the 17th



Fig. 2. The site at Neolithic Avgi.

¹ For further information, visit the web site <http://www.neolithicavgig.gr/>



Fig. 3. Reconstruction of peripheral ditches.

Ephorate of Prehistoric and Classical Antiquities of the Hellenic Ministry of Culture and Tourism under the direction of Georgia Stratouli and the collaboration of an interdisciplinary team of researchers. Based on radiocarbon dating, the Neolithic settlement dates to the Middle Neolithic (c. 5700–5300) and the Late Neolithic I and II (c. 5300–4500, most probably later on, too), with the earliest use of the site dating to c. 5650 calBC. Two distinct phases of occupation are evident: AVGI I, dating mostly to the second half of the 6th millennium (Middle Neolithic and Late Neolithic I), and AVGI II, dating to the 5th millennium (Late Neolithic II).

The earliest phase of occupation (AVGI I) is represented by the structural remains of at least six free-standing rectangular buildings, which were burnt and collapsed *in situ*, leaving intact remnants of clay and wood construction materials, mud bricks, wall plasters and post holes (Fig. 5). The building components comprise large open areas, facilities for the storage of agricultural and other products, thermal structures, including hearths and ovens for heating and cooking, and numerous implements used in a variety of daily tasks, such as food preparation, consumption and tool-making.

The settlement layout and construction techniques appear to have changed radically at AVGI II. The remains of at least five rectangular buildings, ranging in size between 70 to 85m², and one of elliptical shape belong to that phase. Some of the buildings are separated by narrow trenches. The clay walls of the buildings located at the western and, to date, the better excavated part of the settlement, were firmly placed inside foundation trenches, a building tech-

nique well documented at many Neolithic settlements across the Balkans (Fig. 6). Several storage, refuse and borrow pits also belong to the same phase.

The burial area

The burial area at the Neolithic settlement at Avgi is located at the center of the site, covering a rather small area of about 3.0m² (Fig. 7). Based on stratigra-



Fig. 4. Western part of the excavations.

phic observations – while radiocarbon dating is still pending – the burial area dates to the fifth millennium, probably an early phase of AVGI II. We should note here that little is known about this phase regarding the settlement layout and building construction. However, much of the evidence indicates a variety of everyday activities occurring at the site at this period – for instance, the presence of thermal structures, such as hearths and ovens, as well as a large amount of tools and other artifacts.



Fig. 5. Architectural remains dated to the second half of the 6th millennium (AVGI I).

Ten small pots containing tiny amounts of burnt human remains were excavated at this area (Fig. 8–14). The burial ritual involved cremation of the dead, which probably occurred at another place, away from the domestic environment. In two cases, burnt seeds were also placed in the burial pots (Fig. 14). At a later stage, the pots were disposed in this specific area, and each was covered with two or three layers of large pottery fragments (Fig. 9–11); the larger of these sherds were smashed intentionally at some stage during the burial ritual. The small burial pots were most probably buried in pairs (Fig. 10), while stratigraphic evidence would reflect more than one episode of depositions to have taken place, indicating that this particular ritual continued for a rather long period.

The upper layers of the burial area were significantly disturbed by the later Neolithic occupation and

modern ploughing, so both its original form and contents may have been affected. It is a matter of further research to explore whether the small pots were buried within a pit or placed in an open or an encircled area of the settlement, or whether the area was covered and marked by a *tumulus* or any other construction. The good preservation of both the pots and their covering sherds indicates that they were not exposed for a long period after their disposal, but again there are no indications in the excavated part to suggest the opening of a large burial pit in order to include the small group of urns. These issues are unresolved to some extent by the fact that the excavation in that particular area of the settlement is still in progress, and therefore the limits of the burial area remain under investigation.

The burial pots

The ten small burial pots are characterized by a remarkable variability, particularly with regard to their height, which ranges from 3.0cm (*i.e.* a miniature hole-mouth jar, Fig. 12) to 13.0cm (*i.e.* a small necked jar).

Furthermore, differences in both the shape and surface treatment of the pots can be observed. They seem to imitate closed vessels, such as hole-mouth and necked jars, which are well known forms among the pottery inventory of the site. Also, the color of the exterior surfaces of the vessels range from light brown (four pots) and reddish brown (four pots) to red (one pot), while in one case



Fig. 6. Foundation ditches, post holes and pits dated to the 5th millennium (AVGI II).



Fig. 7. Location of the burial area within the settlement.

a small 'black-topped' spherical necked jar, possibly missing a handle, is present. The surface treatment of the burial pots also varies: four pots show smoothed exterior surfaces, while six are burnished. Moreover, two distinct techniques can be detected in the manufacturing process of the burial pots: most were manufactured with the 'coiling' technique, in which coils of clay are used to build up the pot (Shepard 1968.75). The remainder and the smaller pots were crafted using the 'pinching' technique, in which a single lump of clay is transformed into a pot by pressure of the potter's hands (Rice 1987.125).

Also, some pots show wear marks on the exterior surface of their base. This feature would suggest that these particular pots prior to their deposition in the burial ground were used in some other activity in the context of Neolithic daily life, and therefore the 'circle of their life' ended along with the life of an individual. In sharp contrast, there are pots that exhibit more 'hasty' manufacture characteristics (Fig. 13), in terms of shaping, forming and even firing, indicating that they were made for use only as funerary urns.

To sum up, no single burial pot is identical to any other. On the contrary, all urns from the small burial assemblage of Neolithic Avgi were placed at the same central area of the settlement and were covered with large sherds from large vessels, creating possibly a small tumulus (Fig. 10), although it is impossible to know whether or not this feature was visible to the living community after the burial rituals took place. It is also probable that these larger vessels were deliberately destroyed during the funerary



Fig. 8. Burial pot with associated skeletal remains.



Fig. 9. The stages of excavating and ‘revealing’ a burial pot.

ary rituals, once their ‘cultural biography’, carrying a number of meanings through their use in different social and cultural contexts, was completed.

The overall similarity of the funerary rituals at Neolithic Avgi contributes towards an emphasis to communal versus individual identity, although the unique manufacture characteristics of each burial pot mark at the same time the particular identity of the deceased. It is worth mentioning that the shapes of the burial pots were inspired by vessels usually associated by archaeologists with storage and/or collective consumption of food.

The skeletal remains

The study of cremated bone material involves, aside from the thorough recording of biological parameters (*e.g.* age, sex, pathological conditions), the careful examination of variables related to the process of cremation, such as the color, fragmentation and several modifications, like fracturing and warpage, which can be observed on the bone due to its exposure to burning conditions. Moreover, fragmentation and the representation of skeletal elements can be related to a series of acts taking place through human interference, such as the deliberate *mixing of bones* during the process of firing in order to provide more oxygen and, therefore, adequate cremation of the cadaver, and the *mode of collecting* the cremated remains – either complete or selective after the extinction of the pyre (McKinley 1994; 2000; Ubelsker and Rife 2007; Schmidt and Symes 2008).

At Neolithic Avgi, the small quantity of bone found in pot burials limits the analysis with regard to information which can be provided from cremated bones. The majority of the cremated fragments recovered from the site exhibit patterns of calcination, coloring, fragmentation, fissures, transverse and longitudinal fracturing and warping to be consistent with burning as fresh bone with the flesh still attached, as opposed to burning dry bone, without flesh. With regard to burning temperature and duration, the evidence from calcined bones shows that pyre temperatures reached at least 700°C at the level of the body, while exposure to high temperatures was probably a lengthy procedure. High fragmentation may have been caused due to the continuous addition of fuel during the burning process and the consequent mixing of pyre debris with long sticks. The morphology, size and structure of the bone indicate that six out of ten burials belong to adults, and only one to an infant, but there were no features preser-



Fig. 10. A pair of burial pots: in one case, the pot is still covered with sherd fragments.



Fig. 11. Large sherd fragments covering a burial pot.

ved allowing sex determination and an accurate estimate of age at death. All the bones were in tiny fragments (Fig. 13), and only in two out of ten cremation burials were some bone fragments identifiable. In general, there is no preferential selection between cranial and post-cranial skeletal elements.

The weight, however, of the cremated material is worth discussing here. It is generally accepted in the related bibliography that the weight of bone recovered from an adult cremation varies between about 1000 to 3600grms (*McKinley 2000.404*). At Neolithic Avgi, the tiny quantity of the cremated bone material, less than 10grms in each case in the majority of burials, may be consistent with secondary treatment of the deceased. It is worth noting the presence of three out of the six adult burials which show larger quantities of bone material, ranging from 90 to 165grms, which again, however, are not consistent with what would be expected in a careful and thorough collection of all cremated bone remains. It is therefore possible that after the pyre was completed, the cremated remnants of the deceased were collected in a very selective way.

Discussion

The cremations at Neolithic Avgi are not unique in Neolithic Northern Greece. Similar burial evidence was recently discovered at the nearby lake settlement of Dispilio, approx. 10km north-east of Avgi (*Petroutsas 2009*), and Toumba Kremastis-Koiladas in Kozani, approx. 65km to the south-east of Avgi (*Hondrogianni-Metoki 2001*). At Toumba Kremastis-Koiladas, however, the burial ground was not associated with a particular settlement, but was part of a separate cemetery (*Hondrogianni-Metoki 2001*), si-

milar to cemeteries such as Early Neolithic Soufli Magoula and Late Neolithic Platia Magoula Zarkou in Thessaly (*Gallis 1975; 1982*). At Avgi, the grouping of cremations at an area inside the domestic environment together with the complexity of the funerary ritual, as has been suggested by the burial pots and the covering sherds and the results of the osteological analysis, raise a number of issues which require further interpretation.

Firstly, only a small group of people was chosen to be buried in this particular part of the settlement. There

is no doubt that these individuals were buried in this specific area of the settlement in an exceptional way, while most members of the community were probably treated differently. What were the criteria which determined this selection? Were the individuals buried in that area selected randomly, or were they related by some close ties, which were distinct to the Neolithic community, but totally inaccessible to us? Ethnographic studies would suggest that such ties could be related to lineage, social identity and age, or even to a violent and abrupt cause of death (*Parker Pearson 1999*). Whether or not other members of the Neolithic community of Avgi received a similar or different type of manipulation after their death remains unknown, since there is no other related evidence in the excavated area. The occurrence of another burial area within the settlement or in close proximity to it may be possible. In any case, it is remarkable that a group of people was disposed at a distinct area within the domestic environment, which was visible and accessible to the members of the living community only. Moreover, the complex funerary ritual, which was probably a lengthy and



Fig. 12. A miniature hole-mouth jar with associated skeletal remains.

public event, created an opportunity for the villagers to establish new relations in the living community through their participation in the same ceremony.

Death was probably an event which affected and concerned the Neolithic community as a whole, and the funerary ceremonies could be interpreted as a field for the negotiation of the new social roles which were emerging for the living, kinsfolk or otherwise, of the deceased (Whittle 2003:126). Through the *manipulation of death* the community of the ancestors affected the community of the living (for an ethnographic example, see Kopytoff 1971) by reproducing and establishing new relations and social identities among the living, or by reaffirming and reforming the given ones (Parker Pearson 1999). Thus, it was of the utmost importance that the memory of the ancestors would survive for future generations; that ancestry and the past would take a *material form* in order to be preserved, not only as an abstract event, but as a tangible memory, a *token* of the memorable individuals. The case study of Neolithic Avgi would suggest that the burial pots and the associated cremations could be interpreted as *tokens of memory*. Together with their use in funerary practices, these tokens may have also participated in other acts of commemoration. For instance, they may have been held and displayed during special gatherings, such as feasts or other ceremonies of social or symbolic character (see Edmonds 1999:59), long before their final disposal in the burial ground. The lack of grave goods or other finds related to the burial pots is also of interest. Only two pots had small quantities of carbonized seeds inside them, probably emphasising the link between the memorable ancestors and fertility, or even farming activi-



Fig. 13. Burial pot containing tiny amounts of skeletal remains.

ties, which had an important role in the daily round of the Neolithic community. From another point of view, the seeds can be viewed as representing the agricultural cycle (Bradley 2005). In contrast with most things that have a finite life – including people, animals, houses, villages and objects – a seed is part of an unending cycle, since it produces more seeds if planted again. Putting together humans and seeds may be interpreted as an attempt to transcend the effects of life and death and embrace permanence (Williams 2003). Besides, the disposal of these tokens of memory in the domestic environment of a living community had a special meaning. Incorporation of the ancestors into the living world would reflect a strong desire by the community not only to the preceding generation, but also to the particular central area of the settlement. Although building remains from the early phase of AVGI II to which the burials are probably contemporary are scarce, there is enough evidence of a variety of everyday tasks occurring in the proximity to the burial area, indicating that this was unquestionably part of a domestic environment.



Fig. 14. Burial pot containing skeletal remains and carbonized seeds.

The close association of a group of deceased (ancestors) with the living social environment may indicate the desire of Neolithic people to negotiate their own past by weaving it into their own present. Such practices of materializing and managing the past could be considered as *acts of remembering* and, according to archaeological and anthropological theory, constitute important components in the formation of social identities and the construction of social relations (van Dyke and Alcock 2003).

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Early Neolithic burials of Starčevo culture at Galovo, Slavonski Brod (Northern Croatia)

Kornelija Minichreiter and Katarina Botić

Institute of archaeology, Zagreb, HR
kornedunav@inet.hr, katarina.botic@iarh.hr

ABSTRACT – *At Galovo, near Slavonski Brod (Posavina, northern Croatia), a part of an early phase Starčevo culture settlement was found. Inside the settlement a ritual space was separated from the living area by semicircular wooden fences, which shows the so far unknown dimension of ritual burials and organisation of life in the settlement during this period. In a big burial pit, three individuals were buried: a man (complete skeleton), and a woman and a man, both without heads. In the small burial pit a man without a face was buried. Offerings near the buried individuals and objects in the pits show function and tribal status of these individuals at the settlement. Radiocarbon analyses date the burials to around 5700 and 5300 calBC.*

IZVLEČEK – *Na najdišću Galovo pri Slavonskem Brodu (Posavina, Severna Hrvatska) je bila odkrita zgodnja faza naselja kulture Starčevo. Polkrožna lesena ograda je ritualni prostor ločevala od bivalnega. V veliki grobni jami so bile pokopane tri osebe: moški (cel skelet) in ženska ter moški, oba brez glave. V majhni grobni jami je bil pokopan moški brez obraznega dela lobanje. Pridatki govorijo o njihovem socialnem položaju in rodovni pripadnosti. Grobovi so datirani med 5700 and 5300 BC.*

KEY WORDS – *ritual burial; Early Neolithic; Linear A; Starčevo culture; Galovo-Slavonski Brod; Croatia*

Introduction

In the Summer of 1997, during the first year of systematic archaeological research at the Galovo site in the eastern part of Slavonski Brod, part of a Starčevo culture settlement was found in which, specially marked and separated by semi-circular fences, a ritual-burial ground was discovered (*Minichreiter 1999b.12–17*). Human burials of the oldest farming and pottery culture of European Neolithic – the Starčevo culture – are seldom found. In the whole region of the Starčevo culture complex, which in its narrower area include northern Croatia, narrow Serbia, Vojvodina, east and central Bosnia, Kosovo and a part of northern Macedonia (*Minichreiter 2010 in press*), about 600 settlements of Starčevo culture

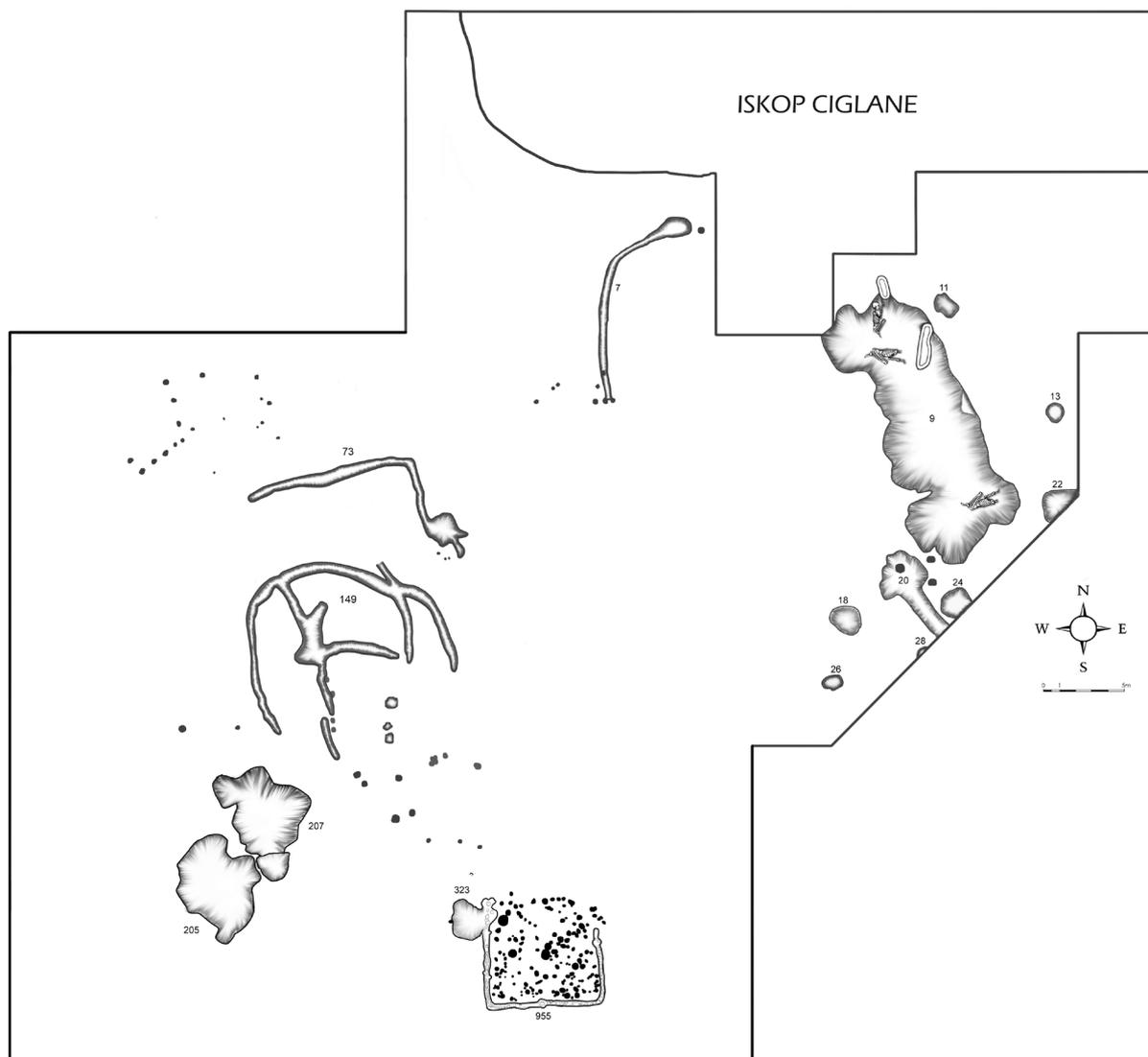
were found, 120 of which in Croatia. Only in 70 settlements have human burials been found, among which five are in Croatia. These five settlements belong to different development stages of Starčevo culture¹: Slavonski Brod – Linear A, Pepelana – Linear C, Vinkovci – Spiraloid, Jaruge and Vukovar probably to the final stage (*Minichreiter 1999b.12–16; 2002a. 63–72*).

Early Neolithic settlement of Starčevo culture

Archaeological research conducted so far on an area of 3000m², has revealed a part of Starčevo culture settlement² in which pit-dwellings and pits for vari-

1 Chronological division after S. Dimitrijević with K. Minichreiter's supplement: Monochrome, Linear A, Linear B, Linear C, Girlandoid, Spiraloid A and Spiraloid B. In the northern Croatia no settlements belonging to the first development stage (Monochrome) were found so far. Linear A settlements are the oldest in this region.

2 Systematic archaeological research of Starčevo culture settlement at Galovo is being conducted from 1997 (12 campaigns) and so far 3000m² were excavated. The work is supervised by Dr. Kornelija Minichreiter, Senior Research Scientist, in cooperation with Dr. Zorko Marković, Assistant Research Scientist, and Katarina Botić, archaeologist, both from Zagreb Institute of Archaeology, as well as archaeologists from Slavonian museums. The students from Philosophical Faculty in Zagreb and Zadar also participated in several campaigns, as a part of their field research program.



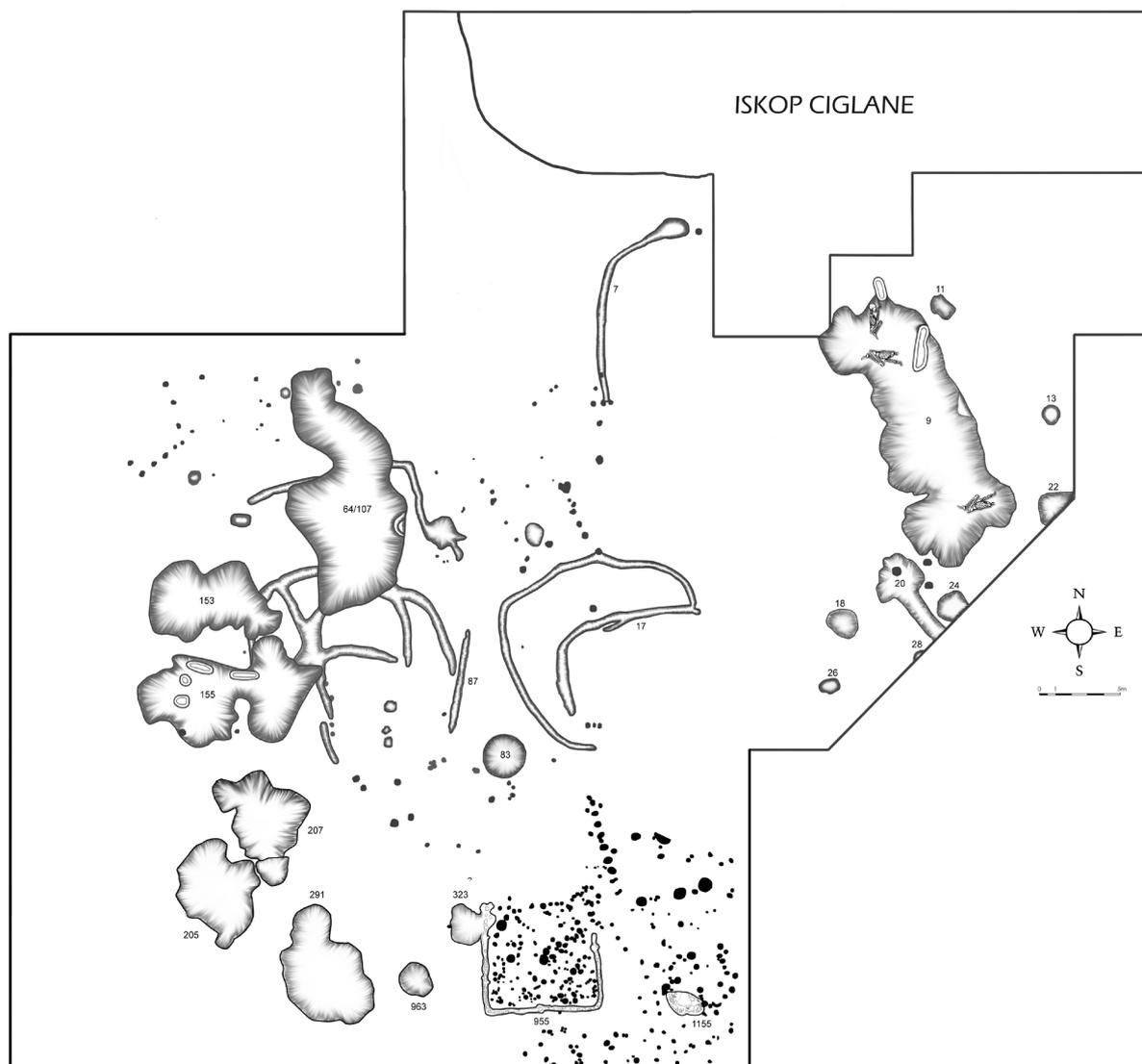
Pl. 1. The 1st phase of the settlement at Galovo (made by M. Gregl).

ous purposes, above ground constructions, cult constructions and a ritual-burial ground separated by wooden fences were built (Minichreiter 2007a).

In the first phase - when structures were built between 6100 and 5700 calBC (Plan 1) - the western part of ritual-burial ground covered a larger area of the settlement ground. This is suggested by two wooden fences (7 and 73) placed between the ritual-burial ground and the residential area of the settlement. Wooden fences, 7 (semi-circular) and 73 (square), surrounded big burial pit 9 containing three burials (Minichreiter 1999b.12-17; 2002b.63-67) and cult structures 149 and 389, which were formed from two double semi-circular fences in the shape of a crescent (Minichreiter and Krajcarić Bronić 2006.Sl. 2; Krajcarić Bronić and Minichreiter 2007). To this oldest group of constructions two working pit-dwellings belong, built somewhat later to the

south of the cult structures. In the working pit-dwelling 205, a large pottery kiln was placed, as well as the remains of a wooden frame and thirty pottery weights for a vertical loom (Minichreiter 2007b.23-25, Figs. 1 and 2). Working pit-dwelling 207 was attached on its north-eastern side to working pit-dwelling 205 and contained a bread oven and an open hearth, while in a separate area in this working pit-dwelling, bone needles for sewing leather were found. In these structures, between fragments of fine pottery, some shards with white painted motifs were discovered, which places this phase of the settlement in the white Linear A stage (Dimitrijević 1974.69; 1979.242; Minichreiter 2007b.25-28; 2007c).

The foundation trenches of above-ground structure/house 955 belong to the group of structures from this settlement's development phase and it repre-



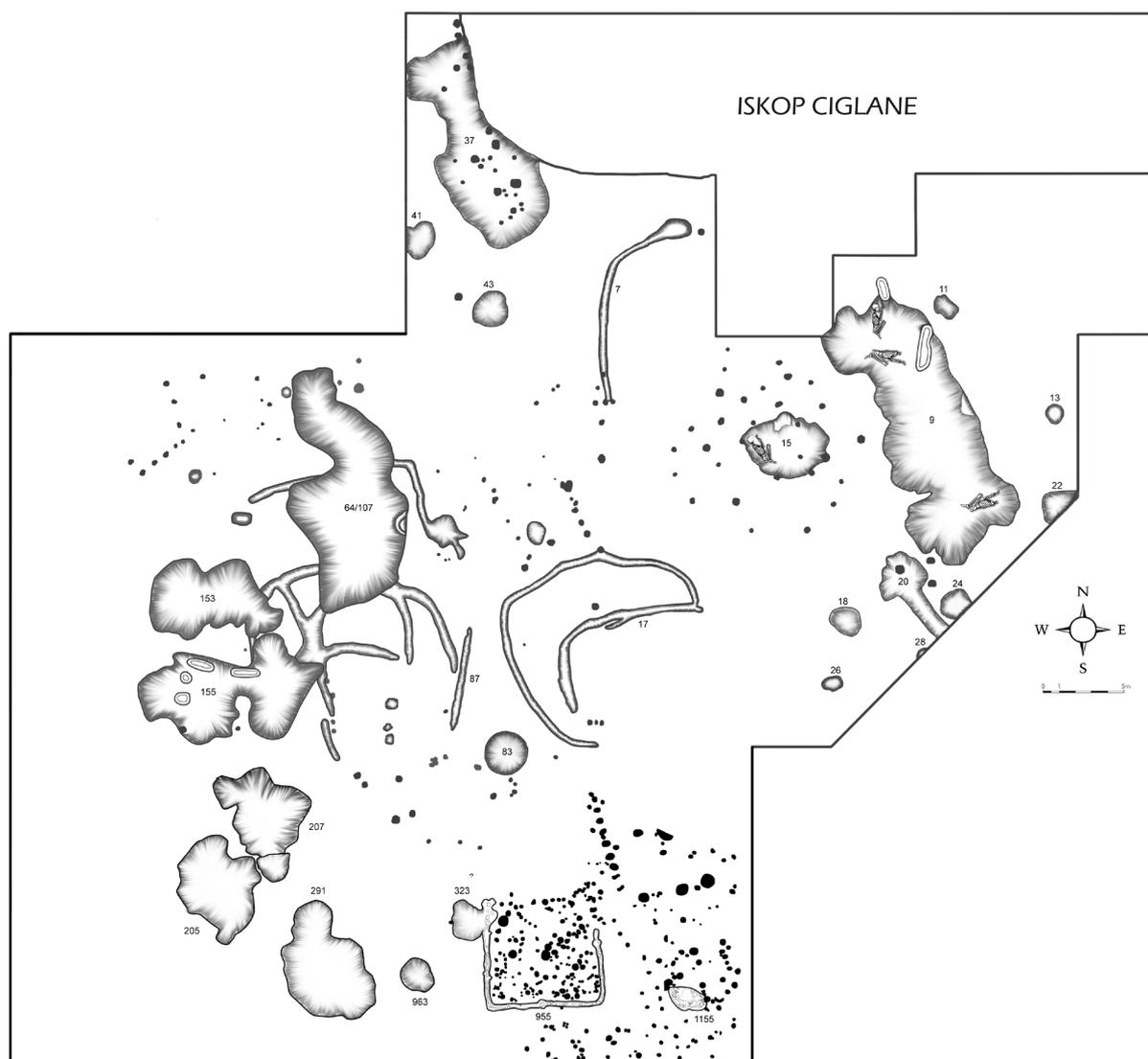
Pl. 2. The 2nd phase of the settlement at Galovo (made by M. Gregl).

sents, according to the present state of research, the oldest above-ground structure of the Starčevo culture settlements in Croatia (*Minichreiter 2010 in press*). The north-western part of the foundation of the house is damaged by a shallow pit 323 whose eastern part was dug over it. The date of this construction could not be directly determined³, so an attempt for its dating was made by dating pit 323 to around 6070–5770 calBC, and it is fair to assume that above-ground structure was built before this time, in the first phase of the settlement.

In the second phase, around 5700 calBC (Plan 2), the settlement spread towards the burial pits, thereby narrowing the area of the burial ground (*Minichreiter and Krajcar Bronić 2006.9–10, Fig. 3; Krajcar Bronić and Minichreiter 2007*). Above western cult

structure 149 and its northern square wooden fence 73 which lost its function due to this new construction, three large pit-dwellings were built: 64/107, 153 and 155. Respecting the tradition and meaning of eastern cult structure, these pit-dwellings were constructed in a semi-circle around it, and not on the north-south axes, the rule respected by other pit-dwellings in the settlement. In a younger phase of the settlement, between the eastern cult structure and the pit-dwellings, a new short wooden fence 87 was built in order to separate the burial grounds from the residential area – more symbolically than physically. The Starčevo culture settlement at Galovo can be placed among the oldest examples of the spread of a residential area towards the space reserved for burials, a practice common in many settlements throughout history, including in present day's towns.

³ The remains of charcoal were not found in the foundations or in the post holes in its interior space.



Pl. 3. The 3rd phase of the settlement at Galovo (made by M. Gregl).

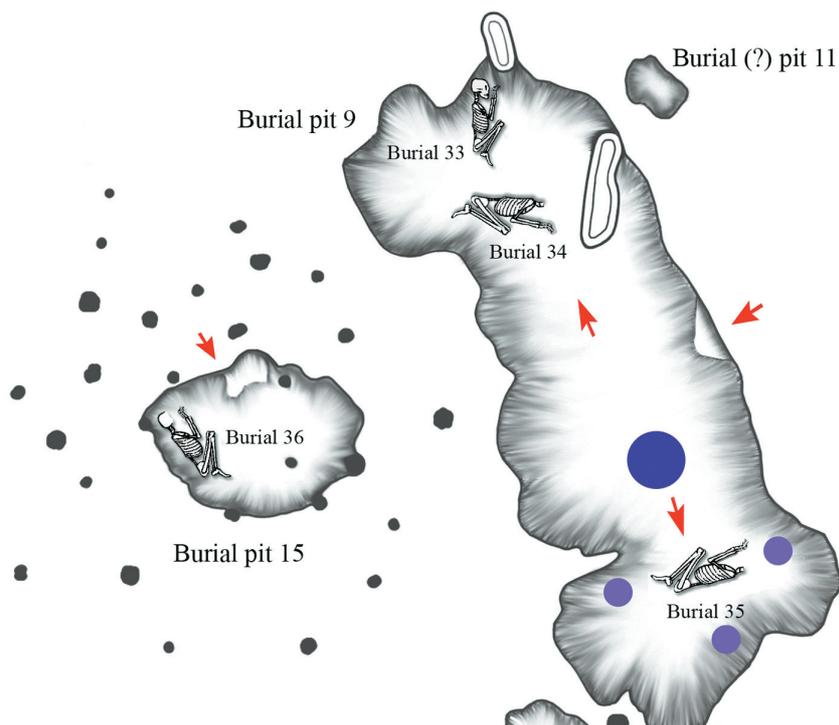
Residential and working pit-dwelling 64/107 is dated between 5635 and 5535 calBC. Its northern space was placed above a part of square wooden fence 73 which confirms its dating to the younger phase of the settlement (Minichreiter 2003, Fig. 2; 2007a, 44). The pit-dwelling consisted of northern and southern spaces of uneven dimensions. The inventory of the northern space contained 715 stone objects from all phases of production (pebbles, cores, flakes, bladelets, blades, whetstones, refuse material *etc.*), which indicates that there could have been a stone tool workshop here. Two different purposes for the northern working area and the southern residential area are underlined by the existence of two entrances to the pit-dwelling at its eastern side. One step led to the northern space and two to the southern.

All the other pit-dwellings in the settlement have only one entrance, on their eastern side⁴, regardless of their function.

Pit-dwelling 153 was situated in its eastern part over the western cult structure, between pit-dwellings 64/107 and 155. Constructed in a younger phase of the settlement, it is dated to 5700–5546 calBC. The absence of ovens, loom and stone objects from early phases of production, as well as the layout and shape of its inner spaces, suggest the residential character of this pit-dwelling (Minichreiter 2007a, 46, Fig. 14).

Working pit-dwelling 155, dated to 5760–5670 calBC, was constructed parallel to pit-dwelling 153 on its southern side and contained two pottery kilns and

⁴ The type of entrance orientation at the east side of the pit-dwellings is direct consequence of climatic conditions. Thick layers of sediment found inside the pit-dwellings, on their western edges, suggest strong western winds at the time of early Neolithic. Identical situation was discovered in pit-dwellings from early Neolithic Starčevo culture settlement at Zadubravlje.



Pl. 4. The composite plan of burial pits and burials (arrows: the entrance paths; circle: a deposition of pottery and bovid horn; small circles: separate groups of pottery deposition).

two bread ovens in its western part. Its eastern working space probably served for the production of clay objects before firing. Near the eastern entrance, in a small separate space, the remains of a wooden frame and ceramic weights were found, suggesting the production of fabric on a vertical loom here (*Minichreiter 2004.5-18; 2007a.46-50, Sl. 15*).

Contemporary to these structures and dated to 5710-5550 calBC is working pit-dwelling 291 situated south-east of pit-dwellings 205 and 207. Formed as an empty working space (without kilns, ovens or looms), it probably served as a workshop for sewing leather clothes and footwear (remains of bone needles) and stone tool production - around 1000 stone artefacts were found there, including fragments of grind stones, 39 cores, parts of 4 polished axes/adzes, one of which is complete (*Minichreiter 2008.5-14, Figs. 1-5*).

To the third, the youngest phase (Plan 3) of construction of this part of the settlement, belong residential pit-dwelling 37 which was dated to 5380-5290 calBC, and a small burial pit 15 dated to 5300-4960 calBC (*Minichreiter and Krajcar Bronić 2006.10-13, Fig. 4; Krajcar Bronić and Minichreiter 2007*). Residential pit-dwelling 37 was built north of the group of six pit-dwellings and north-east of fence 7 (*Minichreiter 2007a.40, Figs. 7-8*) while the con-

temporary small burial pit 15, containing one burial, was built at its opposite side in the burial area, behind fence 7 (*Minichreiter 2007a.70-72, Figs. 25-26*).

Ritual burials in a separate burial area of the settlement

Among 120 Starčevo culture settlements found in Croatia so far, only in five of them (Vinkovci, Pepelana, Vukovar, Jaruge and Slavonski Brod) have human burials been discovered (*Minichreiter 2002a.63-72*). Of all the early Neolithic Starčevo complex settlements, only at Galovo - for the first time - was a ritual-burial area discovered, separated from the rest of the settlement by wooden fences. In

other settlements, individuals were buried in pits inside settlements, between working and residential pit-dwellings.

Archaeological research has uncovered only the western part of the burial area at Galovo so far. This



Fig. 1. Burial pit 9, view to the north.

area, in its 1st phase, occupied large space and consisted of pits for burials and two or three additional cult structures (double wooden fences that close the crescent shaped space) which were separated from the settlement by two long wooden fences (1st phase of the settlement – Plan 1). After some time, because of the increase of population, the settlement spread towards east. Over the west cult structure 149 and its northern wooden fence 73 three big pit-dwellings (64/107, 153 and 155) were constructed. By the expansion of the settlement, the ritual-burial space was shortened by 30m towards the east, and perhaps only the eastern and southern double fences remained in function as cult structures. In that 2nd phase (Plan 2), between pit-dwellings, which belonged to the residential area, and the eastern cult structure, a wooden fence 87 was erected in order to separate the new part of the settlement from cult and burial grounds.

Many small post holes (5–7cm in diameter, 10cm buried in virgin soil) were found north-east of burial pit 9, some of which had been placed in rows, and in some cases buried one next to another, two together⁵. Utility and shape of these structures is not quite clear, but there is a great similarity to the rows of post holes in the eastern part of the Starčevo culture settlement at Zadubravlje, in which those rows of post holes were reconstructed as structures for storage and drying food, one of their possible utilities at the settlement (*Minichreiter 1992a.31*). At a time of research at Zadubravlje, the possibility that the structures were used for ‘drying’ the deceased was not set aside.

The discovery of identical vertical post holes rows at Galovo in Slavonski Brod also leads to the assumption that these structures on high posts could have served for exposing the dead to birds before the final ground burial (*Mellart 1967.167, 169, Fig. 47*). Although the Neolithic shrines at Çatalhöyük contain the wall paintings which show birds in combination with human figures – vultures flying over headless humans, the new research does not confirm this theory.

Burial in a small burial pit 11

In close proximity to the north-eastern part of burial pit 9, where two ritual kilns and two burials of adult individuals were placed, a small shallow pit 11 was found. It was of uneven rectangular shape, U-



Fig. 2. Centre of the burial pit 9. A group of pottery vessels and a horn.

shaped in cross-section and 25cm deep. It contained traces of small bones, probably of a child, and a small pottery fragment.

Burials in a big burial pit 9 (Fig. 1)

The ritual-burial area was dominated by big burial pit formed by three spaces. The central space had, on its eastern side, entrance to this burial pit and in its centre a group of pottery vessels, stone tools and the remains of animal bones (Plans 1 and 4, Figs. 1 and 2). Beneath this group, a big bovid horn was buried, 51cm in length (Fig. 2). The northern and southern spaces were 1m wider than the central space. In the northern one, a skeleton of a man (whole) and a skeleton of a woman (headless) were found, and in the southern space, a skeleton of a headless man. The bottom of the burial pit (U-shaped in cross section) was dug down to the depth of 1m from the upper edge of the structure. The entrance was on the eastern side of the central space, across two steps. Entrances were usually on the eastern or south-eastern side at the Zadubravlje-Dužine and Slavonski Brod-Galovo settlements. The only exception is a small burial pit 15 at Galovo, which required an entrance on the northern side because of its position between the structures. The choice of such a position for the entrance to burial pit 9, especially its central space, had its logical explanation. Upon entering the

⁵ In a space of 150m² around 130 holes from thin wooden posts were found, placed in rows with some rows overlapping but still forming rectangular shapes.



Fig. 3. Centre of the burial pit 9, pottery and lithic finds.

burial pit, visitors stayed only in this central space, where they probably held ritual feasts. Here, a group of fourteen pottery vessels was found; eight pots of coarse structure with different decorations, a bowl of fine structure, three painted bowls on a foot, one pot with white and another with dark painted motifs, altar and a piece of fired clay ('sacrificial table', Fig. 4). Among these objects four stone adzes and three axes were found (Fig. 3).

At the bottom of the northern space in burial pit 9, two human skeletons were found (Plans 1 and 4, Fig. 5.a-b). About half a meter west of the south part of kiln 30, a man was buried (burial 33), 40–50 years of age⁶. He was buried in a contracted position on his left side, with head to the north and facing east. He differed from other two burials in this pit, which were buried in an east-west direction facing the centre of this pit and were headless. The skeleton was covered by dark brown earth mixed with small shards of pottery and flint. On his eastern side, fragments of two fine textured bowls with red polished surface were found (Figs. 5.b; 6.a-b). One was decorated with dark brown painted motifs of hanging triangles filled with oblique lines, while the other had wide vertical stripes painted from the rim to the end of the belly (Minichreiter 2007a.96–97). At

many early Neolithic sites, pottery placed in burials was decorated in the same way: at Zadubravlje and Pepelana (Minichreiter 1992a.T. 9, 14, T. 21, 7–8), Vučedol and Vinkovci (Dimitrijević 1974.T. IV.5, T. XVI.1, 2), Donja Branjevina (Karmanski 1979.T. XXVIII; 2005.T. XC.1, T. XCIII.1–12, T. XCIV.2, T. XCV.9), Obrež (Bukner 1960. T. IV), Lepenski Vir (Srejović 1969.167), Starčevo (Arandelović-Garašanin 1954.T. XVI.2) and Lánycsóku-Bácsfapuszta in Hungary (Kalicz 1978.Sl. 2.1–4; 1990.Taf. 13; 1998.Abb. 2).

On the south side of the male skeleton, two parallel rows of small post holes (10cm in diameter) were found which ran from the eastern border of

the pit to its centre, 2m in length, and which possibly served to separate this male burial 33 and female burial 34 situated about half meter to the south.

A female body (burial 34), app. 35–40 years of age, was placed on its left side in a contracted position,



Fig. 4. Centre of the burial pit 9, 'sacrificial table'.

⁶ Anthropological analysis was made by Dr. Mario Šlaus and Dr. Mario Novak from the Archaeological department of Croatian Academy of Art and Sciences in Zagreb.



Fig. 5a–b. Burials 33, 34 and kiln 30, view to the north.

orientated toward the centre of the burial pit, in an east-west direction (Fig. 7.a–b). Skull bones were not found, which leads to the conclusion that she was buried headless. In the same way as in the other burials, she was covered by dark brown earth mixed with small shards of pottery and flint. At the east side of the skeleton, in a place where the head should have been, in the layer beneath the skeleton, a large concentration of pottery and burned animal bones was found. Between skeleton 34 and kiln 31 (also in a place where a head should have been but little further to the east) fragments of three fine textured bowls with red polished surface, decorated with white and brown motifs, were found together with three small sacrificial vessels and a lump of fired clay (game-hunting ball) (Fig. 7.b). It is important to stress that almost all specimens of this type of small sacrificial vessels have been found near the deceased – six sacrificial vessels near burial 36 in a small burial pit 15 and three in front of female skeleton 34 in a large burial pit 9. Analogy to this rare type of altar was discovered so far only in horizon III.a in Lepenski Vir (*Srejović 1971.T. 12.6; Stanković 1992.T. LXXXVI.14*).

In the immediate vicinity of these skeletons, along the eastern and western edges of burial pit 9, two elongated kilns were built (Fig. 8). They resembled an elongated pottery kilns in shape only, while the method of construction, position and contents in them indicated a ritual use. The kilns were built at the edge of the burial pit, with a firing opening outside the burial pit. The interior sides of the kilns consisted of a thin layer of burnt-through clay, which suggests their occasional use. Only one leg of a large-sized bowl on a foot, of fine texture and bearing traces of red paint, was found in the interior of the kiln.

A large-sized leg (12.5cm high, base diameter 20.5cm and top diameter 16cm) was symbolically placed in the kiln after it was broken from the bowl, possibly during some kind of ritual (Fig. 6.b). The other parts of this bowl haven't been found in the kiln. Maybe they were very fragmented and mixed with the earth which covered the skeletons. The bowls on the legs are usually of fine texture, of one colour or with painted motifs, and are frequently placed in burials, or if found in residential pits, they do not belong to the household pottery but are intended for cult. The kilns from residential parts of settlements in Slavonski Brod and in Zadubravlje differ in method of construction (*Minichreiter 1992b.37–47*) from these ritual kilns. The kilns in Zadubravlje and in working pit-houses 155 and 205 in Slavonski Brod were built of small clay balls, whereas both kilns in burial pit 9 in Slavonski Brod, had clay floor plastered and then a wicker construction (like a basket) made of 1–2.5cm thick twigs/branches built over it. The exterior of this construction was subsequently coated with clay and fired. On the interior walls of the kiln 30, traces of intertwined branches in negative placed one next to the other and 6 cm thick were preserved. The wicker construction was made of thinner and thicker branches, and at one spot a negative of a knot used to tie five branches together remained clearly visible. On both narrower sides (the northern and the southern) the ground plan of the kiln ends in a semi-circle, and in its southern (posterior) part, a piece of the dome was preserved. The firing opening at the northern part of western kiln 30 was hemispherically vaulted and within it, a charred beam was preserved (5810–5620 calBC), placed on the floor of the kiln. There was no plastered floor in this part of the kiln, whereas in the central and the posterior part the floor was plastered twice and

more intensively fired. In this part of the kiln, a composite geometric figure in relief was impressed 2cm into the floor. The figure consisted of a circle (15cm in diameter) and a rectangle (10x6.5cm) joined together (Fig. 9.a-c). The purpose of this geometric figure could not be established. It is necessary to mention that an identical geometric figure (a 29x25cm circle combined with a 15x10cm rectangle) was impressed 4–8cm deep into the virgin soil along the edge of the burial pit's bottom on the northern (right) side of its entrance. Upon demolition of the kiln, wooden beams (5cm in diameter), dug into the virgin soil, were discovered 30cm beneath the floor. Three beams had been laid horizontally, in various directions and intervals, probably in order to stabilise the soil. The content of the kiln was completely different from one at Zadubravlje. While in the pottery kilns of the same shape at Zadubravlje shards of small painted vessels fired within them were found, the kiln 30 in Slavonski Brod yielded only a few pieces of sacrificial vessels and clay artefacts of indeterminate function.

In the north-eastern space of burial pit 9, along its edge in the form of a step – a 'bench' – another kiln (31) in the shape of an elongated rectangle was built, some 4m to the east of kiln 30, identical to it in its orientation and place of a firing opening. Kiln 31 was built in the same way as the neighbouring kiln 30, but it is somewhat bigger and much less well preserved. Several facts suggest that it had been reconstructed and upgraded several times during its use. The entire length of kiln 31 was 2.70m (N-S) and during its shorter phase, it was only 2m long (on the northern side, the floor is missing 65cm in length). In the shorter kiln, the floor consisted of a layer of

fired clay plastered by another layer of raw clay, and in the southern part, over these two layers, there was another layer of plastered clay (total thickness 9cm). The floor level was not even but sloped 15cm towards south. The kiln was somewhat wider in its southern part and it ended in a dome. Southwest of the southern kiln, a small fireplace was discovered at the bottom of a burial pit (a circle of burnt soil, 50cm in diameter), on which unburnt stakes, 30cm high and 5cm in diameter, were piled in the shape of a tent (Fig. 10.a-b). This small fireplace was probably a symbolic representation of a home hearth, erected in the vicinity of a female skeleton buried in this part of the burial pit. The radiocarbon dating of this fireplace to 5570–5470 calBC together with a sample from its vicinity to 5470–5320 calBC, make this fireplace the youngest object in burial pit 9. It was placed here by descendants, possible ten generations after the burial of the female body.

In the specially formed southern space of burial pit 9, a headless male skeleton (burial 35) was found (Fig. 11.a-b) and to his western, southern and eastern sides, near the edges of the burial pit, three groups of pottery vessels, animal bones and stone tools were found (Plan 4). Each of the groups was covered by large pieces of fired clay (3cm thick), which were smooth on one side and were perhaps a part of some sort of construction. Beneath those pieces of fired clay, a very dark layer of earth was found, beneath which large pottery shards and animal bones had been placed at the bottom of the burial pit. So far, the question of roof construction over these three groups of pottery remains open. On the northern side of the western group, pieces of belly of a large vessel were found, with a female fi-



Fig. 6a–b. Vessels from burial 33 and foot of large dimensions from the kiln 30.



Fig. 7a–b. Burial 34 and burial inventory.

gure holding arms in an upright position modelled in relief stripes, a motif very similar to the find from pit 41 south-west of residential pit-dwelling 37 at Galovo. This type of motif in low relief on the belly of a big vessel is very rare in all stages of Starčevo culture, and this is the second one discovered at the Galovo settlement (*Minichreiter 2000b.5–15*). It is worth stressing that these three groups of pottery offerings were grouped at a regular distance of 2.5 to 3m apart (like the tips of an isosceles triangle – the eastern, southern and western groups), and when combined with a fourth group of pottery and animal bones with a buried horn lying to the north of the others (close to the entrance, in the centre of the burial pit) form an almost perfect square. In their midst a headless male skeleton (25–30 years of age) was found, in a contracted position (E–W orientation), facing the centre of the burial pit (Plan 4). The skeleton was covered with earth mixed with pottery shards and stone tools. In its vicinity, at its northern side, a lump of ochre, a miniature zoomorphic altar (*Minichreiter 1999a.17, T. 2; 2002a.T. 5, 2a–2b; 2007a.131–132*), an altar leg, parts of two coarse vessels with ‘plastic ear’ and other plastered decorations were found. Near these, shards of three fine texture bowls were found: a bowl on a red painted foot, and two bowls with white and dark painted motifs (Fig. 11.b).

The roof construction over the burial pit could partially be reconstructed by using holes from small stakes occasionally found along the burial pit edges on the western rim of its central area. Considering that within the large space of the burial pit no holes from vertical thicker posts were found (as in the residential pit-dwellings in the settlement), a question remains open as to how this large space (15x5m) was roofed, and whether it was roofed at all or only partially, taking into account the neighbouring small

burial pit, which had had large posts both in its interior and exterior, and a porch. In his publication of Gornji Brezovljani, S. Dimitrijević proposed two possible roof constructions over the pit-house (*Dimitrijević 1978.84, Sl. 8–9*), which could likewise serve as an option for a cover for large burial pit 9 at Galovo. It is possible that the northern and southern parts of the burial pit, where the deceased were buried, were roofed by horizontally laid stakes. At the level of the pit rim, these stakes could have been propped on the stair (‘bench’) which was formed along its north-eastern part. Beams laid in such a manner might have been covered by soil, over which straw or reed might have been laid in the shape of a double-slope roof. Several factors indicate that the northern and southern spaces of the burial pit were covered in this way: the firing openings of the kilns are located outside the burial pit, being accessed from outside; within the burial pit, there were two human burials, over which, certainly no-one would have walked; in the northern part, no groups of pottery vessels (ritual sacrifices) were discovered, which further indicates that access to this northern space was forbidden. In the same way, the southern part was completely occupied by a male burial, with three groups of pottery placed around. The central part of the burial pit was probably roofed by a tent-like construction in which smaller groups of people could perform sacrificial rituals.

Burial in a small burial pit 15

The western passage from the residential area to the ritual-burial part of the settlement led directly to burial pit 15. This small burial pit was built in the 3rd phase of the settlement construction (Plans 3 and 4), around 5300–4960 calBC, in the middle of the empty western part of the ritual-burial area. It was enclosed by a large covering, supported by a series of wooden posts, which would have contributed



Fig. 8. Kilns 30 and 31, view to the north-east.

to its solemn character and domination over this area. The burial pit was not covered in the usual way of the others in the settlement, which generally had rows of smaller stakes along the edges. The covering above burial pit 15 was held by large posts of varying thickness (20–40cm in diameter), dug a further 20cm into the virgin soil. Set at regular intervals of 1.5 to 2m, the posts surrounded the burial pit like three concentric circles (wreaths), at a distance of 2.4 to 5 and 6 to 7m from its centre.

Such a ground layout of the posts points to several possibilities for the covering of the burial pit. The most likely is that the thicker posts were roof props, while the thinner vertical posts supported a fence of intertwined wattle of thinner, horizontally laid branches. The drawing (Fig. 12) shows three possible ways of covering burial pit 15. The first variant depicts the tent-like cover of burial pit 15, with the roof covering the walkway around it. At its western side, towards the western passage to the settlement, the posts arrayed in a semi-circle connected two parts of a wooden fence of intertwined wattle. The second variant is a large tent covering burial pit 15 and the surrounding space, while at the western side a wattle

fence is situated. The third variant consists of a covering over burial pit 15 and its northern entrance part, while at the southern and the western sides the posts arrayed in a semi-circle connected the wattle fence; the entrance to this fenced space probably lay at the south-western side. Its layout could have been analogous to the circular pit with antechamber at Parța, the Starčevo-Cris culture settlement

in Romania, which Lazarovici states is a very rare shape among Neolithic structures (*Lazarovici and Lazarovici 2003.371, Fig. 58*).

Little burial pit 15 had an almost regular circular ground plan, 5m in diameter, with an almost flat bottom dug 40–50cm into the virgin soil. The entrance to the burial pit lay on its northern side, over a wide step in the form of a small platform. The burial pit had three interior spaces – the northern, eastern and western – all dug to a more or less even depth with a variance up to 15cm. The western space, which contained a burial, was the largest and dug somewhat deeper, about 20cm into the virgin soil. A male was buried (35–40 years of age) near the western edge of this space. He lay on his left side in a contracted position, head to the north and legs to the south, facing the centre of the pit (*Minichreiter 2000a.Sl. 5*). The man was buried faceless – only the posterior bones of the skull were found. Owing to the poor preservation of the bones, his length ‘in situ’ could not be established. The skeleton was covered by earth mixed with shards of coarse and fine painted pottery, the remains of animal bones and 517 stone remains, among which 61 pieces had



Fig. 9a-c. Kiln 30 and the geometric relief imprint.

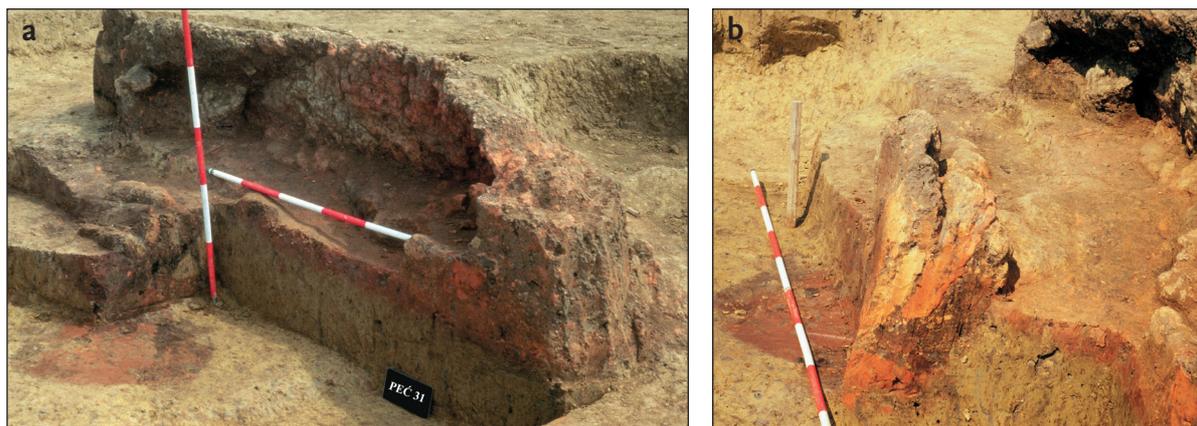


Fig. 10a–b. Kiln 31 and the small round hearth in front of it, view to the north-east.

additionally been formed into tools. According to Rajna Šošić, there were neither raw materials, nor finally shaped tools among the flint remains. Many flakes, blades and bladelets were found, as well as a small amount of cores for flake and blade production (Šošić 2007.176–187, *Tab. 1–4, Sl. 1*). The earth contained a large percentage of soot (black sticky soil), within which, smooth-faced lumps of burnt clay were found showing grooves at one side of indeterminate ornament. Identical pieces were found beneath the centrally placed group of pottery in big burial pit 9, as well as residential pit-dwelling 37 (Minichreiter 2007a.37–38, *Fig. 7*), which points to the possibility that they were used as ‘sacrificial tables’ for holding pottery vessels.

Above the male skeleton (burial 36), which lay in the western part of the burial pit, many contributions were found: in the earth that covered the skeleton larger fragments of coarse and fine pottery were found, among which three vessels had various parts – a vessel with plastered lugs on four opposite sides of the belly and stabbing ornament, a red painted bowl on a foot and a bowl with wide stripes from its rim to the bottom. Above and near the skull, 11 clay objects were found – fragments of four small sacrificial vessels on a foot each, a fragment of rectangular based altar, four perforated pottery fragments (discs), a clay head of a duck and a game-hunting ball (Minichreiter 1999a.16–17, *T. 1. 1a and b; 2007a.142*). Near the feet five clay objects were found – fragments of two small sacrificial vessels on a foot each, fragment of a spindle whorl or weight, a game-hunting ball and an unknown object in the shape of a clay cylinder (*Fig. 13.a–b–c*).

As a special offering to the deceased, ten polished stone tools were found in this burial pit. One axe was found in front of the entrance, on the porch

that gave access to the pit. All of the specimens were found in the northern part of the burial pit, east and west of the entrance steps (*Fig. 13.a–b*). The western group of axes was found together with other offerings in the earth which covered the head of the deceased. Among six polished artefacts, two were axes – one of them whole – two cleaved adzes and a pointed pick. The eastern group was found on a small platform situated on the east side, near the entrance step. It consisted of three wholesome chisels and an axe (Težak Gregl 2007.170–173). Most probably this represents a ritual deposition of the axes (they had not been used) immediately at the entrance to the burial pit. All the axes could have been deposited for the deceased at the same time, during the burial, or deposited one by one during visits to the deceased at certain intervals. This type of offering as well as the large quantity of various stone objects mixed with the earth covering the corpse, indicate his prominent status in the community. This is further stressed by the fact that only one individual had been buried in this pit – normally, various individuals were buried together in Starčevo culture burial pits. Judging from the remains of the post holes, it is visible that this pit had a large covering and especially a covered porch at its entrance, which contributed to its solemn character and domination over this area. The question remains about the faceless burial. This kind of burial was possibly motivated by the belief that, by this means, his power over the community would be suppressed. Radiocarbon analyses from this burial pit date this structure to 5300–4960 calBC (*Fig. 14*), which puts this pit at the same younger phase of this part of the settlement as the residential pit-dwelling 37.

The north-western part of the ritual-burial space was delimited by a wooden semi-circular fence 7 made of densely arrayed vertical stakes, which enclosed the

area from the northeast towards the south in a gentle curve (*Minichreiter 2007a.Sl. 27*). Close to the north-eastern end of the fence a self-standing vertical wooden post 63 was discovered. Unfortunately, this part of the terrain was destroyed in the previous soil exploitation by the brick factory, so the northern part of the ritual-burial space remains indeterminate. However, the apparent similarity with southern end of this fence, and the series of posts next to it, leads to the assumption that there was a passage at the northern part of the burial ground also, leading from the residential part of the settlement into this separate area.

On the south-western side, running from big burial pit 9 to the south and entering unexcavated terrain, part of the big wooden fence (20) was also found.

Conclusion

In the last twelve years of systematic archaeological research of the early Neolithic Starčevo culture settlement at Galovo in Slavonski Brod, part of the settlement was discovered belonging to the early phase of Starčevo culture – the Linear A stage (white and dark linear). At this site, for the first time on the territory of the Starčevo culture complex, a special ritual space was discovered, separated from the rest of the settlement by wooden fences. There were four burials in two burial pits – in the larger burial pit, two men and a woman, and in the smaller, one man. Considering the fact that many offerings were discovered near the deceased, when analysing and comparing them with the inventory of the residential and working pit-dwellings in the excavated part of the settlement (3 residential, 5 working pit-dwellings and 7 smaller pits), we tried to stress some observations which will mark only the beginning of understanding the burial ritual, tribal status of the deceased, beliefs in an afterlife and cognition of a spiritual world among the first Neolithic habitants of the Southern Pannonia.

All of the deceased were placed in a contracted position, on their right or left side, always facing the centre of the burial pit. Coarse vessels were not placed entire near the deceased but were fragmented and mixed with the earth which covered them. Only near the male burial 35 in the big burial pit 9 and the male burial 36 in the small burial pit 15 large fragments of vessels have been found which could be assembled to form a pot. Their absence near male skeleton 33 and the female skeleton 34 in the northern part of pit 9 can perhaps be explained by a group

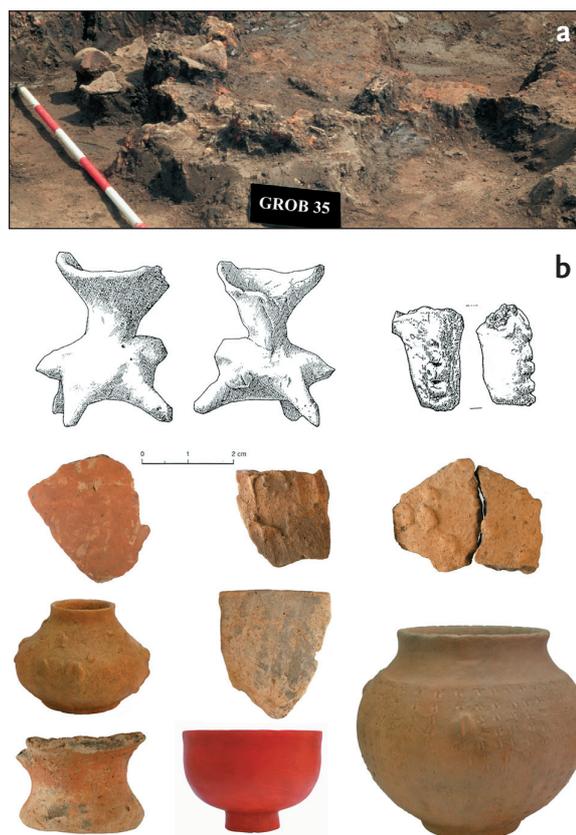


Fig. 11a–b. Burial 35 and burial inventory.

of coarse vessels placed in the centre of this burial pit instead. All the burials had two to three fine texture painted vessels (painted both inside and out) placed near them. Near each deceased, a bowl with dark painted wide vertical stripes running from the rim to the bottom was found. Only the male skeleton 33 and the female skeleton 34, in the north part of burial pit 9, had bowls with hanging triangles near them. Red bowls on a foot painted both inside and out, were placed near the male skeletons 35 and 36. The bowl of the same type, from the central group of vessels in burial pit 9, could have belonged to the skeletons 33 and 34 in the northern part of the pit. Three altars were found only near the male burials: a zoomorphic altar, with a vessel on its back (a unique specimen), and two with a square base on four plug-shaped legs (probably with a vessel on the base). Unlike other rare grave offerings, these altars are common (around 100 specimens) in residential and working pit-dwellings, possibly for domestic rituals. The situation is different with small sacrificial vessels (altars), which were numerous offerings for the deceased: three near female skeleton 34 in burial pit 9, and six near male skeleton 36 in burial pit 15. Only four small sacrificial vessels were found in the settlement. A duck head and perforated clay discs were only found near male skeleton 36

– in the earth covering his faceless skull. Zoomorphic figurines were also found in the settlement. Lumps of fired clay (game-hunting balls) were not found in the settlement, only as offerings near the deceased: each one had a single ball; one which was not near skeleton 33 was found in an elongated kiln 30 near by. Polished stone tools were predominantly found in the burial pits, mainly near male skeleton 36 in the small burial pit 15 and in the central group of vessels above the bovid horn in burial pit 9 (Težak Gregl 2007.160–175). In the settlement, fragments of two adzes were found in working pit-dwelling 37 which according to the radiocarbon date, was contemporaneous with burial 36 in small burial pit 15 and constructed in the 3rd development phase of the settlement (Plan 3). All the offerings in this burial pit confirm the special status of the deceased in his community. Most important are the polished stone tools – axes or similar objects. In the oldest beliefs and myths, the axe is a symbol of a deity (the Thunderer), lightning and destruction. The axe also symbolises fertility and it could be found among grain and seed reserves (Chevalier and Aghebrandt 1994). The find of axes as grave offerings near male skeleton 36 in small burial pit 15 resembles finds from Obre I (Benac 1973.29–35, 39–40). At Obre I, in layer II, in the area surrounding grave 8, six axes were found (five mould-shaped; one flat, almost square in shape; one of the mould-shaped axes shows traces of attempted perforation, but it had broken and the drilling was left unfinished). Alojz Benac determines the axes as grave offerings of cult significance. This shows that already within the Starčevo-Impresso culture, the beginning of an axe cult existed, which would come to the fore at the neighbouring site of Obre II in the context of the Butmir culture (Benac 1971.76–77, Sl. 13a). In this latter settlement, the cult of the stone axe was connected with fire. All the axes were found in a layer of soot and, therefore, probably symbolised the sun or fire. The remaining specimens of polished bladed tools were found in the context of settlement structures and were mostly fragmented or considerably damaged. This is usual

in Neolithic settlements, whereas complete, well-preserved stone axes are found either as grave goods or as parts of hoards.

In the anthropological sense, all the burials at Galovo are interesting in their own way. Although the osteological material was poorly preserved, there was enough to draw certain conclusions regarding the overall health and living conditions of the population in question. Two of the individuals were buried without heads, so it was impossible to detect the most common stress markers (linear enamel hypoplasia, cribra orbitalia and porotic hyperostosis); nevertheless, two of these markers were found on other two individuals⁷. Male burial 33 from burial pit 9 had traces of healed cribra orbitalia visible in his left orbit, and caries on the second right maxillary premolar, covering almost half of the tooth. Male burial 36 in burial pit 15 had traces of healed porotic hyperostosis on the left parietal bone. Probably due to the lack of sufficient number of teeth, the third marker was not found, but it is evident that the population in question suffered severe living conditions and periods of food shortages. It is also inte-

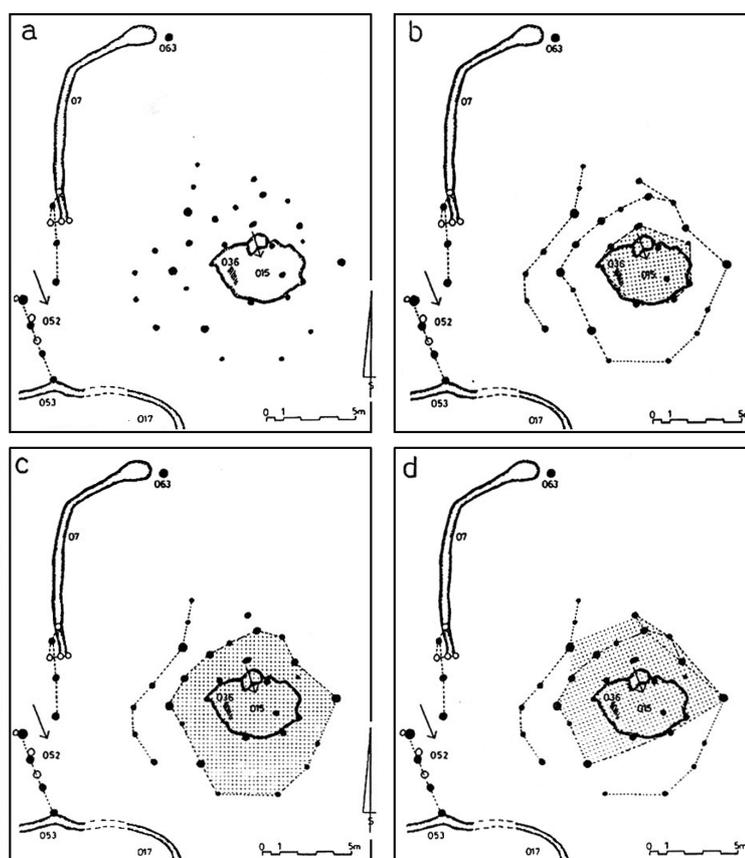


Fig. 12. Three possibilities of roofing of small burial pit 15 (after Minichreiter 2007a).

⁷ See note 6.

resting to note that these two individuals do not belong to the same phase of the settlement, which would indicate the long-term problems that this population faced regarding natural resources. In this light, it is also interesting to note that the male and female burials (33 and 34) from burial pit 9 were of an advanced age (45–50 and 35–40 years, respectively) at the time of death which would probably explain why they were buried in such a special way. The male in burial pit 15 falls into this same age range (35–40 years); only the 2nd male from burial pit 9 was somewhat younger (25–30 years).

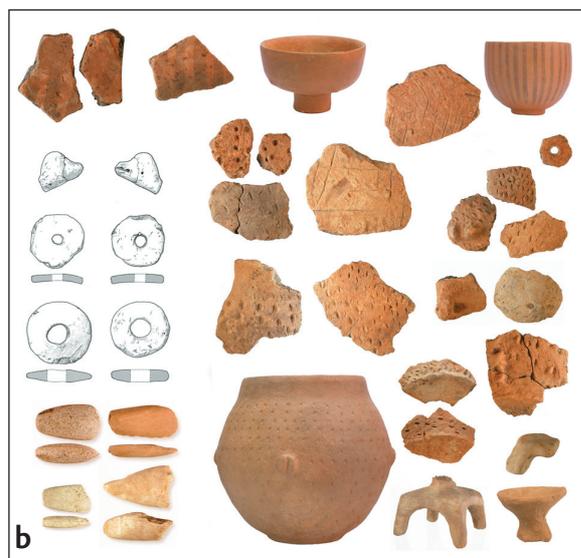


Fig. 13a–b–c. Burial 36, burial inventory.

Regarding the two headless burials from burial pit 9, they fit the widespread burial practices of the Middle East Neolithic times – from PPNB sites such as Jericho, Ain Ghazal, Beidha, Kfar HaHoresh (Goring-Morris 2002; Verhoeven 2002), Atlit-Yam (Galili et al. 2005) to later sites such as Çatalhöyük (Mellart, 1967; see also Çatalhöyük 2004 Archive Report; Hodder 2005), Nevalı Çori and Çayönü (Verhoeven 2002), where there is also abundant evidence of secondary skull burials, which are considered to be related to the cult of ancestors or possibly to the cult of fecundity due to the belief skulls represent the life-force (Verhoeven 2002:251; Kuijt 1996). Ian Kuijt shows both primary and secondary mortuary practices as cycles which connect the burial of individuals or the re-burial of skulls with birth and re-birth (Kuijt 2008:Fig. 2). The skulls of the two headless individuals at Galovo were not found, and we can only speculate on whether the ritual of the secondary skull burial has the same meaning here, or if it was present at this site at all, but considering the fact that the brick factory's vast activities in this area destroyed most of this site, especially the area which is considered by the authors to be ritual and burial, we may very well never come to the plausible explanation. However, one thing can be connected to Middle Eastern practices – the effort of preparing the burial grounds and participating in the burials themselves would have united the whole community. Some kind of grave markers must have existed, because it seems that the two burials in burial pit 9, oriented E–W, belong to a somewhat different phase than the one buried along the N–S axes, but nevertheless they did not disturb one another. Near where the head should have been, male burial 35 had a lump of ochre, and one such lump was found near male burial 36, which looks similar to the practices of marking the place of the skull for later extraction (at Ain Ghazal, for example) (Kuijt 2008:Fig. 3). But until evidence of secondary skull burials is found, there is no way of knowing whether this kind of cult even existed at Galovo.

Male burial 36 from burial pit 15 shows a different kind of treatment altogether. He was buried alone, covered with large fragments of burnt daub (sacrificial tables?) and earth that contained several hundred flint fragments. The earth that covered his faceless skull contained various object and over all of it large pieces of pots were placed. Considering all the other grave goods found around him, there is no doubt that he was an important person in his community, but the fact that he had no face is curious. According to Marina Hoti (1994), there is abundant

evidence of covering parts of buried individuals by pots, especially when it comes to heads and middle areas such as the chest and pelvis – graves from Vučedol in Croatia, Gomolava in Serbia, Tiszapolgár-Basatanya in Hungary, Vinica in Bulgaria, Traian in Romania *etc.* There are various graves with similar features from Mórógy-Tűzkődomb in Hungary as well (Zalai-Gaál 2002). Hoti interprets this phenomenon by using later Greek mythological parallels *i.e.* rituals connected to Antesteriae, the days when the souls came to the world of the living through the pots placed right way up. It was believed that an inverted pot prevented spirits, and especially the evil, from appearing (see Hesiod, *Opera et dies*, 90–95). If applied to the burial at Galovo, this interpretation seems plausible. It could have been a very important but very powerful individual who was given a very rich burial, but who was prevented from exercising his powers after death. The curiosities around this burial don't stop here though. Above his skull, he also had a number of animal bones mixed with other finds placed. A final analysis hasn't been done yet, but so far traces of various large herbivores have been found (cattle or deer), a partial bovid scapula, the right half of a small carnivorous mandible (such

as marten) and part of a red deer metacarpal/metatarsal bone belonging to no older than two-year-old animal (Fig. 15). There is a partial bovid mandible showing cut marks – they could have been made during the effort to separate the head from the rest of the body of the animal, a considerable effort considering the concentration of muscles in this area (Fig. 15). The question is why that would have been necessary. It would have been easier to just leave the head connected to the body or smash it to get to the brain, tongue *etc.* The presence of bovid skulls in the burial can be found elsewhere too (ex. Lepenski Vir, grave 7 – Srejović 1969). The presence of the marten mandible and not the entire body/skull is also interesting⁸. So far, it is difficult to understand the exact meaning of the animal remains around this individual.

One other object from this burial is also curious – a clay model of what seems to be a duck head. So far, no bird remains have been found at Galovo site but that can be due to poor bone preservation. There are no other artefacts suggesting any connection to the birds as well. The closest analogy which predates this specimen of zoomorphic plastic is a head of a marsh

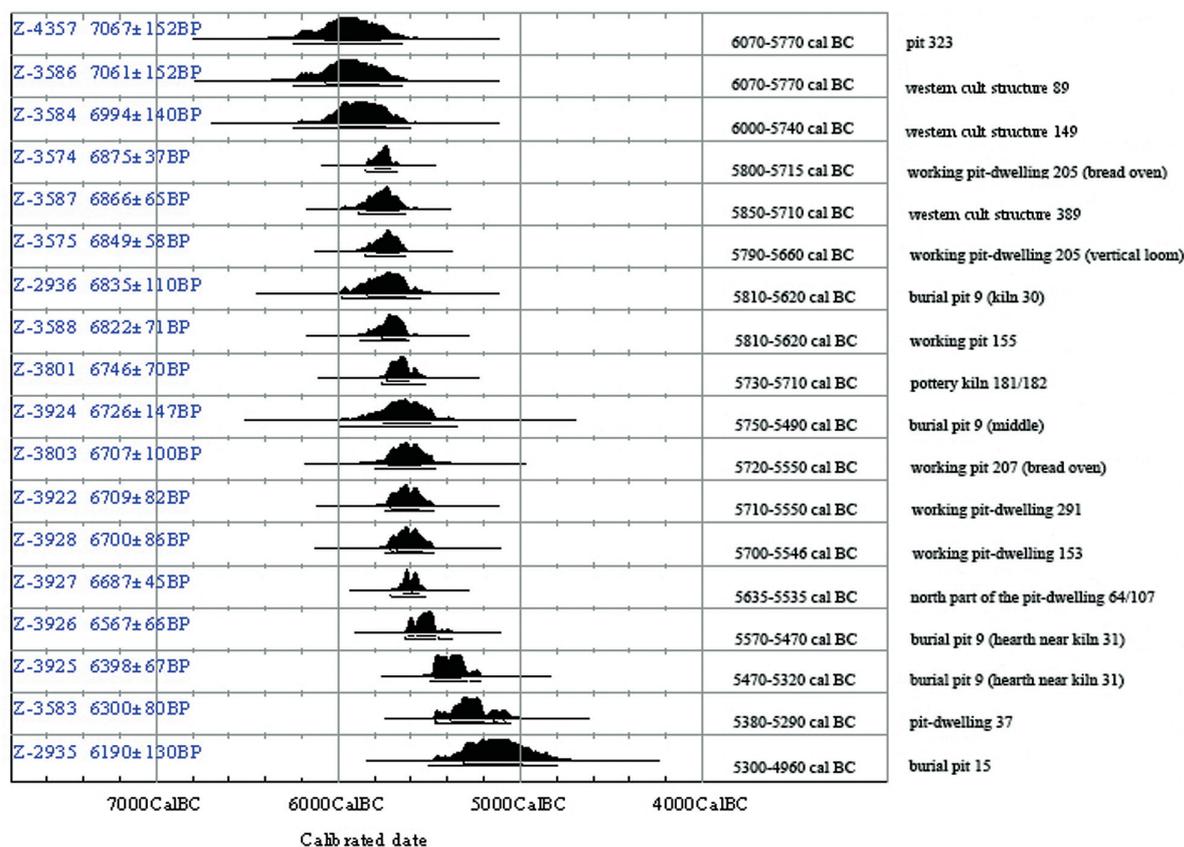


Fig. 14. Distributions of ¹⁴C ranges of charcoal samples from Galovo (after Minichreiter 2010).

⁸ We thank Dr. Tajana Trbojević Vukičević from Zagreb Faculty of Veterinary Medicine for information and help.

bird (duck) made of stone from the level of late Orignacien at Palaeolithic site of Mala Gradina near Kulaš in northern Bosnia (Basler 1979: 347–348). Finds of bird remains and sculptures depicting birds in graves at Ajvide (Gotland, Sweden) and Zvejnieki (Latvia) show how important certain symbols could have been (Mannermaa 2008), even though we cannot fully understand them today. At Ajvide, a clay figurine of what looks like a bird was found near the feet of the woman in burial 62 (Mannermaa 2008:211, 214). At Zvejnieki, a small bird made of wild boar tusk was found above the man's head in burial 74 (Mannermaa 2008:211). At this burial site, common species of duck were also identified (Mannermaa 2008:212).

Not only were bird figurines found at these two sites, but the remains of birds themselves, or their parts, such as wings, in graves next to individuals buried there. Almost all of the bird remains at Ajvide and Zvejnieki were identified as water birds (Mannermaa 2008:212). The presence of the model of bird's head at Galovo is unique, and so far resists a full interpretation.

Given all that was buried in pit 15, one other possible conclusion to the role of the man in question surges. Being obviously respected but feared even after his death, buried without a face and having the rest of the head sealed off by large pot shards, having bone remains of various wild and domesticated animals placed around his head, including bovid scapula, maybe he was occupying a place of a shaman in his community. A burial at Hilazon Tachtit cave (Israel) of a woman placed in a pit together with numerous tortoise shells and various parts of different animals, including marten skulls, represents a distant parallel, both in time (this burial is dated to the late Natufian period, 15 000–11 500 BP) and in context, but nevertheless bares certain similarities (Grosman et al. 2008). At Zvejnieki (Latvia) some burials contained traces of mammals such as elk, fox, marten, badger and seals (Mannermaa 2008:215). Early Neolithic child burial VII at Tamula (Estonia) – 5760±45 BP or about 4600 calBC – had a bird figurine placed near the shoulder and wing bones of a crane in both hands (Jaanits 1954; Kriiska et al. 2007; Mannermaa 2008). According to Mannermaa (Mannermaa 2008:218), it is possible that



Fig. 15. Burial 36, animal bones (photo K. Botić).

“figurines may have depicted animals qualified as helping spirits or they may be impressions of totem animals”. They may have represented the souls of deceased associated with symbolism surrounding the journey to the underworld – one ethnographic parallel can be found in Khanty graves in the Ural area (Mannermaa 2008:218; Zvelebil and Jordan 1999; Vinokurova 2005). Although at Galovo bird remains were not identified yet, it is possible that further analysis will confirm their presence around the burials.

Here, it is worth mentioning how the Masai tradition deals with the corpses of medicine men: “On the death of a Masai medicine-man or rich person the corpse is not thrown away. An ox or a sheep is slaughtered and the fat is taken and rubbed on the body, after which it is put in an ox-hide and carried to a shady spot. A small hole is then dug resembling a trench, into which the body is laid and covered with stones. This is called a grave.” (Hollis 1905:305)

Burials at Galovo show new dimension in public ritual and possibly corporate identity of the dead. Whether they represented a symbolic unity with the living by representing collective ancestors or their personal identity was at the source of the corporate prestige (Chénier 2009:30; Flower 1996), as in the case of Roman funerary wax masks and Christian relics (Chénier 2009:31), or whether their burial crea-

ted bond with the land (arising from the need to care for the dead which only descendants could accomplish) thus making it sacred (*Chénier 2009.33; Fustel de Coulanges 1979[1864].62*), it is difficult to say. Although some efforts have been made towards the understanding of burial ground and its context

at Galovo, much more data and analysis is needed to fully understand it. Unfortunately, a great part of it has definitely been destroyed, and only future excavations may give new important data which would throw light on this specific problem.

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People, dogs and wild game: evidence of human-animal relations from Middle Neolithic burials and personal ornaments in northern Italy

Maria Bernabò Brea¹, Paola Mazzieri², Roberto Micheli³

¹ Soprintendenza per i Beni Archeologici dell'Emilia Romagna, Museo Archeologico Nazionale di Parma, IT
mbernabo@arti.beniculturali.it

² Scuola di Dottorato in Scienze dell'Antichità – Dottorato in Archeologia, Dipartimento di Scienze Archeologiche,
Università degli Studi di Pisa, IT; paolamazzeri@gmail.com

³ Soprintendenza per i Beni Archeologici del Friuli Venezia Giulia, Trieste, IT; roberto.micheli@beniculturali.it

ABSTRACT – *In order to review evidence of human-animal relations, the paper offers an overview of the customs and funerary traditions of the Square Mouthed Pottery culture, between c. 5000 and 4300 calBC. We focus on the importance of domestic and wild animals on the basis of an analysis of grave-goods, funerary rites and personal ornaments. We also consider recent discoveries of peculiar offerings of animals and some dog burials. The evidence testifies to a diffusion of a wild component, symbolically emphasising the importance of the hunter identity in a society where subsistence actually depends primarily on domestic animals. Therefore, a contrast is drawn between the everyday and the symbolic worlds.*

IZVLEČEK – *V razpravi predstavljamo odnose med človekom in živalmi, kot se kažejo v pogrebnih običajih in tradicijah kulture 'čas s kvadratnimi ustji' med c. 5000 in 4300 calBC. S pomočjo analiz grobnih pridatkov, osebnega okrasa in pogrebnih ritualov ocenjujemo pomen domačih in divjih živali. Predstavljamo tudi novejša odkritja daritvenih živali in pokope psov. Opazna je komponenta divjega, ki na simbolni ravni poudarja pomen lovske identitete v kontekstu, v katerem prevladuje gospodarjenje z domačimi živalmi. Poudarjen je kontrast med vsakdanjim in simbolnim svetom.*

KEY WORDS – *burials; personal ornaments; domesticated and wild animals; Square Mouthed Pottery culture; Middle Neolithic*

Introduction

Animal symbolism is an important source for building up culture in almost all human groups; animals are often fundamental symbolic agents in understanding the conception and the representation of the world (Rivera 1999). The distinctive feature of animals is that, being both close to and also remote to people, they can alternate as objects of human thought between metonymy and metaphor. This means that, as symbols, animals have the convenient faculty of representing both existential and normative aspects of human experience, as well as their interrelation (Willis 1974:128).

When Neolithic peoples domesticated plants and animals, they created a category of the wild that had not existed before. The creation of wild-domestic dichotomy had profound consequences for human thought. At the very least, it has been a rich source of metaphors that can be manipulated to many ends in social negotiations (Russell 2002) and during ritual practices. In almost all Neolithic communities, domestic species share the daily space with their masters and often live their life side by side with humans from birth to death, as they are very important elements in subsistence, as sources of food,

labour, or raw material, and are even able to acquire a real importance in the symbolic domain. However, hunting still has an important role and its significance is particularly related to its symbolic value, since it often confers male identity and status. Such figurative utilization of hunting is a constituent part of the persistent dichotomy existing in many horticultural groups between male/hunting and female/farming (Clastres 1966; Kent 1989; Morris 2000; Descola 2004). Therefore, wild and domestic animals, and activities linked to them, can be perceived as metaphors of the dual gender sphere of human society and the marking of oppositions.

This paper tries to shed light on some of the above issues, giving an account of archaeological evidence from the Middle Neolithic of the central-western Emilia territory in northern Italy. The 5th millennium calBC documents the full development of Neolithic groups and the progressive transformation of their economic and social spheres. The aspects taken into account in this paper reviewing evidence of human-animal relations are those of the customs, the ritual and the funerary spheres of the Square Mouth Pottery (SMP) culture. As Christopher Tilley (1996: 215) observes, death, and the ritual practices surrounding it, are far more to do with the living than the dead. In fact, the latter plays an important role in both reflecting and shaping social values and re-establishing social ties of living. By making death into a social occasion, human groups elaborate its social significance, connecting it in various ways to maintaining the social order and cohesion, the cycle of production and distribution of food and wealth, and the renewal or regeneration of life, linked to the fertility of living beings, among which animals have a significant position.

The circle and the square: the SMP culture

At the beginning of the 5th millennium calBC, the different traditions of the Early Neolithic Padan groups

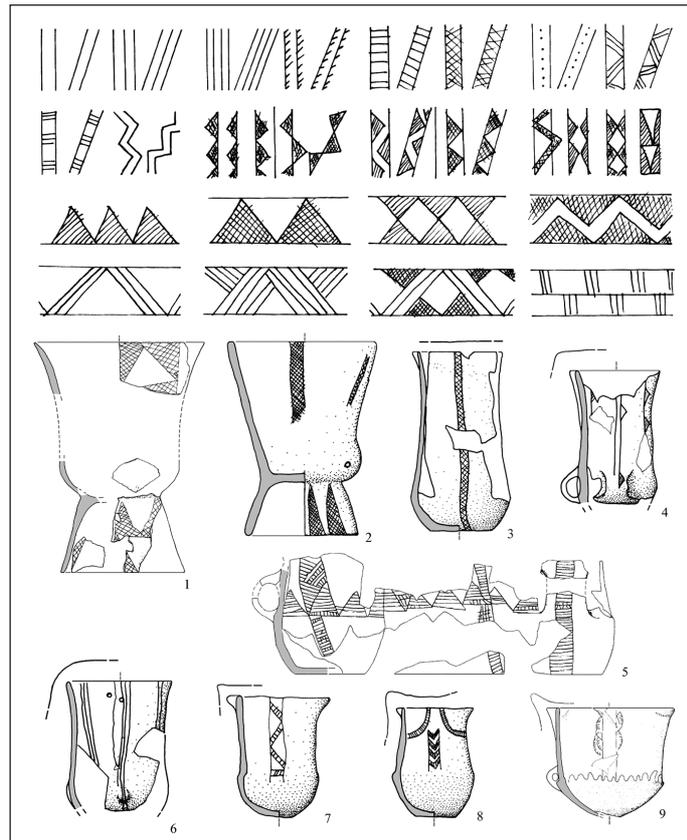


Fig. 1. SMP 1 phase, geometrical scratched style: patterns and forms of pottery.

are replaced by the SMP culture, which occupies the whole of northern Italy. Local roots and cultural inputs from southern Italy, the Balkans and the Danube Basin contribute to the making of a distinctive culture, with a pronounced identity and a high-degree of uniformity, in spite of some regional divisions. The square mouth of the vessels, manifestly not due to any convenience in use, seems to lack a specific purpose, since it is applied to items having different functions. However, it appears for over a millennium within extremely disparate cultural terms, as reflected in different pottery styles. The choice of the square mouth means the choice of a completely conceptual and artificial shape,¹ absolutely different from all contemporaneous pottery traditions, which could be seen as a distinguishing trait and the marker of a deeply felt cultural identity (Mazziere and Bernabò Brea, forthcoming).

¹ In regard to square or rectangular houses, Jacques Cauvin underlines how the creation of geometrical structures is strictly connected to the creation of abstract shapes strongly linked to the Neolithic outlook: *Ce langage des formes géométriques recoupe sans doute en partie certaines symétries observables dans la nature (astres, fleurs, coquillages, constellations), mais nous le trouvons d'emblée / un haut niveau d'abstraction, indépendamment de toute intention figurative... Le rectangle, dont la nature quotidiennement observée ne nous offre guère d'exemple, nécessite davantage l'initiative humaine pour exister: la pierre n'est cubique ou rectangulaire que si on la façonne. Le carré et le rectangle connotent donc le manifesté, le concret, le réalisé... L'habitat au carré témoigne d'une attitude mentale différente, ou le progrès du savoir technique rencontre l'initiative qui l'utilise, laquelle impose un besoin de base, celui de s'abriter, une forme entièrement nouvelle, artificielle, préconçue (Cauvin 1997:177-179).*

SMP culture is divided into three main phases, marked by variations in pottery decorations. The first is characterised by the presence of fine-ware pottery decorated with geometrical scratched patterns (Fig. 1). This phase can be dated between 4900 and 4500 calBC. The second, with incised spiral pattern decorated pottery (Fig. 2), appears between 4500 and 4300 calBC. The appearance of the first Chassey groups around the 4300 calBC marks the end of the development of the SMP in north-western Italy, whereas it continues in the north-eastern regions with clear transalpine influences. The third phase of SMP culture, characterized by the presence of impressed and incised decoration, continues until 4000 calBC. As of now, no funeral evidence is ascribed to this phase, therefore it is not considered here.

Unfortunately, there is no well defined absolute chronology for the numerous SMP graves in northern Italy, since the ^{14}C dates are few. In fact, we only have four absolute dates obtained from grave 2 of Bancole in Lombardy (Starnini and Voytek 2005: 397) and from graves 1, 2 e 4 of La Vela di Trento (Degasperi et al. 2006:157). Two pertain to the first SMP phase, while the other two can be ascribed to the second phase. Because of a large margin of error, two other dates, from burials VI and VII of the Arene Candide Cave, cannot be considered (Maggi 1997:Tab.2). The recent discoveries in Emilia have given the opportunity to improve our knowledge of the funerary practices of SMP people, as well as to date some SMP burials from three important sites: Le Mose, Vicofertile and Parma-via Guidorossi (Tab. 1 and Fig. 3).

The exchange network is wide, starting from the debut of the SMP culture, and includes several raw materials such as flint from the first Alpine foothills (Monti Lessini), green stones from western Alps, vitreous quartz from Alpine regions, obsidians from Sardinia, Lipari and in a smaller quantity, from Ponza, and objects such as fine buff (figulina) pottery from southern regions. The widespread taste for spiral patterns in the pottery decoration of the second phase is probably due to Balkan influences, while the funerary rituals show a resemblance to those of central European Danubian cultures.

Systematic work regarding the everyday subsistence of SMP populations has been carried out only for a few settlements. The faunal assemblage of the Arene Candide Cave in Liguria is surely the biggest sample and the best studied (Rowley-Conwy 1997). In many SMP communities, meat is provided mostly by cattle, sheep/goats and, in smaller quantity, pigs, while wild animals are sparsely represented. On the whole, domesticated animals are prominent, such as in the Arene Candide Cave, Casalnoceto in Piemonte (Aimar 1998), Casatico di Marcaria in Lombardy (Barker 1983), La Vela in Trentino (Bazzanella 2002), and also in some of the recently excavated sites in Emilia (De Grossi Mazzorin, forthcoming). The wild animal presence in the faunal assemblage is predominant in a few sites only. This is due to the peculiar location of the settlements, such as at Mezzocorona Borgonuovo in Trentino (Bazzanella et al. 2002) or Fimon Molino Casarotto in Veneto (Barfield 1971), or in particular ritual contexts like La Razza di Campegine (Cazzella et al. 1976; Bernabò

Site	Feature	Laboratory number	Sample material	Radiocarbon age (BP)	Calibrated date (BC) 94.5% probability	Calibrated date (BC) 99.7% probability
Vicofertile	grave 3	LTL-4569A	human bone	5357±50	4328-4051	4346-3992
Le Mose	grave 36	LTL-1530A	human bone	5419±55	4360-4057	4448-4044
Le Mose	grave 12	LTL-1349A	human bone	5447±60	4449-4071	4458-4048
Parma – via Guidorossi	grave 29	LTL-4570A	human bone	5488±45	4449-4257	4464-4173
Parma – via Guidorossi	grave 28	LTL-4573A	human bone	5520±45	4457-4267	4494-4245
Le Mose	grave 5	LTL-1348A	human bone	5543±55	4494-4268	4544-4244
Le Mose	grave 37	LTL-1531A	human bone	5594±50	4521-4345	4603-4327
Le Mose	grave 1	LTL-1528A	human bone	5658±75	4684-4355	4778-4327
Vicofertile	grave 2	LTL-4571A	human bone	5740±45	4707-4489	4770-4449
Le Mose	grave 24	LTL-1351A	human bone	5766±50	4725-4491	4788-4457
Le Mose	grave 28	LTL-1353A	human bone	5900±45	4906-4685	4949-4590

Tab. 1. New chronometric evidence from SMP burials of Emilia. Dates were performed by Accelerator Mass Spectrometry (AMS) by Centro di Datazione e Diagnostica (CEDAD) of Lecce University (Italy). Calibration: OxCal v. 4.1.5 (Bronk Ramsey 2010); Atmospheric curve (Reimer et al. 2009).

Brea and Mazziere, forthcoming).

The pollen cores available for some of the Emilia sites show in the surroundings of the settlements a tree cover of deciduous mixed oak woodland, with open areas used for legumes and cereal cultivation (*Marchesini et al., forthcoming*). Meanwhile, micromorphological analyses conducted on some of the Po Plain settlements reveal climatic stability during the 5th millennium calBC, which permitted the development of soils rich in nutrients and stable in structure. There is evidence of slash and burn clearance of woodland, but its impact is not as great as in later periods such as the Copper Age (*Cremschi, forthcoming*). What has been excavated thus far suggests the coexistence in the Po Plain of three different environments: original forest probably far from the sites, more open woodland not so far from the villages, and open cultivated areas immediately around the settlements.

Death and burials: SMP funerary traditions

Whereas there is almost no evidence of the first Neolithic funerary rituals, many data are available for the SMP culture. In fact, SMP burials are well-known from Liguria, the central Po Plain, western Veneto and Trentino (*Bagolini and Grifoni Cremonesi 1994.155-160*) with shared features, reflecting a collective and shared identity whilst having at the same time different funerary traditions connected to cultural and environmental peculiarities (Fig. 4). Burials are in simple earth-dug graves, within stone circles or in stone cists (Fig. 5). The deceased is usually oriented E-W, with the head to the East, and the face looking South. The position of the body in the grave is normally flexed on the left side, rarely in dorsal decubitus, with bent legs, while other positions are occasionally attested. In every region, differences regarding the grave, and the position and

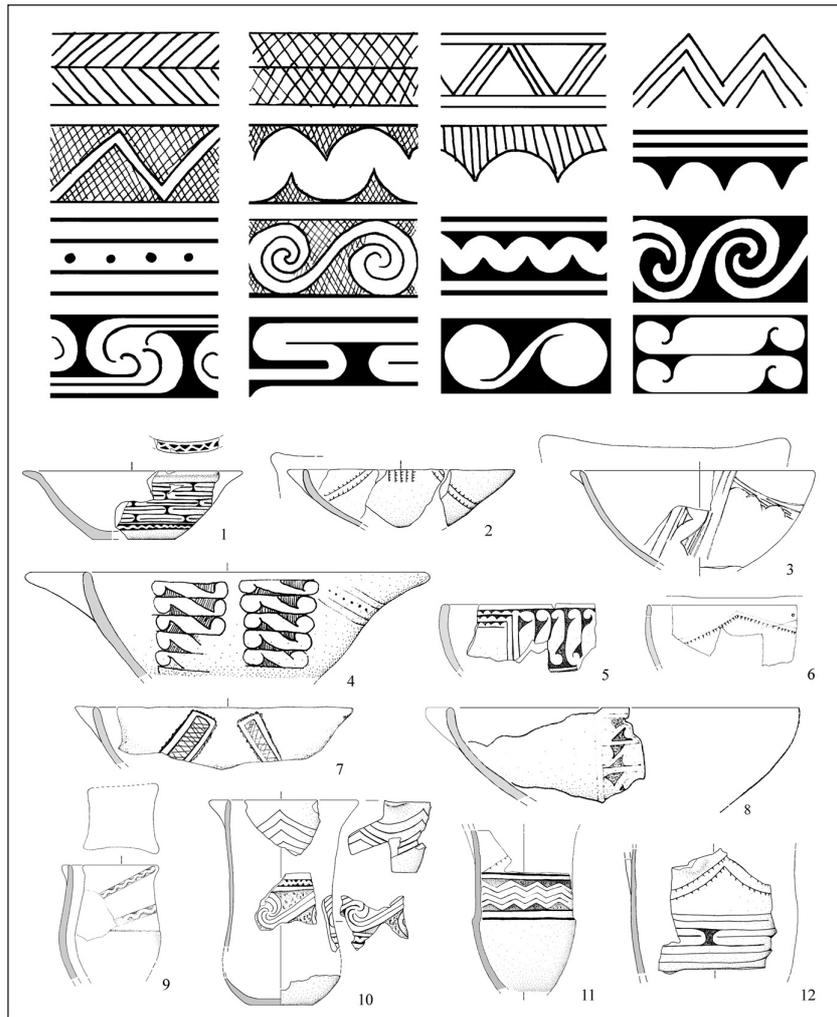


Fig. 2. SMP 2 phase, incised meander-spiral style: patterns and forms of pottery.

treatment of the body seem to be in accordance with complex rules connected to gender or the status of the deceased.

Liguria

There is a good deal of information on the SMP mortuary practices in the Liguria caves finds, especially from Arene Candide (over 40 inhumations), La Pollera (47 burials) and Grotta dei Pipistrelli (10 burials). The first discoveries can be dated to the 19th century (*Issel 1908.376-393*) and to the first half of the 20th century (*Bernabò Brea 1946.19; Del Lucchese 1997*). In these graves, adults were enclosed in stone cists, while the infants' graves were usually without protection. The bodies were in flexed positions, with most of the heads oriented to N or N-E. Some skeletons were set with ochre, which was frequently contained in a vessel. In terms of grave-goods, the richest data come from the burials excavated during the 19th century: at Arene Candide and La Pollera caves, some burials were equipped with

green stone axes, a pot, bone pins found near the breast, a red-deer antler, a Triton shell, shell and animal teeth ornaments. In some caves, skeleton manipulations are known: an inhumation from which the skull has been removed at La Pollera, and the deposition of skulls within the cave of Arma del Sanguinetto (*Pessina and Tinè 2008.298*).

Western Veneto and Trentino

Some groups of tombs or isolated burials have been found along the Adige Valley (*Barfield 1970*), while small necropolises are attested in the southern expanse of the valley in Veneto at Progno di Fumane and Quinzano Veronese (*Salzani 1981; Pedrotti 1996*). The most important graveyard is La Vela, in the nearby of Trento, which numbers at least fourteen burials (*Bagolini 1990; Pedrotti 2001*). These are displaced within stone circles or stone cists (Fig. 6); the two different kinds of grave are located in separated areas of the graveyard. The bodies are buried in a crouched position on the left side and oriented SE-NW or SSE-NNW. Most of the graves are arranged in pairs; only a child burial (grave 7) is located in isolation. Some remains belonging to an adult male have been found in grave 4 and could represent a secondary burial. Scattered human bones were found in graves 1 and 6. The occurrence of funerary rituals is attested by the presence of some hearths near the graves. Nine of the fourteen burials excavated are equipped with grave-goods: males are provided with flint objects (blades, arrow-heads), polished stone tools (axes and chisels) and bone pins; females and children with miniature vessels, a Serra d'Alto small flask, bone tools and grind-stones. Pe-

culiar to this graveyard is the occurrence of personal ornaments made of *Spondylus* shells. Some of the equipment is particularly rich, as in grave 1, belonging to an adult male endowed with a chisel, an axe, a flint blade and nine arrow-heads; or grave 3, belonging to a child wearing a bracelet and necklace of *Spondylus* beads, and equipped with a bone pin and three miniature vessels, one of them containing cinnabar.

Emilia

Central-western Emilia, which comprises the regions of Piacenza, Parma and Reggio Emilia, offers a good case-study for SMP mortuary practices (*Bernabò Brea et al. 2006b; 2007; forthcoming a and b*). In this area, some two hundred and thirty burials have been brought to light at seventeen sites (Fig. 7). Single inhumations have been found in some sites, while others show a higher density of burials, sometimes in the shape of small graveyards holding up to fifty-five graves. Some burial groups are also attested (Fig. 8), sometimes arranged in rows, possibly indicating kinship ties between the deceased (Fig. 9).

Both men and women are interred crouched on the left side in simple earth-cut pits. The burials are mostly oriented E-W, with the face turned to the south (Fig. 10). As the culture develops, the funerary ritual becomes more and more standardized.

There are also burials in huge, irregular-shaped pits and in silos (Fig. 11). Neither scattered human bones within the settlements nor skeleton manipulations have been found on the Po Plain, with the exception of some cases such as skulls and selected bones deposited at the bottom of silos in three settlements (Ponte Ghiara, Le Mose and via Guidorossi). The special care for the skull, as attested by its position at the centre of the pit, reveals a special treatment of the head as defining the identity of the dead. Cremation is rarely attested among SMP funerary practices (7 cases, or 3.5% of burials) - one case at Ponte Ghiara, two at Le Mose and four at Gaione - Cascina Catena. All the cremations determined thus far are of adult fe-

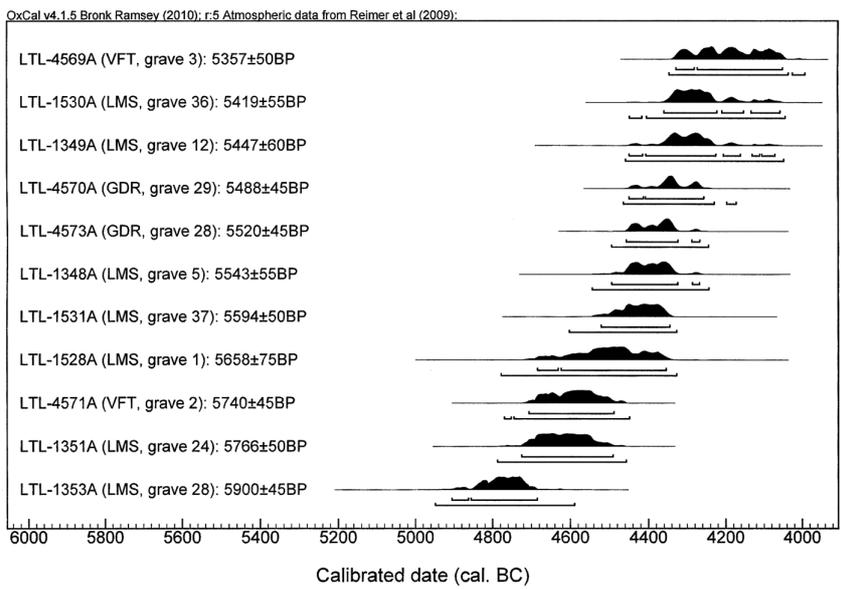
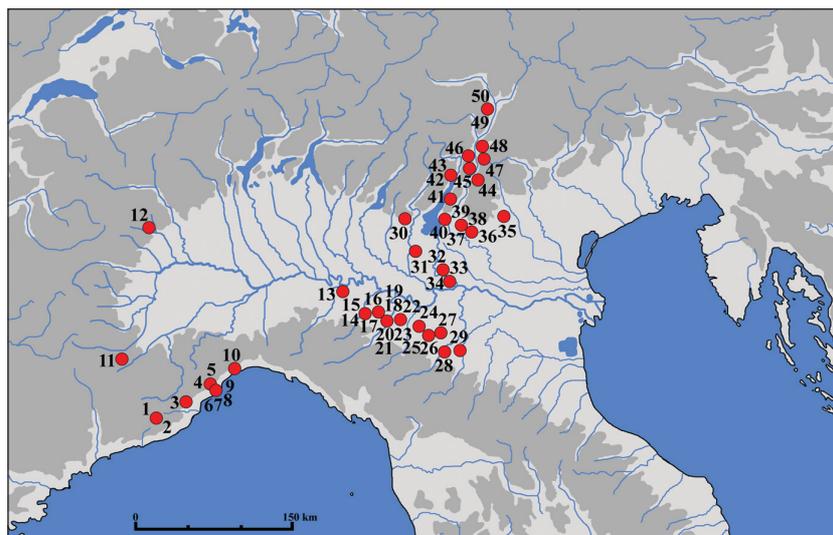


Fig. 3. Calibrated dates from SMP burials of Emilia. Sites: LMS = Le Mose; VFT = Vicofertile; GDR = Parma - via Guidorossi.

Fig. 4. Geographical distribution of SMP sites in northern Italy with burials or skeletal human remains: 1. *Arma della Gastea*; 2. *Tana della Volpe*; 3. *Arma di Nasino*; 4. *Arma dell'Aquila*; 5. *Grotta dei Pipistrelli or Borzini*; 6. *Grotta del Sanguinetto or della Matta*; 7. *Riparo di Pian del Ciliegio*; 8. *Arene Candide Cave*; 9. *La Pollera Cave*; 10. *Riparo di Alpicella*; 11. *Grotta di Aisone*; 12. *Santa Maria*; 13. *Le Mose*; 14. *Ponte Ghiara*; 15. *Castelguelfo*; 16. *Pontetaro*; 17. *Collecchio (Tangenziale and Ca' Lunga)*; 18. *Vicofertile*; 19.



Parma (Benefizio and via Guidorossi); 20. *Gaione (Cascina Catena, Cinghio and La Perla)*; 21. *Marano*; 22. *Sant'Ilario d'Enza - Loghetto and Calerno - Ca' Nuova*; 23. *La Razza di Campegine*; 24. *Reggio Emilia - via Rivoluzione d'Ottobre*; 25. *Chiozza di Scandiano*; 26. *Albinea and Rivaltella - Ca' Romensini*; 27. *Formigine, Cantone di Magreta*; 28. *Pescale, Prignano sul Secchia*; 29. *Spilamberto, Cava Camer - La Dottora*; 30. *Nave - Località Mulino*; 31. *Casalmoro*; 32. *Bancole - Porto Mantovano*; 33. *San Giorgio di Mantova*; 34. *Bagnolo San Vito*; 35. *Fimon - Molino Casarotto*; 36. *Quinzano Veronese*; 37. *Campagnole di Negarine, San Pietro in Cariano*; 38. *Santa Maria di Negrar*; 39. *Progno di Fumane*; 40. *Rocca Rivoli*; 41. *Malcesine - Campo Manesch*; 42. *Riva del Garda, Cava di Monte Brione*; 43. *Romarzolo - Chiarano*; 44. *Rovereto, La Sticcotta*; 45. *Pederzano - Pal Alto*; 46. *La Vela di Trento*; 47. *Martignano (Maso Merisi and Montevaccino)*; 48. *Meano - Alle Pergole*; 49. *Dambel*; 50. *Appiano/Eppan*.

males and seem to represent a special ritual practice. In some necropolises (Vicofertile and Gaione - Cinghio) among the burials, some pits with no bodies (cenotaphs) have been found. No grave-goods or objects have been found in these pits. Cenotaphs are common in the 5th millennium calBC in the Balkans, but are also attested in the Danube Basin and central Europe (Bailey 2000).

Burials dated to the first SMP phase generally have no grave-goods, whereas between 30% to 60% of second phase burials, including those of children, are equipped with objects. The grave-goods indicate a very marked gender distinction. Male burials are provided with flint artefacts (blades and arrowheads) and polished stone tools (axes and chisels) and rare antler artefacts (Fig. 12.1-6). Among grave-goods, green-stone axes are decidedly the most characteristic element, even though arrow-heads are also strongly represented. Female grave-goods include SMP pots, small flasks imitating the peninsular Serra d'Alto culture pottery, bone spatulas and awls and personal ornaments (Fig. 12.7-9). Pots found inside the burials are usually undecorated, unlike pottery from the settlements, which is usually richly

decorated. In both cases, the separation between everyday objects and items intended for the deceased seems clear.² These funerary pots may simply have stood for a symbolic meal partaken by the dead.

So far, only two female burials figurines are known, from the necropolis of Vicofertile (grave 3) and from via Guidorossi (grave 55). The first accompanied an adult woman (Fig. 13); it is 19cm high and the depiction is particularly accurate. It reproduces some SMP figurine features - the seated pose, the hip size, arms folded under the breasts, the prominent bird bill nose, the realistic hairstyle and the absence of a mouth (Bernabò Brea 2006; Bernabò Brea and Cultraro, forthcoming). The last two characteristics are particularly interesting, because there is a contrast between the precision in the depiction of the hair and the symbolic absence of the mouth. The latter in particular seems to stress the inability to speak, as in the world of the dead. Furthermore, the body rigidity and the flat breasts probably also refer to this sphere. The bird bill nose, instead, shows a syncretism between the human and animal worlds, and in particular, between the woman and birds, which are often related to each other in many

² In Trentino and in Mantua territory the presence of miniature vessels in graves is quite common, in contrast to settlements, where they are extremely rare.

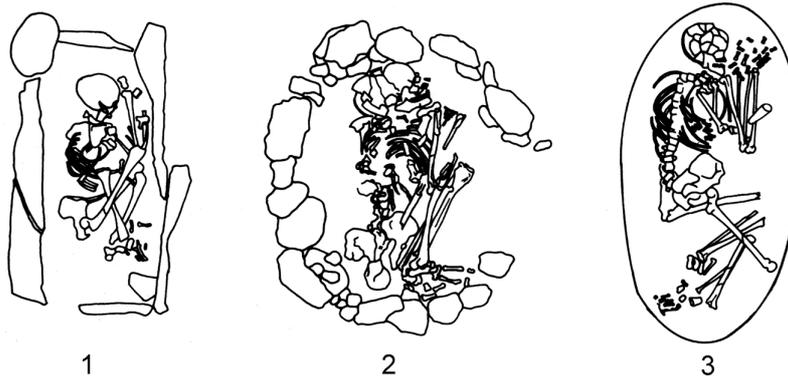


Fig. 5. Typology of the SMP burials: 1. Stone cist grave; 2. Grave within stone circle; 3. Simply earth-dug grave (after Bagolini 1992).

cosmogonic mythologies. The second figurine, of small dimensions (5cm high), is from the burial of a child whose sex has not been determined (Mazzieri, forthcoming). Both figurines are sprinkled with white colouring.

The figurines placed in the burials reproduce all the features of those found in settlements, but at the same time they are slightly different, as they are intact and not intentionally broken during ritual manipulations; the pubic triangle is depicted, underlining the regenerative meaning and, finally, they are finished with white colouring, whereas the finds from the settlements are painted in red (Bernabò Brea and Mazzieri, forthcoming). It is worth noting the widespread use in colour symbolism of red to express life, and white as the non-colour of death (Turner 1967).

Animal depositions and other rituals attested in Emilia

Some animal depositions – probably rituals or offerings – have been brought to light at certain SMP settlements. The most abundant evidence relates to dogs. Two dog burials were found during excavations (still unpublished) at Bagnolo San Vito in the Mantua region in association with human burials equipped with flint arrow-heads (Castagna et al., forthcoming). A dog was deposited near grave 2 at Chiozza (Laviosa Zambotti 1943). At Ponte Ghiara, a cremation burial contained selected bones of a woman mixed with dog bones. The cremation was at the top of a silo containing the burial of a middle-aged man. Scattered dog bones have been found within a male burial (grave 5) at Collecchio – Ca’Lunga. Other dog depositions have been found within features not far from human burials at via Guidorossi (Fig. 14) and Pontetaro. In the latter site, a dog from which the hind legs had been removed was

placed in a pit with the explicit aim of binding it to that place, as it was believed to be a guardian (Bernabò Brea and Mazzieri, forthcoming). So far, depositions of other domestic animals in SMP settlements are not attested.

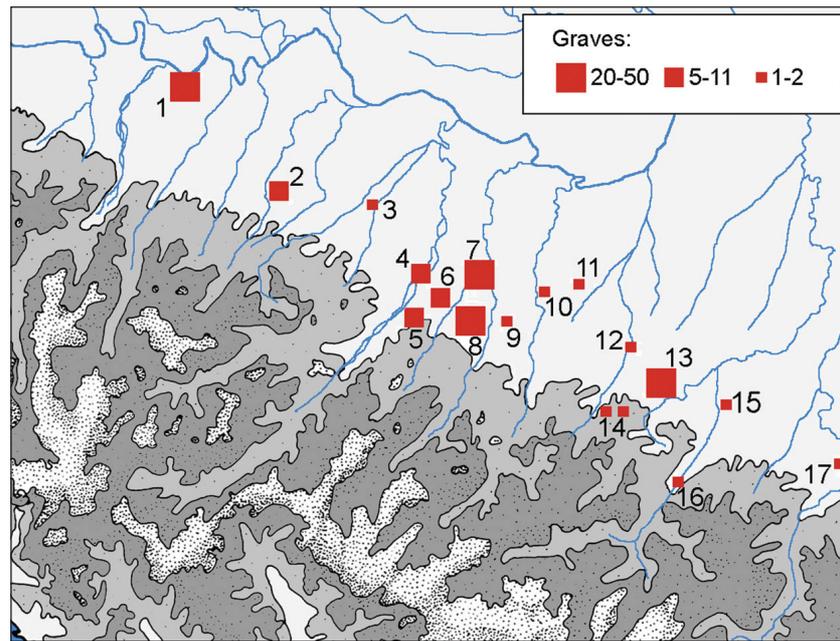
Wild animal depositions within features or silos in SMP settlements are rather widespread. One of the most interesting cases is the huge irregular pit excavated in 1974 at Razza di Campegine,

because it contained several well preserved faunal remains. A large red deer antler and two female wild boar skulls were deposited at the base of two silos, a humerus of a big wolf and other remains of auroch and badger were scattered inside the feature (Cazzella et al. 1976.113). The wild boar were large, and consistent with subspecies now living exclusively in eastern Europe (*Sus Scrofa Attila*). At Parma



Fig. 6. Stone cist grave of an adult female from La Vela di Trento (grave IV) (after Mottes 2007).

Fig. 7. Geographical distribution of SMP burial sites in the Emilia region: 1. *Le Mose*; 2. *Ponte Ghiara*; 3. *Castelguelfo*; 4. *Pontetaro*; 5. *Collecchio (Tangenziale and Ca' Lunga)*; 6. *Vicofertile*; 7. *Parma (Benefizio and via Guidorossi)*; 8. *Gaione (Cascina Catena, Cinghio and La Perla)*; 9. *Marano*; 10. *Sant'Ilario d'Enza - Loghetto and Calerno - Ca' Nuova*; 11. *La Razza di Campeigne*; 12. *Reggio Emilia - via Rivoluzione d'Ottobre*; 13. *Chiozza di Scandiano*; 14. *Albinea and Rivalentella - Ca' Romensini*; 15. *Formigine, Cantone di Magreta*; 16. *Pescale, Prignano sul Secchia*; 17. *Spilamberto, Cava Camer - La Dottora*.



- Benefizio settlement, numerous auroch remains were at the top of a silo containing a vase cut in two and lying on a cobbled hearth (Mazzieri and Grignano, *forthcoming*). From via Guidorossi, we have two unusual depositions: in the first case, two snakes twisted together as in copulation were found at the base of a silo; in the second case, two medium-size birds whose species has not yet been determined were buried complete in two different pits (Bernabò Brea and Mazzieri, *forthcoming*). Such findings suggest some ritual deposition. In fact, snakes do not usually copulate underground, and when they are in their nest, they maintain a coiled position, not a twisted one. Snakes are linked with the chthonian and water worlds; therefore, this discovery could testify to some ritual action connected with these spheres. The snake has no comparison in the Italian Neolithic iconography and there are no data on its occurrence in funeral or daily contexts. As for the birds, we have other evidence from Pontetaro in Emilia, where a rough terracotta bird head with an epiphysis imprint at its base was discovered (Fig. 15).

Some of the Emilia evidence can probably be ascribed to sacrifices or funerary feasts. Over and among the heaps of stones covering two male burials at via Guidorossi, some

as yet undetermined faunal remains were found. Thus far, the only certain burial context testifying to a funeral feast relates to a buried woman suffering from tuberculosis and osteomyelitis which was found in the via Guidorossi graveyard (grave 24). The offerings consisted of broken fine-ware pots, hazelnuts, cattle, pig, sheep/goat and pike remains.

Personal ornaments and SMP Neolithic groups: an overview

SMP personal ornaments, both from settlements and burials, were made of various materials in a wide range of forms. This wide range can be attributed to the vast territorial extension and the longevity of SMP culture. Differences are particularly notable between Liguria, the Po Plain (western Emilia and Man-



Fig. 8. Vicofertile burial site.



Fig. 9. Gaione - Cinghio: graves arranged in a double row.

tua territory) and Trentino. Regarding grave goods, personal ornaments accompanied female burials almost exclusively, adult or child, except in Liguria.

Shell and tooth: personal ornaments from Liguria

Data regarding ornaments in Liguria come almost exclusively from Arene Candide and La Pollera caves. The use of shells (*Columbella rustica*, *Cardium* sp. and *Glycymeris* sp.), perforated bones and teeth is well attested, while elaborated ornaments such as discoid and cylindrical beads and bracelets are very rare. The data from the Liguria settlements also point to the importance of perforated animal teeth in the settlements, as shown at the Arene Candide Cave. The relevance of these objects in the SMP levels and their absence in the other horizons during the Neolithic is clear (Fig. 16). The most common teeth are the canines of canids (dog, fox and wolf); red-deer canines are rarer, as are those of felines (wild cat and lynx), mustelids (badger and polecat) and bear. Boar tusks, simply pierced or employed to make peculiar pendants, are also registered. The perforated bones include lower jaws, phalanges, metacarpus and metatarsus of wild animals. The only perforated bone of a domestic animal is a goat metapodial.

Interesting data come from three graves excavated in the late 19th century: at La Pollera, a female burial was endowed with six perforated teeth of an undetermined canid associated with a perforated lynx lower jaw; one adult burial at the Arene Candide Cave had a perforated wild boar tusk on the thorax and a red deer antler as equipment, while in another grave, three wolf canines were found around the neck of an adult (Issel 1908.337, 409; Delfino 1981. 105). From the same cave comes a necklace (Fig. 17) consisting of fox, wild cat and dog perforated teeth,



Fig. 10. Parma - via Guidorossi (grave 30): earth-dug grave of an adult male.

as well as bird bones and arc-shaped shell pendants, probably imitating carnivores' large canines or claws (Bernabò Brea 1956. 110-111, Fig. XXXIII; Micheli 2004. Fig. 13). The use of perforated bone and teeth is a new phenomenon compared to northern Italy first Neolithic and therefore particularly interesting, since it reveals the preponderance of wild over domestic animals. The dog is the only domestic animal which is strongly represented.

Exotic materials in central Alps: the case of Trentino

Data on personal ornaments in Adige Valley come from the necropolis of La Vela (Pedrotti 2001), from the rock-shelters of Moletta Patone di Arco (Bago- lini et al. 1984) and of Mezzocorona Borgonuovo



Fig. 11. Parma - via Guidorossi (grave 16): silo burial of an adult male.

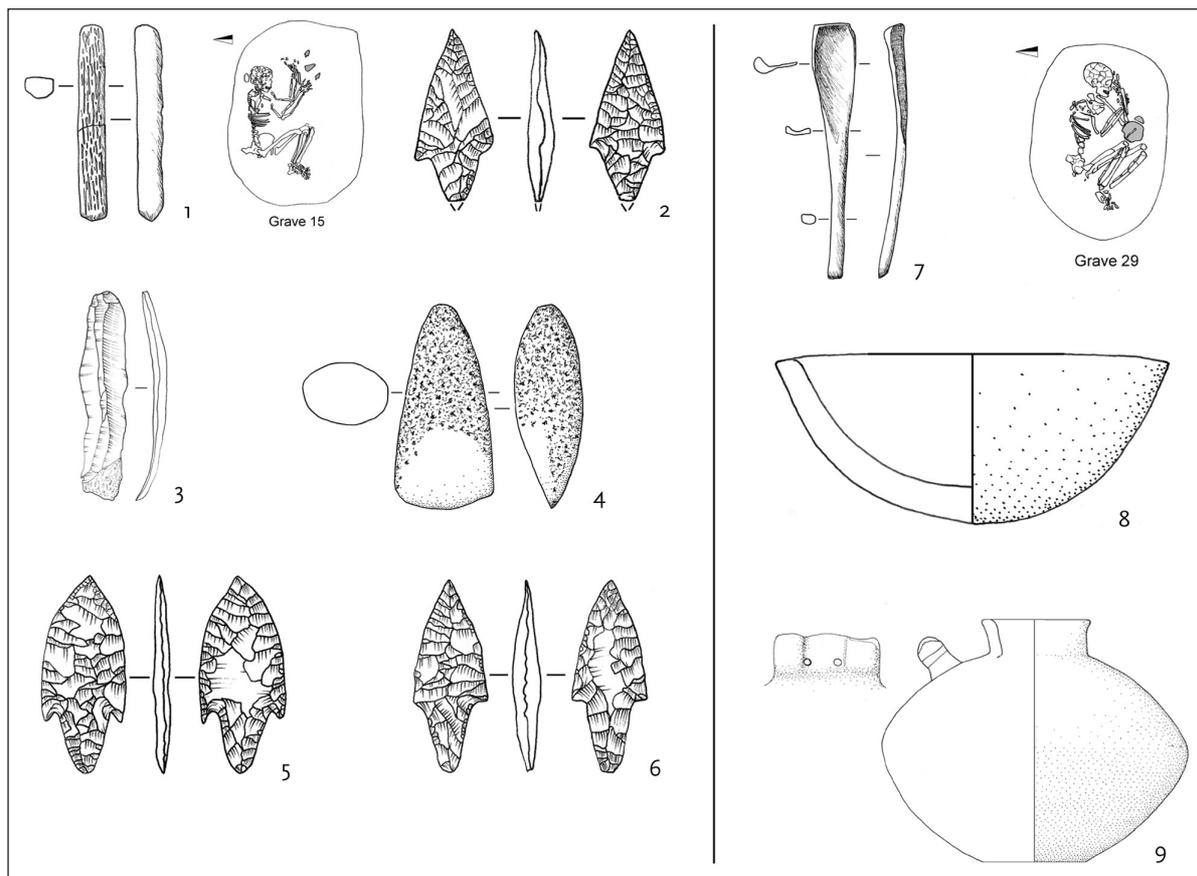


Fig. 12. Parma - via Guidorossi: 1-6. Adult male grave-goods (grave 15); 7-9. Adult female grave-goods (grave 29).

(Bazzanella et al. 2002) and from the settlement of via Brione at Riva del Garda (Micheli, forthcoming). The use of exotic raw materials in the manufacture of personal ornaments, such as beads in steatite from the Apennines and pierced sea shells (*Columbella rustica*) and *Spondylus* (Bagolini 1990; Micheli, forthcoming), is well attested and widespread among the SMP groups of Trentino.

The use of perforated teeth, including red-deer canines and boar tusks, or drilled pebbles is more rare, however. The special feature of personal ornaments in Trentino is the presence of *Spondylus* beads, as attested at La Vela necropolis (Bagolini 1990; Pedrotti 2001), Moletta Patone rock-shelter (Bagolini et al. 1984) and Riva del Garda settlement (Micheli, forthcoming).³ The beads are cylindrical, sometimes long and thick, or smaller and shorter, or discoidal. Their frequency can be connected to the diffusion of Danubian elements (Bagolini 1990; Borrello, Micheli 2004). It is worth mentioning that in the central Alps area, some fossil *Spondylus* depo-

sits are known which could have been exploited by Neolithic populations (Micheli, forthcoming).

Types and raw materials of central Po Plain personal ornaments

In the central Po Plain during both the first and second phase of SMP, steatite pendants and beads, *Dentalium* shells, fossil *Serpulidae* and perforated teeth are the most frequent personal ornaments. Many data concerning such objects come from recently excavated settlements and graveyards in Emilia. The SMP Emilia groups are characterized by the production of personal ornaments fashioned from black steatite collected from the numerous deposits sited in the central-western Emilia Apennines (Bernabò Brea et al. 2006a). Perforated animal teeth are important elements in Emilia SMP customs: mainly dog teeth - the only domestic animal represented - fox, and very seldom bear. Three of the seven burials provided with ornaments at via Guido-rossi had perforated animal tooth pendants. These

³ These beads come from a peripheral area of the settlement and, in view of their similarity to the beads from La Vela graves, the hypothesis that they could be grave-goods of disturbed burials cannot be refused.

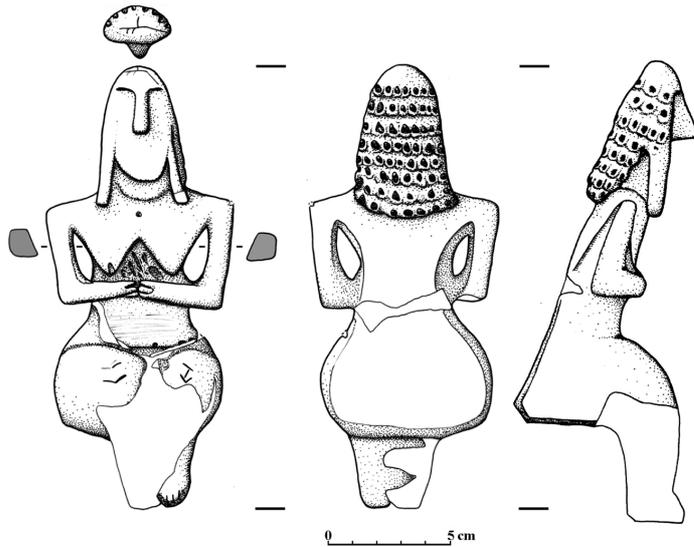


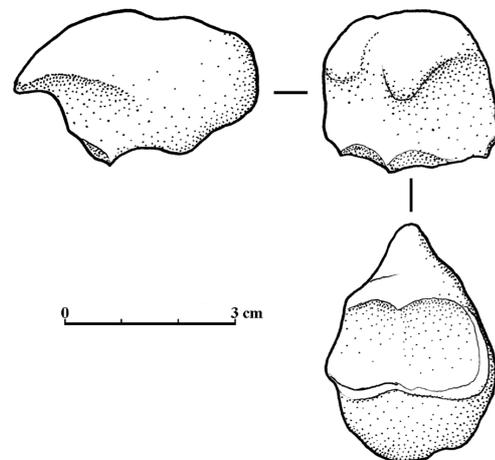
Fig. 13. Vicofertile (grave 3): female terracotta figurine from an adult female burial.

ornaments have been found around the neck of women: two fox canines from grave 27 (Fig. 18), a dog canine from grave 19 and a necklace consisting of one molar, three premolars, two canines and two incisors from a very old dog⁴ from grave 37 (Fig. 19). From Chiozza graveyard comes a bear canine (Bagolini, Barfield 1971. Fig. 23.5).

The occurrence of a necklace formed by four pike vertebrae, belonging to a small specimen, inside the grave of a female child at Le Mose graveyard is exceptional in the Neolithic. The pike is a predator of the Po River and sometimes reaches considerable dimensions; its presence in the Padan fluvial system is seasonal, being related to its prey. A large antler hook found in a male burial from the same gra-



Fig. 14. Parma – via Guidorossi: dog burial. Fig. 15. Pontetaro settlement: rough terracotta bird head with an epiphysis imprint at its base.



veyard could be linked to pike fishing.

Regarding the use of perforated bones as items of adornment, two pendants made from hare metatarsus with a transversal hole were found at Fimon-Molino Casarotto (Bagolini et al. 1973.204, Fig. 33.6–7) that are comparable to similar perforated bones from the 19th century excavations at the Arene Candide Cave (Bernabò Brea 1946. Fig. LXIII).

The employment of perforated human teeth as pendants is very rare in prehistory; nevertheless, such objects are attested at two SMP sites.

An abraded perforated human canine (Fig. 20) was worn by a 30–40-year-old woman at via Guidorossi (grave 6) (Mazzieri, forthcoming), while five drilled human teeth pendants have been brought to light in the settlement of Fimon-Molino Casarotto (Bagolini et al. 1973. Fig. 331.5). Their use is not only decorative, since wearing a human tooth pendant implies strong symbolic values and a direct link with the person to whom the tooth belonged, and could have had diverse purposes: as amulets against magic and illness, trophies or signs of affection. A human premolar imitation in black steatite comes from surveys at the Gaione – S. Rufino settlement.

Unlike Liguria and Trentino, red deer canines have not been attested so far in the Emilia territory. Ne-

⁴ Determination by Alice Choyke.

vertheless, we know some imitations in bone in grave 53 of via Guidorossi (Fig. 21) and steatite from the Gaione - Cascina Catena and Pontetaro (Fig. 22) settlements, suggesting the symbolic importance of red deer canines for the SMP people of Emilia as well. Concerning red deer, it is noteworthy that a steatite object probably reproducing a leg of a zoomorphic figurine was found at the Gaione - San Ruffino settlement.

Animals and their implications in ritual

Regarding animal ritual depositions, only the finds in the Po Plain allow any deductions. As far as grave-goods and ritual practices are concerned, domesticated species, except for dogs, are scarcely represented. Bone spatulas and awls obtained from sheep/goat metapodials are included almost exclusively among the female grave-goods of some graveyards (Le Mose, Collecchio, via Guidorossi and Chiozza). Precisely the same types of artefact have been found repeatedly in settlements.

Among the domesticated species documented, dogs play the main role, as they were interred inside, or nearby, burials or in huge irregular-shaped pits, cremated with a human being, and their canines have been used for personal ornaments (Tab. 2).

A red deer antler and three antler artefacts are placed in burials as offerings or as grave-goods. At Pontetaro, an antler (Fig. 23) was placed under the head of an adult male (Mazziere and Mutti, forthcoming). Two antler sticks were found inside two richly equipped burials from the via Guidorossi (grave 15) and Le Mose (grave 6) graveyards; they are enigmatic

objects, lacking any apparent function (Figs. 12.1 and 24), and may have a symbolic value similar to that of the antler itself. Among the objects in the funerary equipment of grave 6 there was a large antler hook. Different meanings can be attributed to these finds. In some cases, they can be interpreted as 'hunting trophies', such as the antler, declaring the personal valour of the deceased. They can also be seen as regeneration symbols, because the deer renews its antler every year; and as a virility

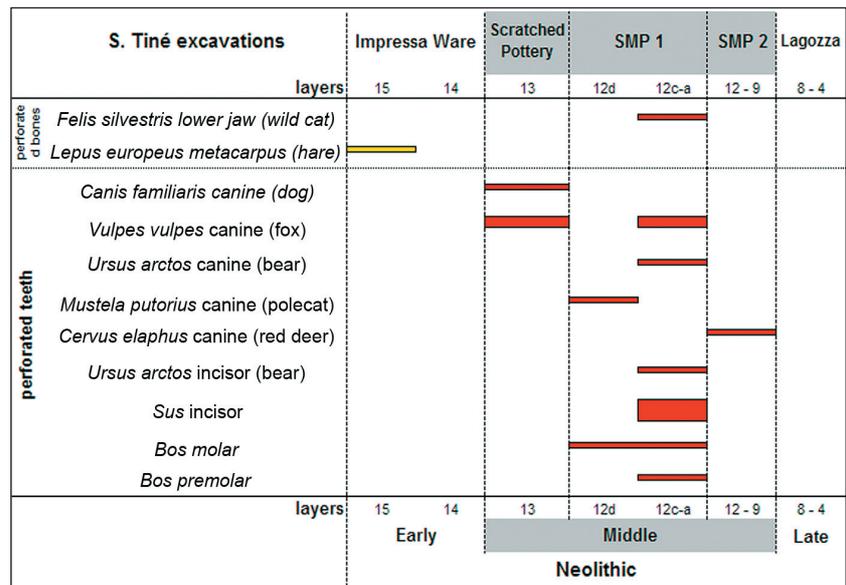
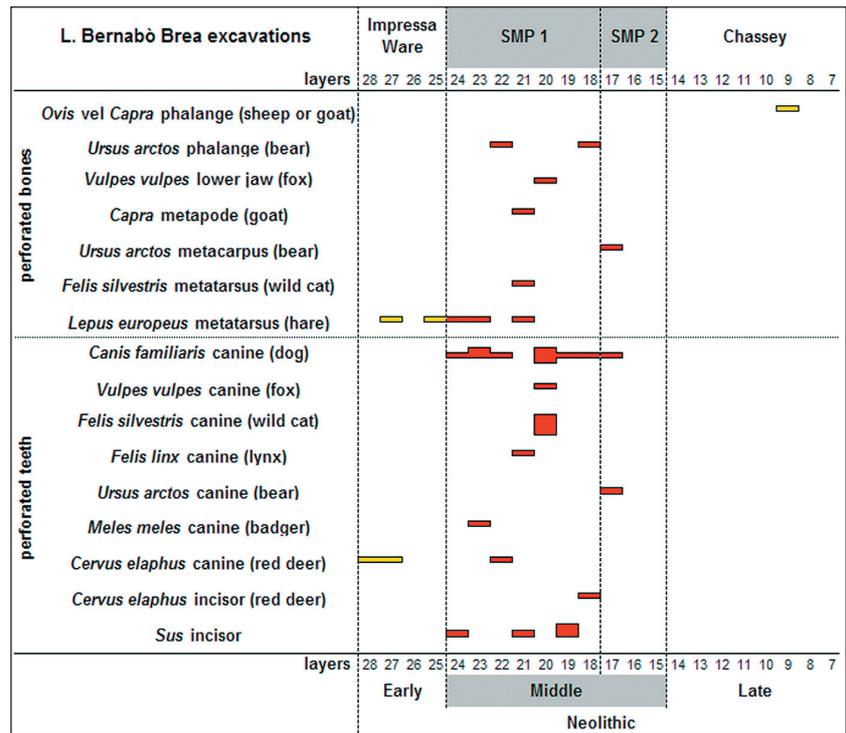


Fig. 16.1 and 2. Frequency of perforated bones and teeth in the Neolithic deposits of the Arene Candide Cave: 1. Luigi Bernabò Brea's excavations (1940-42 and 1948-50); 2. Santo Tiné's excavations (1972-1977).

Site	SMP Phase	Dog remains	Context	Human remains	
				From the same grave	Nearby
Ponte Ghiara	Early 1	selected cremated bones	cremation grave	F, 20–40 years (grave 2)	–
Ponte Ghiara	Early 1	2 perforated teeth	layer, settlement	–	–
Pontetato	1–2	skeletal without hind legs	dog grave	–	–
Collecchio – Ca' Lunga	Early 2	scattered bones	inhumation grave	M, 18–20 years (grave 5)	–
Collecchio – Tangenziale	Early 2	1 perforated tooth	layer, settlement	–	–
Parma – via Guidorossi	2	1 perforated tooth	inhumation grave	F, 25–19 years (grave 19)	–
Parma – via Guidorossi	2	7 perforated teeth	inhumation grave	F, 40 years (grave 37)	–
Parma – via Guidorossi	2	complete skeletal	dog grave	–	M, c. 25 years (grave 1)
Chiozza di Scandiano	2	complete skeletal	dog grave	–	M, 30–35 years (grave 2)
Bagnolo San Vito	2	complete skeletal	dog grave	–	(graves 4 and 8: sex and age not yet published)
Bagnolo San Vito	2	complete skeletal	inhumation grave	(sex and age not yet published)	–

Tab. 2. Dog embodiment in SMP culture: evidence from burials and personal ornaments.

devices.⁵ But the meaning of the antler artefacts is totally different, not being related to exhibition, but instead to a deeply intimate value or a peculiar expertise. The previous form of the antler is unrecognizable in the sticks and hook, because they are the result of the long work of manipulation and mimesis, which required time and skill.

Hunting and its symbolic representations

The frequent occurrence of flint arrow heads in male burials reflects the relevance of the hunter, and/or perhaps warrior, in the SMP society, and is an expression of the personal status acquired in life through skill and bravery. The hunter can act as a mediator between the domestic world represented by the village and the wilderness symbolized by the animals of the forest. In the SMP world, hunting is not economically relevant, but it takes on great significance as a symbolic activity. The wide range in shape and size of the arrow-heads which equipped SMP male burials (Fig. 25) is surely not due to a chronological discard, since morphologically different arrows have been found within the same grave. This fact could be linked to a type of symbolic abstraction of the hunt. Two hypotheses can be assumed: the first is that a specific correlation between the shape of the arrow-head and kind of game exists, as noticed in many traditional societies (*Pétrequin*

and *Pétrequin 1990*). The second is that some of the arrow-heads are symbolic and display objects to be shown and used only on particular occasions, as demonstrated by the specimens made of exotic materials such as obsidian and vitreous quartz (Fig. 26) from the via Guidorossi and Pontetaro settlements (*Mazzieri, forthcoming; Mazzieri and Mutti, forthcoming*).

The symbolic importance of animals

The data presented so far show the relevance of the wild. The symbolic value of the finds is clear, since they highlight the discrepancy between the subsistence of the SMP groups – which was based primarily on domestic animals – and

Fig. 17. Necklace made with perforated teeth of fox, wild cat and dog, bird bones beads and arc-shaped shell pendants, probably imitating carnivores' large canines or claws (Arene Candide Cave, layer 20 from SMP 1 levels).



⁵ The level of testosterone in the adult males' blood determines antler size and competitiveness in reproduction and, consequently, the position within the social hierarchy.



the figurative use of wild animals. The only well attested domestic animal in funerary or ritual contexts, as we have seen, is the dog.

Among personal ornaments, there is a preference for objects referring to the forest and the animals living in it, especially predators. The same preference is attested for the pike among fishes. It is interesting to observe the inclination for animal species with a clear/epiphanic seasonal nature, such as the red deer which sheds its antlers, the hibernating bear, or the sloughing snake *etc.* Such choices are surely not fortuitous, and may express the regenerative power associated with the undomesticated savage world. It is worth remarking that necklaces that included animal teeth were worn by women in the SMP necropolis of Emilia. This type of ornament does not seem properly representative of the female



Fig. 18. Parma – via Guidorossi (grave 27): burial and composite necklace of an adult female formed by steatite and shell beads; two perforated fox canines and some *Conus* shells.

sphere, but its meaning can be linked to the ostentation of their male relatives' status.

Among wild species, the red deer is the most represented and evoked animal. Its antler and canines are very important hunting trophies. The antler may also be considered as a symbolic element representing regenerative power, since it changes every year, as an expression of the renewal of nature. Moreover, through its size, the antler expresses masculine strength.

Analogies with other contemporary Neolithic groups

To compare the SMP data with other contemporary Neolithic cultures in detail would go beyond the scope of our paper; nevertheless, it is worth mentioning some Middle Neolithic cases very similar to those of the SMP groups of Emilia (Fig. 27).



Fig. 19. Parma – via Guidorossi (grave 37): necklace of an adult female formed by one molar, three premolars, two canines and two incisors from a very old dog.

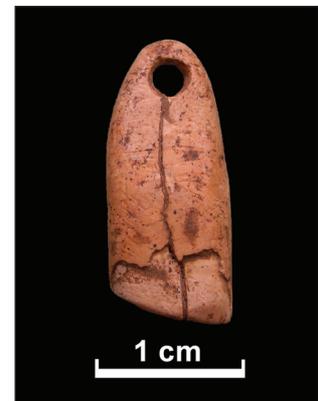


Fig. 20. Parma – via Guidorossi (grave 6): abraded perforated human canine.

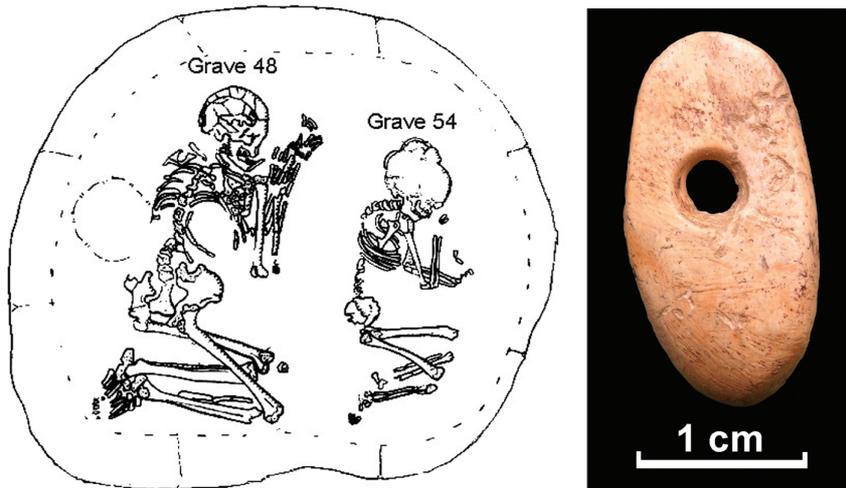


Fig. 21. Parma – Via Guidorossi (graves 48–54): imitation of a red deer canine worn by a female child associated with the burial of an old male.

With reference to dogs, from the Serra d'Alto culture there is evidence of dog depositions at the Cala Colombo Cave in Apulia, where a silo contained the disarticulate remains of two individuals and one complete young dog, while the remains of a second dog were spread in the upper deposit of the pit (Geniola 1974–76.210). Finally, we should note the very famous female and dog burials at Ripoli, in Abruzzi region (Parenti 1957). In such contexts, therefore, as in the SMP world, the dog has a twofold meaning, depending on its association with men or women: firstly, it is linked both in daily life and in the symbolic universe to the male and to hunting, where the dog is the hunter's friend and helps him catch prey; secondly, the dog is the animal of the domestic world when associated with the female as a protective guardian of the house. A special regard for dog in the ritual and mortuary sphere, sometimes associated with human burials, is also seen in Chassey culture in Rhone Valley (Beeching and Cru-bézy 1998.152–153), or in Vaucluse, Aude and Haute-Garonne in southern France (Vaquer 1998.168).

In southern Italy, unlike in the SMP culture, domestic animal depositions and sacrifices in relation to burials or within ritual contexts, especially caves, is widely attested (Curci and Muntoni 2008; Manfredini, forthcoming). However, the evidence of the symbolic importance of red deer hunting comes from some sites of the Serra d'Alto culture in southern Italy, contemporary with SMP culture.

The Porto Badisco and Cosma caves in Apulia yielded very famous depictions, painted in black, of hunting scenes in which archers and dogs were represented together with abstract signs (Graziosi 1980;



Concerning the Serra d'Alto funerary contexts, it is interesting to mention the burial of a young man in the Scaloria Cave which contained a large antler as at Pontetaro and Arene Candide Cave (Tinè and Isetti 1982).

During the 5th millennium calBC, birds, anatids in particular seem to play a very important role in rituals in central and southern Italian Neolithic cultures. The best known ritual context in which birds have been found is surely the Grotta dei Piccioni, ascribed to the Ripoli culture, where numerous anatid bones, with small balls of ochre and clay at one end, were found among the child burials and cremations (Cremonesi 1976). The representation of anatid heads often occurs in the shape of small handles on Serra d'Alto fine pottery. Also, at Serra d'Alto layers at Grotta del Kronio a small anatid-shaped head made of jadeite was found (Tinè and Tinè 1998).

The final point we wish to stress is the relevance of perforated teeth among the personal ornaments of the SMP groups. The use of perforated teeth as personal ornaments was common during the Middle Neolithic in Central Europe, especially in Hinkelstein, Grossgartach, Rössen, Stichbandkeramik and Lengyel groups. In these cultural spheres, red-deer, fox and wild cat teeth or



Fig. 22. Pontetaro settlement: steatite imitation of red deer canine.



Fig. 23. Pontetaro (grave 1): red deer antler placed under the head of a mature male as offering.

wild boar tusks are preferred to perforated shells or *Spondylus* ornamental elements (Jeunesse 2002: 53, 55). The occurrence of wild animal bone or antler artefacts is instead well documented for the Cerny culture in the Paris Basin (Sidera 1997; 2004), but in some ways could be reconducted to a common phenomenon of the Middle Neolithic as attested in Chassey culture (e.g. in the Camp de Chassey settlement - Thevenot 2005) or in the Serra d'Alto culture (e.g. in Grotta Pacelli - Striccoli 1988).

Some concluding considerations

The preference for perforated teeth or wild game bones does not necessarily arise from a simple aesthetic purpose, but can rather be seen as the result of a change among Middle Neolithic groups in the ideology pertaining to the social importance of hunting. In Italy, this fact seems related to a reduction in the consumption of game as food.

Hunting, once released from the requirements of everyday subsistence, becomes an ideal of virility taking roots in myth - the Mesolithic perceived as a mythical Golden Age? (Aurenche and Kozłowski 1999) - and participating in the creation of an Ideological World, as shown by the hunting scenes depicted in southern Italy



Fig. 24. Le Mose (grave 6): grave-goods of a mature male burial with red deer antler artefacts.

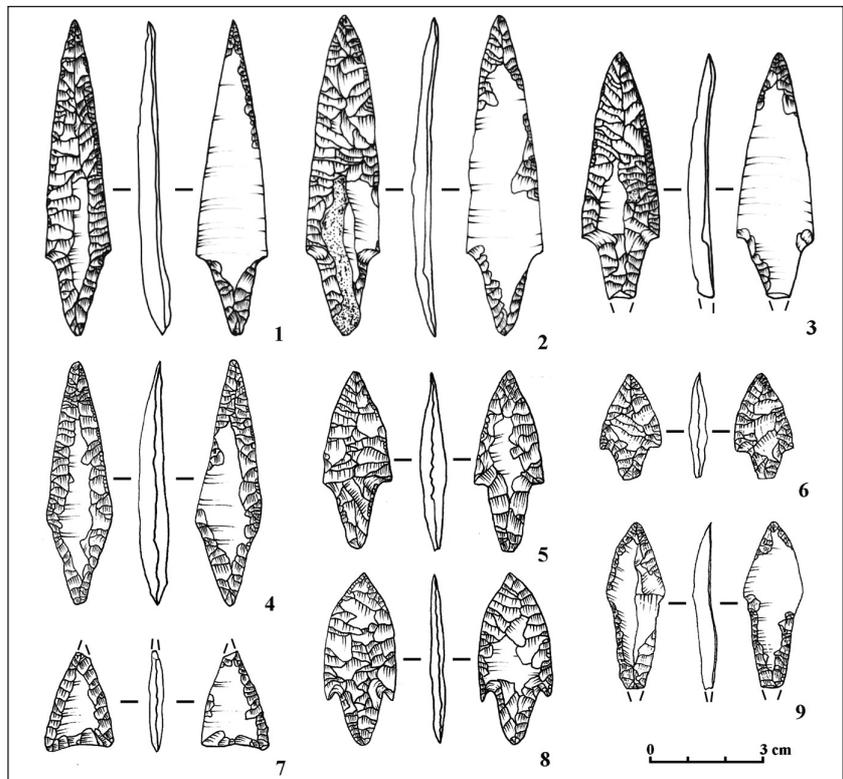


Fig. 25. Types of arrow-heads from SMP male burials of western Emilia. 1. Castelguelfo; 2.-3. Collecchio; 4.-5., 7.-8. Parma - via Guidorossi; 6., 9. Le Mose.

caves. Also in death, the valour and the social role of a man is marked by the presence of objects referring to hunting, such as weapons, trophies and artefacts hinting at a particular game or prey.

Regarding the presence of dog, or dog remains, deposited near or in human burials, it is difficult to establish if this was simply related to the funerary ritual, as a sacrifice, or if the dog was given preferential post mortem treatment, similar to that of people, as a companion in many everyday activities. Dogs actually go hunting with men; they protect the domestic space and herds, *etc.* Not only because they are trained, but also due to a natural predisposition, they occupy an intermediate/liminal position between the human and the animal worlds. This close intimacy is well expressed by dog burials in or near human graves, so that the dog follows its master also in the death, to lead him in the unknown afterlife realm, as it usually helps him to move around in the wild, outside the domestic world.

The customs of SMP groups, like that of many other European Middle Neolithic groups, testify to the diffusion of a wild component in the form of hunting trophies, emphasizing – also symbolically – the importance of the hunter's identity and his skill in killing wild animals in a society where subsistence actually depends primarily on domestic animals. There-



Fig. 27. Human-animal relation evidence and bird figurines from Italian Middle Neolithic sites: 1. Ripoli; 2. Grotta dei Piccioni; 3. Grotta Scaloria; 4. Grotta di Cala Colombo; 5. Ipogeo Manfredi di Santa Barbara; 6. Grotta Pacelli; 7. Grotta San Biagio; 8. Grotta della Trinità; 9. Grotta di Porto Badisco; 10. Grotta Cosma; 11. Grotta del Kronio.



Fig. 26. Vitreous quartz arrow-head from the Pontetaro settlement.

fore, a contrast arises between the funerary and ritual contexts and the domestic universe. The archaeological evidence tells us that there was a clear distinction between the daily round of subsistence activities of SMP people and their symbolic world, as represented by grave-goods and personal ornaments, and that some animals and weapons were chosen as symbolic agents to highlight this opposition.

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(Un)Usual Neolithic and Early Eneolithic mortuary practices in the area of the North Carpathian Basin

Alena Bistáková¹, Noémi Pažinová²

¹ Archaeological Institute, Slovak Academy of Sciences Nitra, SK

alena.bistakova@savba.sk

² Department of Archaeology, Constantine the Philosopher University Nitra, SK

npazinova@ukf.sk

ABSTRACT – *On the basis of the characteristics of Neolithic and Early Eneolithic mortuary practices in the area of North Carpathian Basin it can be argued that the existence of graveyards is an isolated phenomenon. Various rituals were involved in disposing of the dead. In this article, we focus on (un)usual burials which are singled out into two major categories: cremation and inhumation. Special emphasis is given to cremation as a mortuary practice: arguments for cremation; interpretation possibilities; examples of the use of fire and noticed phenomenon.*

IZVLEČEK – *S pomočjo značilnih neolitskih in eneolitskih pogrebnih praks v severnem delu Karpat-ske kotline sklepamo, da so pokopališča izoliran pojav. S pokopi so bili povezani različni rituali. V članku predstavljamo (ne)običajne pokope, ki sodijo v dve glavni kategoriji: sežig in pokop trupel. Poseben poudarek je namenjen sežiganju kot pogrebni praksi: argumentom, interpretacijam in izbranim primerom.*

KEY WORDS – *Neolithic; Early Eneolithic; North Carpathian Basin; mortuary practices; cremation burials; inhumation graves*

Introduction

Human remains provide a valuable source of information from the past and offer plenty of important knowledge. It is evident from research of burial rites that prehistoric populations did not share any single burial rite. It is possible to talk about predominant form of rite in optimal case. It is also uncertain what can be considered a burial rite and what is not directly related to it, e.g. post-mortal manipulations and cult acts.

From the beginning of the Neolithic, we meet various forms of burials in the North Carpathian Basin e.g. graveyards, isolated graves or group of graves within or outside settlements, isolated settlement burials, burials inside various settlement features, isolated parts of human skeletons, cremations and

cave burials. In order to simplify the situation, the article is divided into two parts; the first part focuses on cremation and cult practices associated with fire. In the second part, we focus on the skeletal remains of the examined area, with the main emphasis on curious, interesting, extraordinary graves/funerals. At the same time, we have to admit the subjective approach to the selection.

Chronologically defined, our themes concern the Neolithic (Linear Pottery culture – 15 sites, Želiezovce group – 18 sites, Lengyel culture – 21 sites, Tisza culture – 3 sites, Bükk culture – 5 sites) and early Eneolithic (Epilengyel – Ludanice group – 43 sites, Tiszapolgar culture – 4 sites and Bodrogkeresztur culture – 2 sites) with burials/skeletons in the northern part

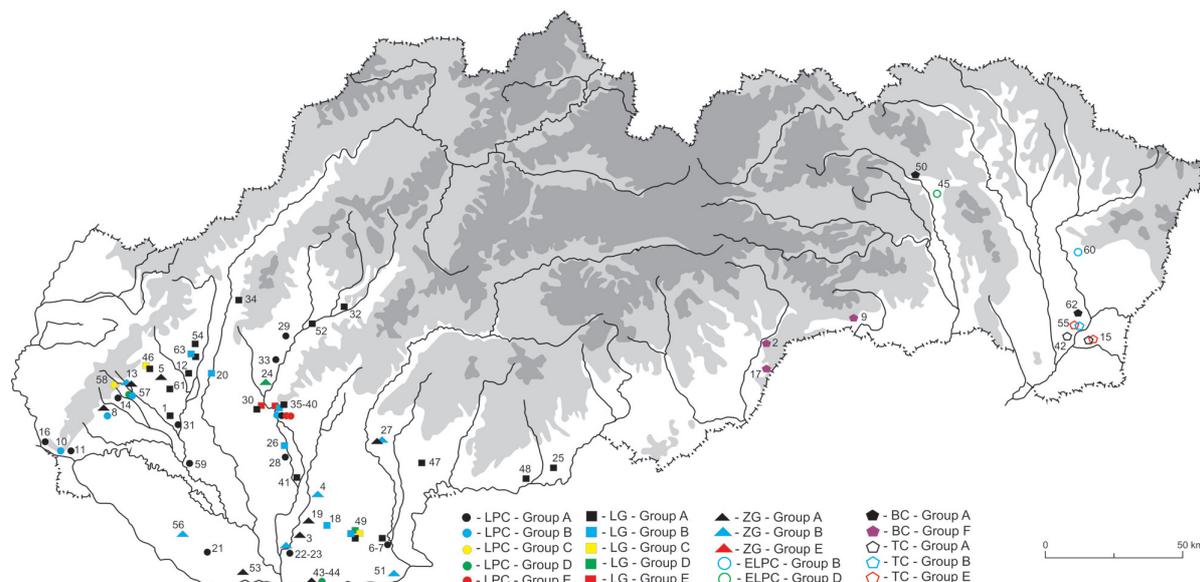


Fig. 1. Neolithic burial sites in Slovakia. 1. Abrahám; 2. Ardovska cave; 3. Bajč ‘Medzi kanálmi’; 4. Bešeňov; 5. Biely Kostol; 6. Bíňa; 7. Bíňa ‘Berek’; 8. Blatné; 9. Bobkova cave; 10. Bratislava-Mlynská dolina; 11. Bratislava-Trnávka; 12. Bučany; 13. Čífer Pác; 14. Čataj; 15. Čičarovce; 16. Devín; 17. Domica (cave); 18. Dubník – Bundáš; 19. Dvory nad Žitavou; 20. Hlohovec; 21. Holiare; 22. Hurbanovo-Bohatá; 23. Hurbanovo-Bacherov majer; 24. Jelšovce; 25. Kiarov; 26. Komjatice ‘Tomášove’; 27. Levice; 28. Lipová-Ondrochov; 29. Ludanice; 30. Lužianky; 31. Malá Mača; 32. Malé Kršteňany; 33. Malé Zálužie; 34. Moravany nad Váhom; 35. Nitra – Dolné Krškany; 36. Nitra – Chrenová; 37. Nitra – Klokočina (Šúdol); 38. Nitra – Mikov dvor; 39. Nitra – Mlynárce; 40. Nitra – Priemyslová ulica; 41. Nitriansky Hrádok; 42. Oborín; 43. Patince ‘Čierny hon’; 44. Patince ‘Teplica’; 45. Prešov – Šarišské lúky; 46. Ružindol-Borová; 47. Santovka; 48. Slovenské Ďarmoty; 49. Svodín; 50. Šarišské Michal’any; 51. Štúrovo; 52. Topolčany; 53. Veľké Kosihy-Okánikovo; 54. Veľké Kostol’any; 55. Veľké Raškovec; 56. Veľký Meder; 57. Veľký Grob; 58. Višňuk; 59. Vozokany; 60. Zálužice (Malé Zálužice); 61. Zeleneč; 62. Zemplínske Kopčany; 63. Žlkovce. Abbreviation: ZG – Želiezovce group; LG – Lengyel culture; LPC – Linear Pottery culture; ELPC – Eastern Linear Pottery culture; TC – Tisza culture; BC – Bükk culture; A – graveyard; isolated grave/group of graves (graveyard?); B – skeleton inside settlement object; C – skeleton inside ditch; D – burial in dwelling context; E – cremation; F – cave burial.

of the Carpathian Basin (territory of Slovakia). All the sites known in the examined area are shown in the maps (Figs. 1 and 2).

Cremation

In cremation, the body of the deceased is burned. Most of the body is burnt during the cremation process, leaving only a few pounds of bone fragments. The bodies of small children and infants produce very little in the way of ‘ashes’, as ashes are composed of bone, and young people have softer bones, largely cartilage. Often these fragments are processed into a fine powder, which has led to cremated remains being called ashes.

The main arguments for choosing cremation are: 1. Cremation is recognised as the most hygienic method of disposing of the dead; 2. Problems with space to bury the dead; 3. Ashes in urns are safe from vandalism and can be kept wherever the bereaved wish, even in the home.

Fire was part and parcel of the life of Neolithic people. They used its power and effects in everyday life and during rituals or ceremonies. Thus it was employed in the mortuary practices of Neolithic communities.

Archaeological finds provide evidence of several moments of fire utilization during a funeral. We can follow its traces at grave pits or directly inside of them as well as on the remains of the dead. Graves with the piously buried remains of cremated individuals belong to a special group.

One of the main criteria for identifying a cremation grave is the occurrence of the cremated body parts of individuals (remains of burnt pieces of bones or ash) inside the grave pit. Often there are articles found claiming that the described find is a cremation grave, with no closer evidence to support such statements. Also, the occurrence of anthropologic material in the grave is often not supported with evidence. However, this fact is related to the finding cir-

cumstances of individual units. The oldest evidence of cremation rites in the Carpathian Basin is from the Mesolithic period. It was documented in its southern part at the site of the Lepenski Vir culture in Vlasac (Srejović 1972). Other finds show only isolated instances of cremation e.g. Starčevo – Körös – Criş culture complex.

Cremation in northern Carpathian Basin contains elements of a mortuary rite evidenced in Linear Pottery culture (Abbreviation: LPC). However, cremation is very rare here, and only new research has shown that the minor presence of cremation graves can be related to the state of research. More cremation graves have been explored at the bi-ritual burial site in Kralice na Hané in central Moravia. Cremated remains were placed in a pit or a vessel (urn). The remains of grave equipment were often affected by the heat of the funeral pyre. Šmíd (2008:251, 257) points out that finds of hooped hand-axes affected by the strong heat of a funeral pyre can indicate potential burial sites. Especially in the case of older finds, information about grave units remains supposition, with no reliable evidence.

Cremation was probably also used at the burial site at Kleinhadersdorf in Austria (Neugebauer-Maresch 1992:5; Lenneis, Neugebauer and Ruttkay 1995:49), and at Nitra-Priemyslová Street site in Slovakia (Pavúk 1972:39). Cremation rites were also practised to a limited extent in the Protolengyel period. However, the graves of Lužianky group present the oldest evidence of cremation in the area of Slovakia. Grave 1/1956 from eponymous site at Lužianky can be considered as a definite cremation grave. Following information from Novotný (1962:271), the vessels were placed in a circle around a centrally positioned large pitcher located slightly above the other vessels. Besides the pottery, eight pieces of animal ribs, with a bead placed underneath in the clay, were found in the eastern part of the grave. Burnt bones were freely dispersed among the pottery at the bottom of the grave pit. In the case of the other two cremation graves from the Lužianky group (Nitra – Mlynárce grave 8 and 11; Novotný 1962:155), cremation is not entirely certain.

Different forms of treatment of the dead can be considered in the period of the Early Eneolithic (Epilen-

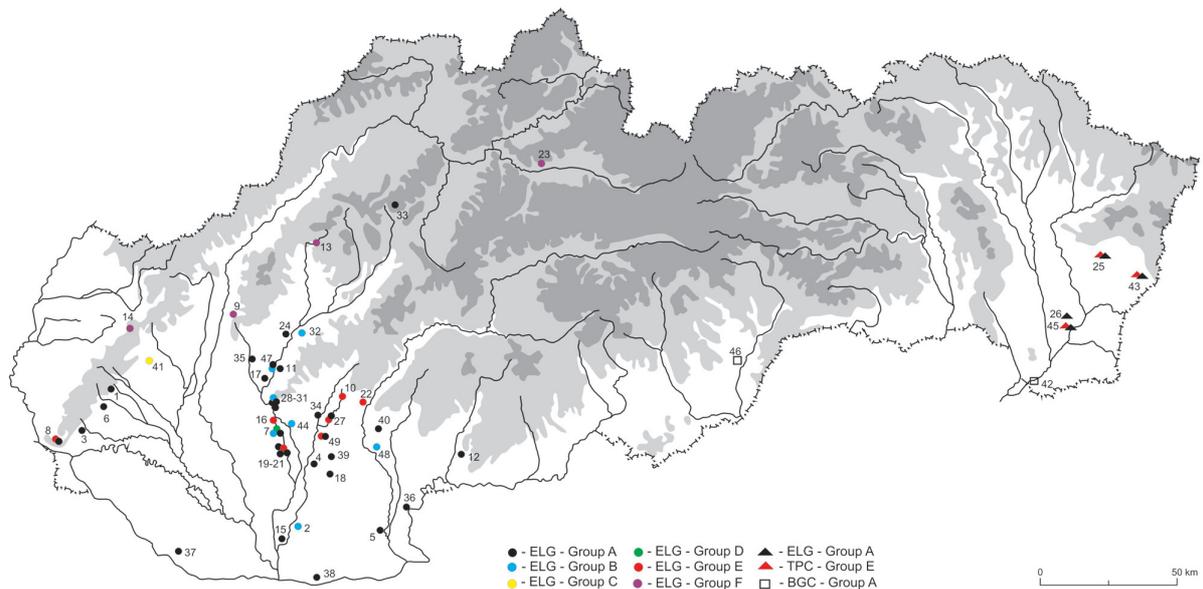


Fig. 2. Early Eneolithic burial sites in Slovakia. 1. Báhoň; 2. Bajč-Vlkanovo 'Ragoňa'; 3. Bernolákovo; 4. Bešeňov; 5. Biňa; 6. Blatné; 7. Branč; 8. Bratislava-Dúbravka; 9. Čertova pec; 10. Čierne Kl'ačany; 11. Dolné Lefantovce; 12. Dudince; 13. Dúpná diera; 14. Dzeravá Skala; 15. Hurbanovo-Bohatá; 16. Ivánka pri Nitre; 17. Jelšovce; 18. Kolta; 19. Komjatice – Homoky; 20. Komjatice – Homolka; 21. Komjatice – Legionárske; 22. Kozárovce; 23. Liskovská cave; 24. Ludanice; 25. Lúčky; 26. Malé Raškovce; 27. Nevidzany; 28. Nitra – Leningradská ulica; 29. Nitra – Martinský vrch; 30. Nitra – Mlynárce 'Sony'; 31. Nitra – Štúrova ulica; 32. Nitrianska Streda; 33. Nitrianské Pravno; 34. Nová Ves nad Žitavou; 35. Nové Sady – Čab Sila; 36. Pastovce; 37. Pastúchy; 38. Patince 'Čierny hon'; 39. Podhájska – Svätuša; 40. Podlužany; 41. Ružindol-Borová; 42. Streda nad Bodrogom; 43. Tibava; 44. Veľký Cetín; 45. Veľké Raškovce; 46. Včelince; 47. Výčapy Opatovce; 48. Vyšné nad Hronom; 49. Vráble. Abbreviation: ELG – Epilengyel (Ludanice group); TPC – Tiszapolgar culture; BGC – Bodrogkeresztur culture; A – graveyard; isolated grave/group of graves (graveyard?); B – skeleton inside settlement object; C – skeleton inside ditch; D – burial in dwelling context; E – cremation; F – cave burial.

gyel) throughout the western and north-western parts of Carpathian Basin. For example, in western Slovakia, there have been only a small number of grave or skeleton finds compared to settlements during this period. Use of cremation is represented at Komjatice-Homoky and Čierne Kl'ačany (Točík 1978. 248; Veliáčik 1974.107).

Isolated finds as semi-burnt fragments of human bones deposited below and inside the pots indicate cremation burials at Bratislava-Dúbravka and Ivánka near Nitra (Farkaš and Novotný 1993.64; Ruttkayová 1997.162) and at Nevidzany- Dolné Šelero vce (Bátora 1982.435–436). Especially the unit from Nevidzany could present an evidence of bi-ritual way of burials. There were inside an inhumation grave remains of burnt bones placed inside a vessel together with other pottery grave goods by the legs of the deceased (Bátora 1976.25–26).

Traces of fire found on human skeletons can be the result of unfinished cremation. This could be due to insufficient knowledge of cremation technology or inconsistency of the bereaved carrying out the cremation. Another alternative cause of the traces of fire found on skeletons is that a fire was lit close to, or on, the corpse. Thus traces of great heat could also occur on skeletal parts of body. In such case, mourners had to reckon with damaging the corpse. The body was sometimes placed directly into the fireplace: Vel'ký Grob (Steklá 1956.708); Liskovská jaskyňa (Struhár and Soják 2009.47, 48).

The same type of find was made in the settlement of Vyšné nad Hronom in southern Slovakia. Four human skeletons with traces of fire and damaged upper limbs were found lying under a burned layer of daub

inside a settlement pit of the Protolengyel culture. Also, more secondarily burnt vessels, clay weights, clay whorls and two bone needles were discovered inside the filling (Pieta, Konečná and Trgína 1991. 81).

What is interesting is the fact that traces of fire on skeletons are not recorded in regular graves from this period. Obviously, there was no reason to apply the power of fire to bodies in cases of piously inhumed – not cremated – individuals.

Traces of fire inside a grave strengthen the idea of the purifying power of fire, whether we consider the practical or spiritual character of the activity. It is, however, very rare in the area of the Carpathian Basin. Burning inside a grave was recorded, for example, at Suplacu de Barcău-Corău I (Suplac group, Ignat 1998.117) and Pilismarót-Basaharc (Bodrogkeresztur culture, Bognár-Kutzián 1963.361).

A find from the Early Neolithic (Tisza culture) site at Čičarovce (Vizdal 1980.14–35) has a special meaning. In addition to settlement units, a pit (A/76) was documented that differed from the other pits in depth (220cm). Four layers and interlayers were discovered inside it, with each layer containing the remains of ritual burials (Fig. 3). There was also a 'cult' fire discovered beside each skeleton. The fragmented grave goods – the fragmentariness of the pottery, split or fractured animal or human bones – suggests intentional damage.

Inhumation

The oldest Neolithic burials come from the Early LPC in western Slovakia. Two children's graves from Čičarovce

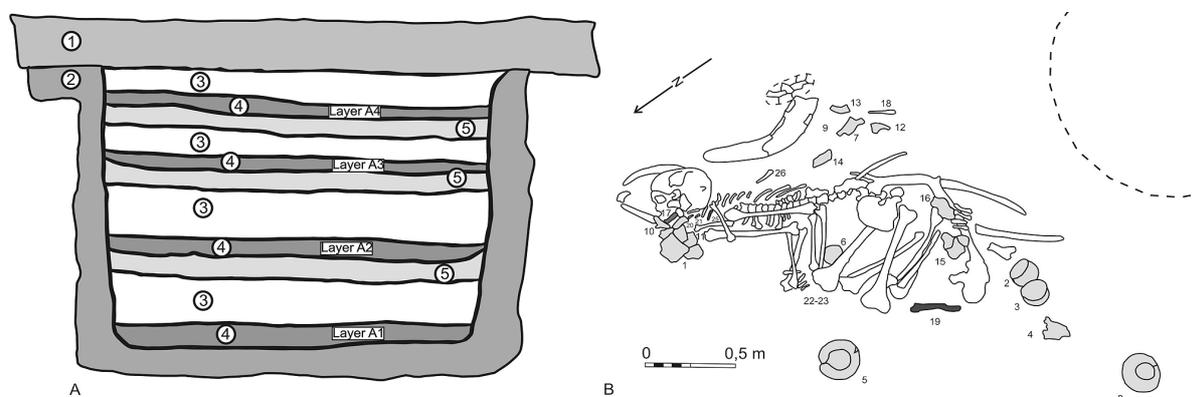


Fig. 3. Čičarovce, Trebišov district. A – Tisza culture pit A/76 with four layers and interlayers; in each layer remains of ritual burials were found: 1. plough layer; 2. native soil; 3. filled interlayers; 4. layers with cultic burials; 5. priming layers; B – ritual burial in layer A4 from pit A/76: 1–16 – pottery; 17. miniature stone axe; 18. hooved hand axe; 19. stone axe; 20., 21. blades; 22., 23. scrapers; 26. awl from bird bone (adopted from Vizdal 1980.Fig. 4, 5).

taj (Pavúk 1976.178), a flexed child's skeleton from a settlement pit in Bratislava-Mlynská dolina (Egyházy-Jurovská and Farkaš 1993.19) and three burials with variously oriented skeletons in flexed position from Bína (Točík et al. 1970.26–27) were identified in that period. A find of a man's skeleton in a settlement object at Malé Zálužice – which is dated to the Szatmar group and the beginning of the Eastern LPC – is among the oldest finds from eastern Slovakia (Vizdal 1992).

Since the beginning of the LPC we can recognize several burial practices. The first is comprised of graveyards. In this context, it is necessary to distinguish between intramural and extramural graveyards. Both are characteristic of Neolithic and Eneolithic, when groups of graves were placed within settlements and subsequently removed out of the settlement territory. In some cases, the graves were part of a bigger graveyard which was located in the vicinity of the settlement and continuous (in some cases periodical) settlement in the course of the time caused mutual disturbance, such as at the Neolithic settlements at Lužianky (Novotný 1962), Svodín (Němejcová-Pavúková 1986), Santovka (Pavúk 1994a.169) and Šarišské Michal'any (Šiška 1995.38). There is an interesting case of eleven inhumation graves near five settlement pits at the Čičarovce site in eastern Slovakia (Vizdal 1980.50–75, 90, 95). A neighbouring cremation in a vessel was found in one skeletal grave and, inside two settlement pits, there were isolated human skulls deposited. However, the most important find is a cult object/shaft with burial superposition of four individuals, mentioned above in the section on cremation. There is evidence of the superposition of buried remains also at the Epilengyel settlement at Bajč-Ragoňa (Točík 1978.240). Inside a cultural object (pit with a circular ground plan) have been found the first discoveries, two bowls and a vase in fragments, at a depth of 73cm. Under that, at 88–120cm depth, six unbroken vessels were found, beneath which lay two skeletons of adult individuals in flexed positions. Sterile brown filling continued until a flat floor at a depth of 273 cm. Approximately 20 cm above the floor four skeletons were located (adult woman and a man, juvenile individual and a child) in a flexed position (Fig. 4).

The existence of extramural graveyards in the Neolithic in the studied area was proved at Nitra – Priemyslová Street (76 graves; Pavúk 1972) and in the Early Eneolithic at Tibava (41 graves; Šiška 1964) and Veľké Raškovce (44 graves; Šiška 1963.215–217; Vizdal 1977). According to the occurrence of

grave groups, a graveyard is also supposed at the Neolithic sites Nitra-Mlynárce (Plesl 1952), Nitra-Mikov dvor (min. 7 graves; Březinová 1999), Holiare (Barta and Willvonseder 1934.6), and Lipová-Ondrochov (Točík 1981.303).

Intramural burials mostly occurred in the Early Eneolithic period: Branč (17 graves; Lichardus and Vladár 1964), Jelšovce (22 graves; Pavúk and Bátor 1995), Výchapy-Opatovce (8 graves; Porubský 1955; Nevizánsky 1985b). There are individual graves or groups of graves from several sites whose affiliation is uncertain. However, these present regular burials in grave pits, where the deceased were laid in flexed or stretched position on their right or left side, with hands usually in front of the face. These deceased were equipped with grave goods on their last journey. Stone covers for grave pits were found at Epilengyel sites at Malé Kršteňany (Vlček and Bárta 1950.337–340), Blatné (Pavúk 1978.192–195) and Nitrianske Pravno (Nevizánsky 1985a.75); at the last of these sites the stones were also positioned on the skeleton. This practice might be related to burial rites of the Funnel Beaker culture, where stone-packed graves are common (Šmíd 2004). Other indications of outside grave marking are absent. The exception is a child's grave inside the area of LPC settlement

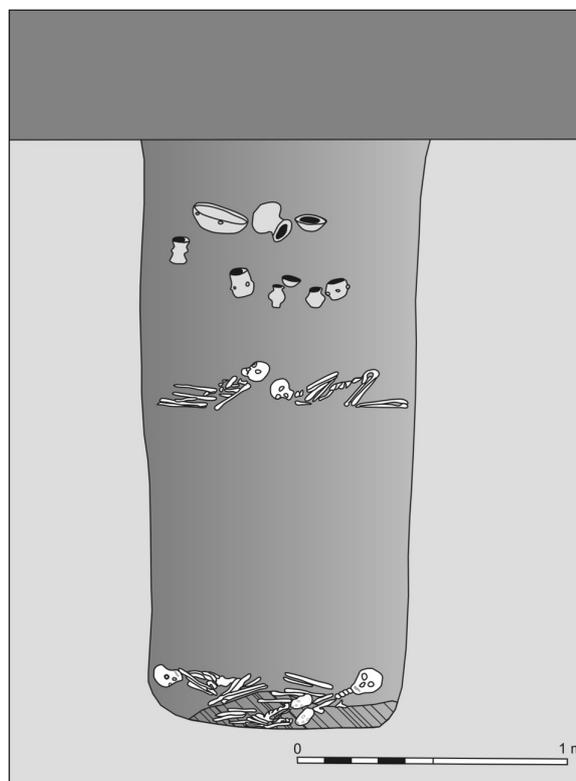


Fig. 4. Bajč-Ragoňa, Komárno district. Epilengyel site-Ludanice group. Cultic shaft with pots and six individuals (adopted from Točík 1978.Fig. 4, 5).

in Bratislava Mlynská dolina (*Egyházy-Jurovská and Farkaš 1993.19*), where traces of six post holes were detected around the grave. In this case also, a stone block covered the torso of the skeleton. Following this case, we move on to the second group of finds, which contains solitary skeletons inside settlement objects/units. It is important to distinguish between regular burials inside a settlement pits and putting of some individuals inside objects. So long as the human skeletons were found laying piously in settlement objects and mostly with some grave goods, they were probably regularly buried, whereby a pit originally serving purposes other than burial was used. There is a good example of such a burial in the settlement unit of the Želiezovce group in Levice (*Samuel 2007.173–174*), which contained the skeleton of a 40-year-old woman placed in a flexed position on her left side, with her head facing north, two vessels placed beside her legs, and the shells of a necklace on her chest and neck. This type of accessory/jewellery is not rare. It also appeared in object 92 in the settlement unit of LPC and Želiezovce group site in Štúrovo (*Pavúk 1994b.96*). There was a skeleton of a 40–50-year-old woman found in flexed position on her right side, with numerous freshwater shells located around and below her (Fig. 5). Several bone fragments from more human individuals approximately 15–30-years-old were discovered in the upper layer of the pit filling. The river shells were also found between both layers of the pit filling. Bones from the upper layer have traces of burning, splitting and carving.

An interesting child burial was discovered in the settlement unit at Branč (*Lichardus and Vladár 1964*). The skeleton was in a straight position, facing the bottom of a rectangular floor plan pit which had rounded corners and walls narrowing towards the bottom. The legs of the skeleton were located on the bevelled pit wall (Fig. 6). No grave goods were detected; however, there were fragments of vessels inside the pit filling. Also, a find from the Želiezovce group site in Cifer-Pác can be considered a non-regular burial (*Kolník 1978.132*). An extremely flexed skeleton lay on its left side inside a settlement unit facing north-east. It originally had its hands tied behind its back (Fig. 7). Perhaps one vessel, an unfinished stone tool and a bone awl can be

considered as grave goods. Another interesting find that is considered a demonstration of cult practices comes from the same settlement. A double grave of markedly flexed young individuals (probably a woman and a man) lying side by side, with faces turned away from each other, was found inside a pit of irregular elliptic shape (Fig. 8). Evidently, the dead were tied together at the waist and sole. Above their heads, a conical bowl with decoration reminiscent of ideograms and one spherical bowl were located (*Kolník 1980. 170*).

Finds of isolated bones inside settlement units, often with traces of violent interferences are also not classified as ritual burials. These are frequently finds of isolated skulls, e.g. in two settlement objects from the Tisza culture site in Čičarovce (*Vizdal 1980.90, 95*) or the LPC settlement unit in Blatné, where the skull was surrounded (covered) with stones and fragments of some bigger vessels (*Pavúk 1980.208*). A settlement unit at the Želiezovce group site in Bajč yielded a great quantity of different human bones: jaws, neurocranium – the upper portion of the skull – braincase, thigh, facial skeleton, frontal bone etc. (*Vondráková 1991.107*). Anthropological analysis revealed that the fractures of these bones are mostly authentic and their surfaces prove they were fractured when they contained organic material. An os frontale from object 459 in Bajč even contained traces of intentional interference by means of a slashing or cutting tool – the evidence of anthropophagy, perhaps? There is another example in the case of the

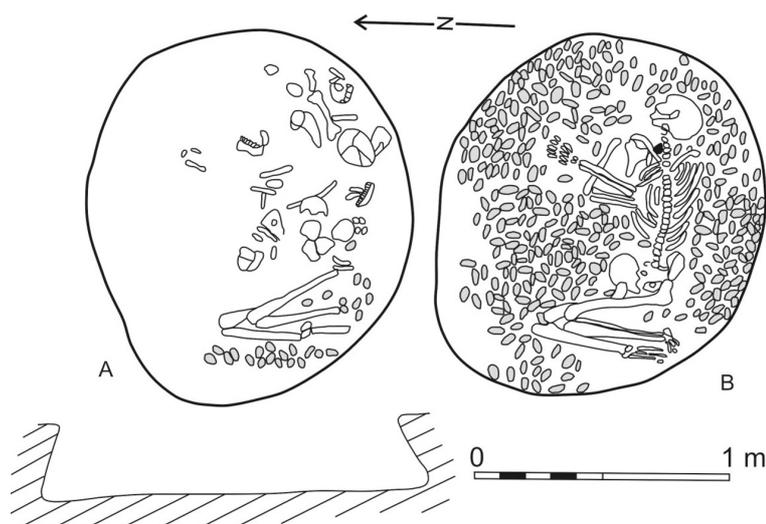


Fig. 5. Štúrovo, Nové Zámky district. Linear Pottery culture and Želiezovce group site. Object 92. A – upper layer of pit filling with several bone fragments and freshwater shells; B – skeleton of a 40–50 year old woman in flexed position on her right side with freshwater shells located around and below (after Pavúk 1994a.Fig. 39, 5 a, b).

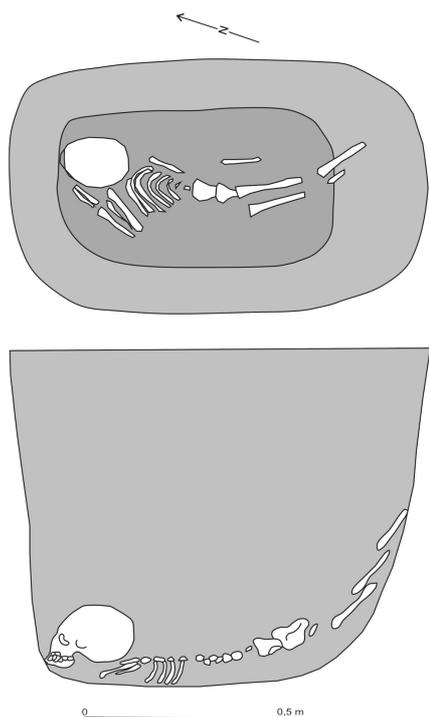


Fig. 6. Branč, Nitra district. Epilengyel site-Ludanice group. Child's skeleton in settlement unit in straight position facing the bottom of pit with legs located on the bevelled pit wall (after Lichardus and Vladár 1964.Grave 271).

incomplete bone remains of three women discovered in unit 750/79 of a Lengyel culture site in Svodín, where traces of healed fractures were documented for two women (Němejcová-Pavúková 1998.40, 42).

Evidence of some isolated bones found in the settlements could be evidence of various post-mortals manipulations. Some of these could be part of ritual acts. Likewise, the damaged skeletons found in graves or inside objects are considered a result of ritual activities. Ritual encroachment on graves is assumed when grave fitting is removed. Such interventions can also be explained as anti-vampire. On the other hand, the removal of skulls (or other bones) from the grave after the decomposition of soft tissue could be explained as a manifestation of respect, of an ancestor cult. There is, perhaps, an exception in the case of a find from a Bükk culture site in Šarišské Michal'any, where human bones with traces of cutting, scratching and cooking were found in layers as well as settlement units (Šiška 1995). It is possible to consider cannibalism in this case!

Also the placing/throwing of the human body together with isolated human bones indicates ritual activity, which differs from 'classic' graves. A single skull

was found, for example, together with the skeleton of an 8–9 years old child in one out of 76 graves at Nitra – Priemyslova Street (Pavúk 1972.8), and the cranial arch of an adult (probably a woman) was located in a settlement unit near a child's skeleton in Bratislava – Mlynska dolina (Egyházy-Jurovská and Farkaš 1993.19). Both examples belong to LPC.

A discovery from Blatné is very interesting (Pavúk 1978.192–195; 1980.208). A partly damaged Želiezovce group storage pit, with a circular floor plan with flat floor contained two skeletons, a newborn and an 8–15 month child, found when removing pottery fragments. By the south-west edge of the pit, a child's skeleton was found in an unnatural, badly flexed position. The skull was laid on its rear side, facing up. By the eastern edge of the pit, the skeleton of a small dog was discovered, stretched and lying on its right side. A fragment of a child's skull was found beside its hind legs. In the northern part, another skeleton of a child was uncovered surrounded by fragments of sole bones from an adult. A small decorated amphora was situated next to this child's skull. Another skeleton in the pit was positioned on its left side, with strongly decomposed ribs and limbs in a flexed position. Westwards of the skeleton, another fragment of child's skull was found. All the isolated bones of children and adult individuals bore traces of pre mortal injuries and of burning. The preserved individual bones in particular appear to have been perfectly boiled. It is possible to consider this act as proof of violent interference, cannibalism or scalping. Although a burial rite

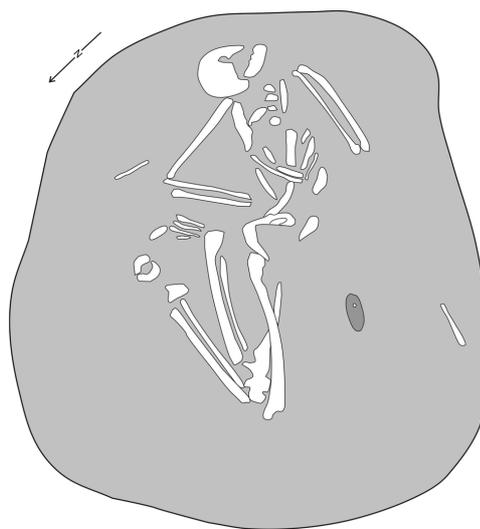


Fig. 7. Cífer Pác, Trnava district. Želiezovce group site. Strongly flexed skeleton on its left side inside a settlement unit facing north-eastwards with hands originally tied behind its back (adopted from Kolník 1978.pit 239).

in the middle Neolithic was not fully established, certain rules were already adhered to. This allows us to assume that the main aim of activities leading to the creation of find situations was primarily not for the purposes of a funeral itself. A dog, as well as children, could be sacrificed, fitting food, or some kind of companion.

The skeletons of children were usually interred within settlement boundaries. For example, at the Epilengyel settlement in Branč, out of seventeen graves, twelve were those of children (*Lichardus and Vladár 1964.101, 102*). The inhumation of deceased children refers to some emotional attitude of their relatives. The presence of grave goods can reflect a certain notional social status of inhumed child. For example, at the LBK graveyard at Nitra-Priemyslová Street, from out of twenty-two children (under 15-years-old) eleven were buried without accessories. Seven children were buried in graves with one vessel and one other article (*e.g. bone bracelet, stone pad etc.*). Also, pieces of graphite were found between the child's left hand fingers in grave no. 5 (*Pavúk 1972.8, 75*). There are several richly furnished children's graves known from the Lengyel culture site in Svodín. The richest child's (Infans III) grave - no. 112/80 - contained two painted anthropomorphic vessels, several ordinary vessels, a clay altar, several hundred spondylus shell pearls from a necklace, belt and bracelets. Some were originally sewn on a headwear or other head decoration (*Němejcová-Pavúková 1986.145, 146*). Besides regular graves also burials inside settlement units come from Svodín. For example finding from the pit no. 337 is interesting. There is the skeleton buried inside the object in a very specific, so-called frog position. Was the position intended to express some already unknown spiritual meaning? The skeleton was that of a young individual with a badly healed fracture which had created some kind of third joint at the forearm (Fig. 9). It was probably because of this defect that the person was separated from the community. This might reflect the unusual way it had been interred (*Němejcová-Pavúková 1986.150*).

Another special group of disrespectful laid human remains is presented by findings at Lengyel settlements with a circular enclosure (Ružindol-Borová, Svodín) and with enclosed ditches (Vištuk). In the ditch of the circular enclosure in Ružindol-Borová, traces of pre-mortal violence (most often, blows to the head, arm and forearm) were found on most of the twenty-eight individuals identified (seventeen belong to the Lengyel culture - phase I and ten to

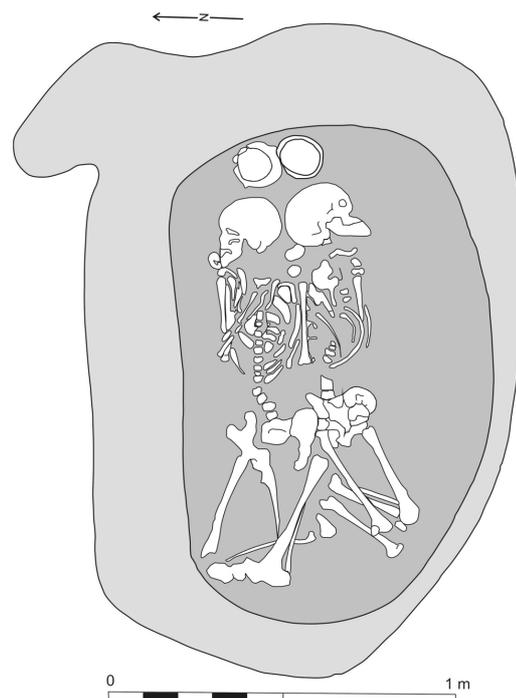


Fig. 8. Cífer Pác, Trnava district. Želiezovce group site. Double grave of considerably flexed young individuals (probably a woman and a man) lying next to each other with faces turned away; they were evidently tied together at the waist and soles (adopted from Jakab 1993.Fig. 4).

the Ludanice group - Epilengyel). The number of persons that could be found in the whole ditch is estimated up to 130 (*Němejcová-Pavúková 1997. 115-119*). Also, numerous traces of animal bites were detected on the bones of both men and women of different ages. Apparently, the dead bodies were thrown into the ditch and left uncovered for some time and therefore exposed to the impact of the environment. It is possible that the inhabitants were attacked and thrown into the ditch, which remained open for some time. A discovery from Svodín presents a different situation. The skeletons of two children without accessories were found 200cm deep in the filling near the exterior wall of the circular enclosure inner ditch. There were no traces of a grave pit (*Němejcová-Pavúková 1995.47*). According to the find situation, we can suppose that the bodies reached the ditch during its continuous back-filling with soil.

There is so far one isolated discovery of a young woman's skeletal remains (18-22 years) and of a girl (Infant II) lying together in a trench at the LPC site in Vištuk. Traces of violent interference have been preserved on some of the bones, which incurred probably sometime after death (post-mortal injuries). It is impossible to interpret this context as the re-

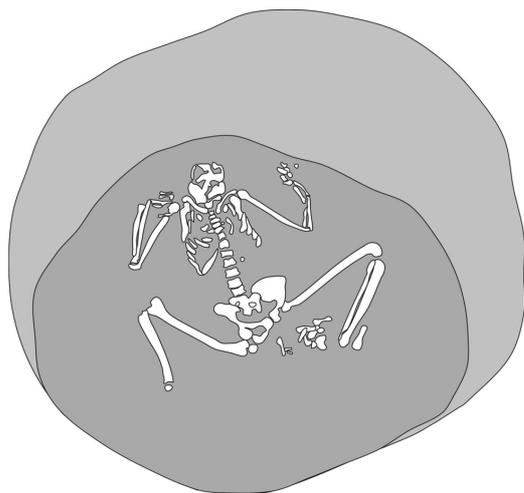


Fig. 9. Svodín, Nové Zámky district. Lengyel culture site. Young individual in frog position with badly healed fracture at forearm in settlement unit No. 337 (adopted from Němejcová-Pavúková 1986.Fig. 10).

main of a Neolithic fenced settlement, because of the unclear terrain situation (Farkaš and Ševčáková 2003.177–182). In Neolithic ditches, it is important to recognize not only profane, but also the symbolic function of spatial division into outer (wild, dangerous) and inner (secure) area. In such contexts, funerals in ditches can be considered as a type of temporary zone between this world and the world to come. Skeletons inside ditches of circular enclosures reflect the effort to be as close as possible to sacred zone. Skeletons thrown into ditches, or isolated bones, are not only evidence of war, but also of human sacrifice, even a certain form of burial rite.

Occasionally, human skeletons also appear in dwelling contexts at some Neolithic settlements. There is one good example from the Želiezovce group site at Jelšovce (Bátora 1999), where the skeletons of two women were found in the foundation trench of a house (Fig. 10). Skeleton A was lying in the lower, narrower part of the western half of a trench, positioned on its back. Because of the narrow space, it was pushed inside the trench and the pelvis was deformed by the pressure. Three round vessels lay over its skull. Skeleton B was positioned on its left side in the eastern part of the trench, with no other finds. The age of the women is estimated at within 30–40, and some pathological changes such as paradontosis, tartar, caries and cysts, arthritis and a sharply delimited cavity on a thighbone were noted. Pre-mortal injuries occurred

in the form of defects and traces of punches to the jaw-bones. Finally, skeleton A suffered from a broken jaw.

It is questionable whether burials in a dwelling context (inside and outside) can be interpreted as building sacrifices, or simply as an individual form of ritual burial. Undoubtedly, certain forms of sacrifice existed and were highly likely performed. For example, at the Epilengyel settlement in Branč the graves were situated close to the corners of dwellings, supporting a theory of building sacrifice (Vladár and Lichardus 1968.328). In this context, a group of children's graves located under the floors of dwellings at the Lengyel settlement in Svodín is interesting (Němejcová-Pavúková 1995.122). Likewise, the find of a strongly flexed skeleton found under the post hole of a long house of the LPC site in Patince 'Teplica' (Cheben 1989.70).

Different types of sacrifice occurred in Branč, too. These include e.g. a find of an undamaged spondylus shell bracelet under a post hole at the north-eastern corner of dwelling 13, or a completely preserved clay model of a dwelling together with pottery fragments in the same position at dwelling 17 (Vladár 1969.506–508).

Burial inside dwellings, with skeletons placed inside ovens and near fireplaces, constitutes a special category of interment. Interment in ovens or near fireplaces symbolises the domesticity. At an LPC and Želiezovce group site in Vel'ký Grob, a skeleton was positioned in the fireplace and covered with a thick layer of burnt soil (Steklá 1956.708). In Prešov-Šarišské Lúky (Eastern LPC) at the north-eastern corner of a large settlement object a demolished clay fireplace was discovered, among it with dispersed parts of human limbs and a jaw (Šiška 1976.84).

Human remains found in caves comprise a separate group, which is perhaps mostly linked with cults and

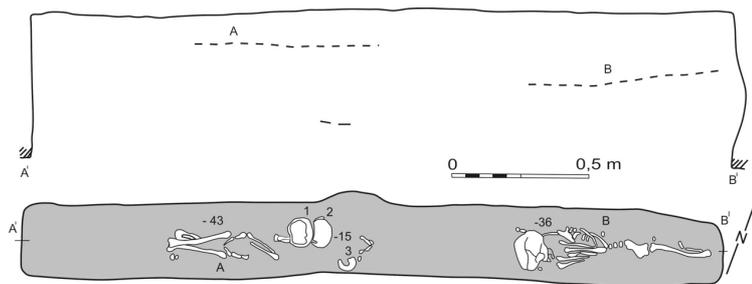


Fig. 10. Jelšovce, Nitra district. Želiezovce group site. Skeletons of two women in foundation trench of a house (after Bátora 1999. Fig. 2).

rituals. In the Neolithic, this special category occurs in the cases of three Bükk culture caves (Domica, Ar-dovská and Bobková cave), and in the early Eneolithic, in four Epilengyel caves (Čertova pec, Dúpna Diera, Dzeravá Skala and Liskovská jaskyňa). Mostly human skeletal remains occurred dispersed; however, there is also evidence of both isolated (Dzeravá Skala) and mass burials of mostly young individuals (Dúpna Diera). The Liskovska cave is a special example of this phenomenon (*Struhár and Soják 2009. 47, 48*). Evidence of a particular ceremony has been found inside. A large accumulation of human bones was located at a fireplace in a small low niche (Fig. 11). The fireplace was tiled with bigger stone blocks. In the fire layer under the bones, a small spiral decoration made of copper wire was placed. The whole object was separated from the larger corridor by some kind of stone wall. The unit analysis has shown that it can be related to cultic district-charnel-houses (*Struhár 1999*). At least sixteen people were buried here, six of them young; the remainder were adults between 20 and 40 years of age. Three of them could have been up to 50 years old, one even 60 years (*Jakab 1999*). Intentional cuts were noted on the diaphysis of a thigh-bone. Probably only isolated bones, and not the whole bodies of the deceased were po-

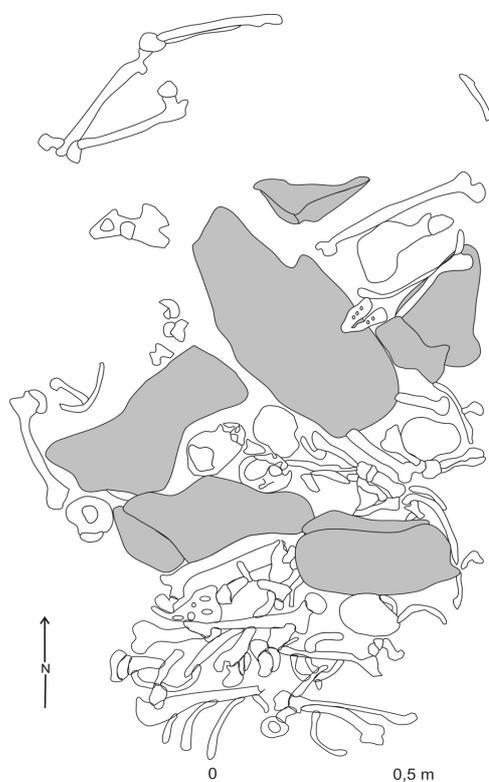


Fig. 11. Liskovská Cave, Ružomberok district. Epilengyel-Ludanice group site. Cult burial in a small low cave niche with the bones of sixteen individuals (after Struhár 1999, Fig. 2).

sitioned in the niche. These were originally laid at some other location where they decayed naturally. After the decay and separation of soft tissue from the bones, the remains were collected and moved to the place of their eternal rest. Also, animal bones of various species were positioned inside the object: grouse, goose, hawk, rabbit, wild boar, polecat and sheep/goat. So far, it is not clear whether this object was created as a result of a single action, or used as a cult site over a longer period as a depository for the bones of the deceased. Traces of viridescence on the skulls and bones prove the presence of copper jewellery and decorations gracing the clothing and bodies of the inhumed. It is interesting that before the bone remains were placed in the niche, a fire was lit and the bones were placed in smouldering ash. Most probably so-called purification – cleaning the place intended as a sepulchre. The division of the sacred area from the other cave areas probably served to prevent the return of the deceased; however, on the other hand, it was also for the undisturbed (peaceful) rest of the dead. An isolated burial area was also documented in Dupna diera cave, where the area with bones (supposedly secondary burial) was separated from the residential area by dry-stone wall (*Barta 1983.22*).

Finally, it is necessary to remark that besides the group of funerals mentioned, the burial of animals intact constitutes a special category. Entire animal skeletons are often placed along with a human individual. There is a good example in grave 3/71 at the Lengyel site in Svodín, where the complete skeleton of a dog was located at the feet of a flexed human lying on his right side with hands in front of his chin (*Němejcová-Pavůková 1982.201–202; 1986.148*). There are also examples of separate burials of animals. The grave of a small young dog (*Canis familiaris palustris*) in a cultural pit at the LPC site in Hurbanovo-Bacherov majer is the oldest evidence (*Ambros and Novotný 1953.447–450*). It is possible that since the Neolithic, the dog has played a significant role in human life, and perhaps we can also consider its role as a guide of the deceased in the kingdom of the dead.

Conclusion

The knowledge of the mortuary practices of the period studied depends on detailed study of all remains presented by archaeological findings. Although some remains were burnt and other traces of fire are evident, it is difficult to explain the connection between burial practice and open fire. One of the possibilities

is its purifying power. It enables separation of the soul from the body, and purification after the body is damaged, so it can carry on living in the other world. At the same time, it prevents the dead from returning to the world of the living. Despite the strong faith in magical powers of the Neolithic communities that was unconditionally expressed in both religious and mortuary practices, we cannot exclude the practical level of the activity. The following reasons can be taken into consideration: hygiene, transport simplification or reduction of spatial requirements for graves. In this case, we cannot forget another aspect of the cremation process that is increased demands for cremation, *i.e.* a greater effort to build a funeral pyre, as well as the longer duration of burial ceremony. Purification and the destructive power of fire can also be very closely associated as well.

In the case of cremation of the dead, the low number of cremation graves is specific. However, the low number show that the cremation rite does not have to be related to the preservation of the graves themselves (*e.g.* because they are more shallow *etc.*). We have to reflect moreover on other ways of treating human buried remains: keeping remains in urns, whereby these became part of life of the bereaved; dispersal of ash in the air, water or at a ritual site; *etc.* Ethnographic sources prove that some South tribes in America perform so-called endocannibalism (practice of eating dead members of community) and burning of bones makes them easier to dissolve. Sometimes this act is linked with other ritual activities, *e.g.* in the case of the death of a chieftain, his body is burnt and the ash is mixed in a drink. Differentiation based on age, sex or status within a society may be one of the reasons of cremation.

Apart from sanitary and other practical considerations, the site of burial can be determined by religious and socio-cultural considerations. Thus in some traditions, especially with an animistic logic, the remains of the dead are 'banished' for fear their spirits would harm the living if too close; others keep remains close to help surviving generations.

In this contribution, we tried to enumerate all possible funeral types present in the observed area in the Neolithic and early Eneolithic. The analysis of the mortuary practices demonstrates that burial in a graveyard was only one of a number of various practices. Some burials were located in temporarily unoccupied sections of settlements, within settlement units or in dwelling spaces. The particular ritual elements differ, implying that factors of a concrete nature had a leading role. The same holds for burials in caverns. It is also possible that some of the dead were exposed or their grave reopened after a requisite period after funeral, and the bones or skull moved and buried individually, or used in various ritual forms of ancestor cult.

Since we titled the article '(un)usual burials...', we still owe an answer, if there is one, to the question of where the 'usual' graves are? As an answer, we can accept the explanation that the burials were not inhumations and did not leave archaeological traces, or there are many graveyards that have remained undiscovered. It is difficult to say what the criteria for the choice of one or other mortuary practice might have been. It is beyond doubt that most of the cases cannot be defined as 'exceptions', as its practice shows they were standard mortuary practices.

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Empty graves in LBK cemeteries – indications of special burial practises

Eva Lenneis

Institute of Pre- and Protohistory at the University of Vienna, AT
eva.lenneis@univie.ac.at

ABSTRACT – *After a short overview of LBK burial rites, I propose a definition of empty graves, distinguishing them from cenotaphs. Until now, empty graves have been found only in twelve LBK graveyards, comprising an average of 10.2% within these cemeteries, which seem to cluster in some regions and to be absent in others, which might be due in part to bad soil conditions for preserving skeletons. The proportion of empty graves within the graveyards varies considerably and is highest in Lower Austria/Moravia and Bavaria. Some 53% of the empty graves yielded no finds, 45% some ceramic remains and 10% stone tools only, or in addition (Fig. 3). There are never remains of ornaments, indicating that when the corpses were disinterred they were still securely wrapped in winding sheets. The open questions remain as to what kind of ritual treatment these bodies underwent next, and where the human remains were finally reburied.*

IZVLEČEK – *Po kratkem pregledu LTK pokopnih praks predlagam definicijo praznih grobov, tako da jih ločimo od kenotafov. Prazni grobovi so bili do sedaj najdeni le na dvanajstih LTK grobiščih. V povprečju predstavljajo 10,2% grobov v grobiščih. Opazne so njihove zgoščitve v nekaterih regijah in odsotnost v drugih, kar je lahko posledica slabe ohranjenosti kosti v agresivnih okoljih sedimentov. Delež praznih grobov v grobiščih močno variira in je najvišji v Spodnji Avstriji, na Moravskem in Bavarskem. V 53% praznih grobov ni najdb, v 45% se pojavljajo keramične najdbe, v 10% pa tudi ali samo kamena orodja (Sl. 3). Nikoli ni ostankov okrasja, kar je indic, da so bila trupla ob izkopu še vedno zavita v mrtvaški prt. Ostaja vprašanje, v kakšne rituale so bila ta trupla vključena in kje so bili njihovi ostanki pokopani za tem.*

KEY WORDS – *Neolithic; LBK; burial practices; cenotaphs and/or cleaned graves*

The culture of the 'Linearbandkeramik' (LBK) or Linear Pottery Culture is synonymous with the early Neolithic in central Europe. In its later stage, it extended from western Hungary to the Paris basin. Burial practises show great diversity. To a small extent people were buried inside settlements, close to houses, in the long pits of houses, or in other settlement pits, but quite seldom in unusual positions, or with only parts of the bodies being interred (Veit 1996; Zápotocká 1998). There are some sites with regular inhumations in the ditches surrounding settlements, such as at Menneville in France (Farruggia et al. 1996) or Vaihingen in Germany (Krause 1998; 2002), but also ditches filled with corpses thrown in and showing clear signs of violent death (Asparn/Au-

stria – Windl 2009). Similar traces of massacre are known only from two more sites, where the victims were found in settlement pits (Talheim/Germany – Wahl-König 1987; Wiederstedt/Germany – Meyer-Kürbis-Alt 2004).

The greatest number of all burials by far is to be found in cemeteries of the most varying size, from small grave groups of 5–10 graves up to very big graveyards with more than 200 graves (Schwetzingen – Gerling 2009; Wandersleben – unpublished; Jeunesse 1997; Nieszery 1995). Only in these cemeteries are some burials cremations (Lenneis 2007), but at all sites many more inhumations have been preserved. The 'normal' position of the dead is flexed,

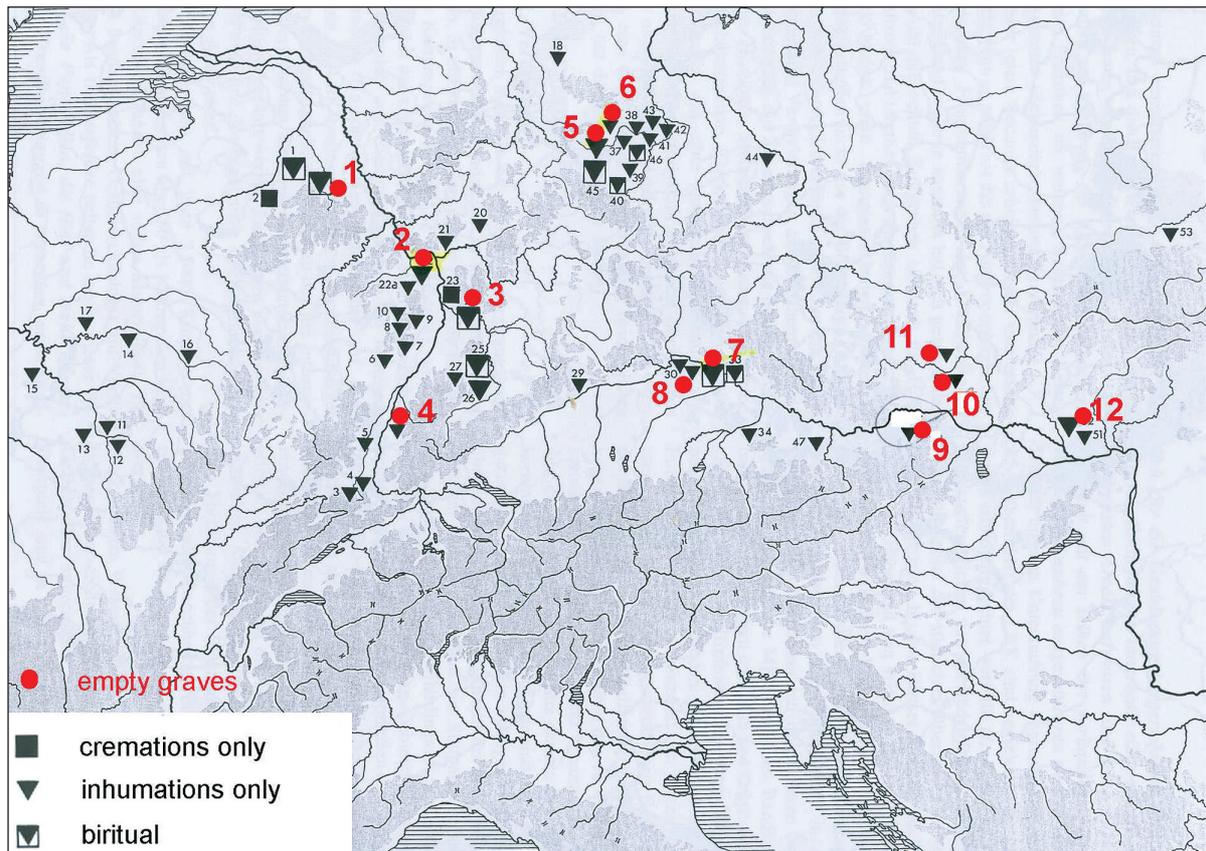


Fig. 1. LBK cemeteries in Central Europe (Nieszery 1995.Abb. 7 – with the addition of sites with empty graves): 1. Niedermerz (Dohrn-Ihmig 1983), 2. Flomborn (Richter 1969), 3. Schwetzingen (Gerling 2009; in press), 4. Königschaffhausen (Kraft 1936), 5. Bruchstedt (Kahlke 2004), 6. Sondershausen (Kahlke 2004), 7. Aiterhofen (Nieszery 1995), 8. Sengkofen (Nieszery 1995), 9. Ratzersdorf (Blesl 1999), 10. Kleinhadersdorf (Neugebauer-Maresch 1992; Neugebauer-Maresch, Lenneis in prep.), 11. Vedrovice, Za Dvorem – Zabrdovice (Skutil 1941; Podborský et al. 2002), 12. Nitra (Pavúk 1972).

more often on the left than the right side. Positions such as stretched lying on the back or others are quite seldom. In at least twelve (or perhaps more) of all LBK cemeteries (Fig. 1) there are also ‘empty graves’, pits in the form of graves, but with no skeletons, or only few remains of them. Some of these pits contain various types of find.

Different terms are used to deal with this phenomenon – purely descriptive ones such as ‘grabähnliche Gruben’ (pits like graves), ‘leere Gräber’, ‘Leergräber’ (empty graves); ‘Gräber ohne Bestattete’ (graves without funeral); or interpretations such as ‘tombes symboliques’ (symbolic graves) or ‘kenotaphe’ (cenotaphs). This last term is used rather often, and I think without sufficient care.

Kenotaph (cenotaph) is a Greek word meaning empty grave, but it was used in antiquity only for the grave of an absent person to whom funeral honours were dedicated. Therefore, I propose to distinguish the two as follows: a ‘cenotaph’ is a burial pit in which

no skeleton or even remains are buried, but grave goods are clearly deposited in an intentional position to symbolize the grave of an absent person. An ‘empty grave’ is a burial pit in which no skeleton or only a few remains of human bones are found. Grave goods or other finds are (discovered) in disturbed, *i.e.* not in the original position. The scattered human remains, grave goods and other remains mark the exhumation of the deceased.

LBK grave pits without skeletons are all ‘empty graves’ as described above, but with varying ‘lost’ grave goods. Empty graves have not been found in all LBK graveyards, which might be partly due to the quality of the excavations, but also in some regions to soil conditions disturbing the bones (especially in parts of the northern Rhineland). The record in Table 1 and Figures 1 and 2 might be only the minimum values. There are several doubtful or unclear situations, which might raise the number in the future. To give some examples.

**Vedrovice, Široká u lesa/
Moravia**

There are 108 graves, with eleven burials which were disturbed in the 19th century, but about four to five ‘damaged’ burials with a considerable depth (around 50–60cm) and some more damaged or disturbed shallow graves (Podborský *et al.* 2002. 126–128). Only the grave pits disturbed in the 19th century were cleared of skeletons; the others contain more or less damaged skeletons. It is not possible to classify them as ‘empty graves’ in the given definition on the basis of the published information.

Vedrovice, Za dvorem/Moravia

The much smaller graveyard at Vedrovice contains only seventeen burials; eight were excavated by Černý in 1910/1911. In his report, Skutil published about six graves with inhumation and grave goods and about two empty pits in the form of graves. Both authors published these graves as belonging to Zábrdovice near Vedrovice; Podborský combines them with the graves investigated later at the site at Vedrovice, Za dvorem (Skutil 1941.22; Podborský *et al.* 2002.336–337).

Stuttgart-Mühlhausen, Viesenhäuser Hof

Unfortunately, this very large graveyard with 177 LBK burials has not been published. The overview plan of the graveyard shows at least fourteen graves which cannot be orientated. This fact might indicate a disturbance or clearance of the inhumation, but there is no explanation in the brief commentary on these graves (Price *et al.* 2003.26–28, Abb. 3).

Bassin Parisien/Paris basin

Figure 1 shows seven sites in this most western region of the LBK. Nieszery put them on this map of LBK graveyards, although there are only graves inside the settlements, at some sites in small groups at the edge of the settled area. Most recently, two empty graves were reported from this region, but unfortu-

	total amount	inhumations	%	cremations	%	empty graves	%
Niedermerz	114	102	89.5	11	9.6	1	0.9
Flomborn	85	81	95.3	0	0	4	4.7
Schwetzingen	218	194	89	9	4.1	15	6.9
Königsch.	7	6	–	0		1	
Bruchstedt	72	70	97.2	0	0	2	0.8
Sondershausen	50	44	88	0	0	6	12
Aiterhofen	265	160	60.4	69	26	36	13.6
Sengkofen	38	29	76.3	0	0	9	23.7
Ratzersdorf	17	12	70.6	0	0	5	29.4
Kleinhadersdorf	84	55	65.5	4	4.8	25	29.7
Vedrovice-Z.	17	15	88.2	0	0	2	11.8
Nitra	85	76	89.4	8	9.4	1	1.2
	1052	844	80.2	101	9.6	107	10.2

Tab. 1. The different grave types in the twelve LBK cemeteries with empty graves.

nately without naming the site (Thevenet 2009. 111).

There are twelve LBK cemeteries at which empty graves have been found for certain (Tab. 1; Figs. 1 and 2). In total, more than 2500 LBK graves have been found (Jeunesse 1997.25), with twelve graveyards accounting for less than half of them, accommodating 1052 graves. The mean values for the latter are: 80.2% inhumations, 9.6% cremations, and 10.2% empty graves, but the numbers of these grave types varies considerably at different sites.

The Austrian sites at Kleinhadersdorf and Ratzersdorf show the highest percentages of empty graves: 29.4–29.7%, followed by the Bavarian sites Sengkofen (23.7%) and Aiterhofen (13.6%), the Thuringian site at Sondershausen (12%) and the Moravian site

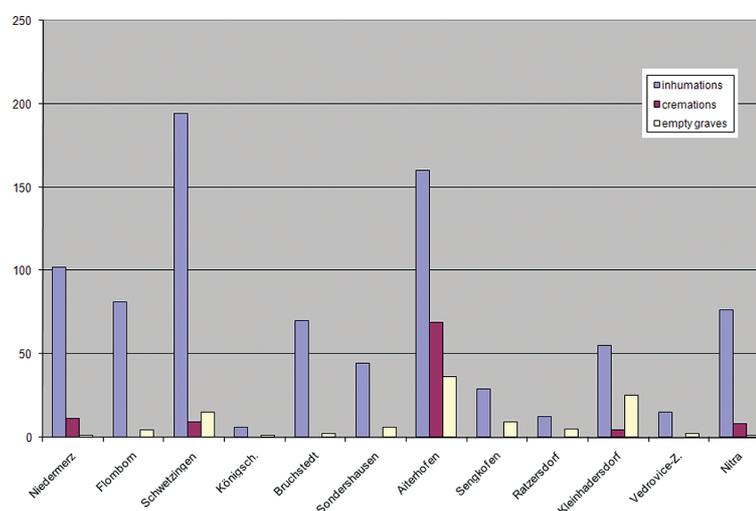


Fig. 2. Structure of the twelve LBK cemeteries with empty graves.

at Vedrovice, Za dvorem (11.8%). In the remaining cemeteries, empty graves are below 10%¹ of the total. One has the impression that the phenomenon of empty graves might have been of greater importance in these regions than in others.

Although this type of grave did not contain a skeleton, some contained other finds (Fig. 3). As mentioned before, they were found in the back-fill or in a sort of disturbed position. Until now, the best documented situations are of Sondershausen (*Kahlke 2004.42–47, T. 14–19*); Schwetzingen (*Gerling in press.*)² and Kleinhadersdorf (*Neugebauer-Maresch, Lenneis in prep.*) will follow soon. On average, nearly 45% of the empty graves contained some ceramic remains, at most only a few sherds, and very seldom whole pots (for example: Nitra, grave 10; Flomborn, grave 18). In only about 10% of these pits were stone tools found, some together with the pottery. The stone tools are adzes, millstones and hammer-stones, most seldom flint. Some 53% of these empty graves contained nothing; they were empty in the normal sense of the world.

It is very important to point out that not even the smallest remains or ornaments have been found in these empty grave pits. This fact indicates that the disinterred corpses must still have been securely wrapped in winding sheets, and also that the time between burial and disinterment was not very long. The winding sheet was probably of organic material (leather, tissue), which rots rather quickly in central European soils. Therefore, it remains an open question as to what kind of ritual treatment these corpses underwent. And where were these corpses, or their remains, finally deposited?

Until autumn 2009 (see *Boulestin et al. 2009*), there seemed to be a possible answer to where the bodies extracted from graves could have been reburied. The scattered human remains found together with rich, and also scattered, finds in ditch like pits around the site at Herxheim in the Palatinate province of Germany were interpreted as the remains of hundreds of humans, buried there in a secondary burial rite (*Zeeb-Lanz et al. 2007*). As there are a few other

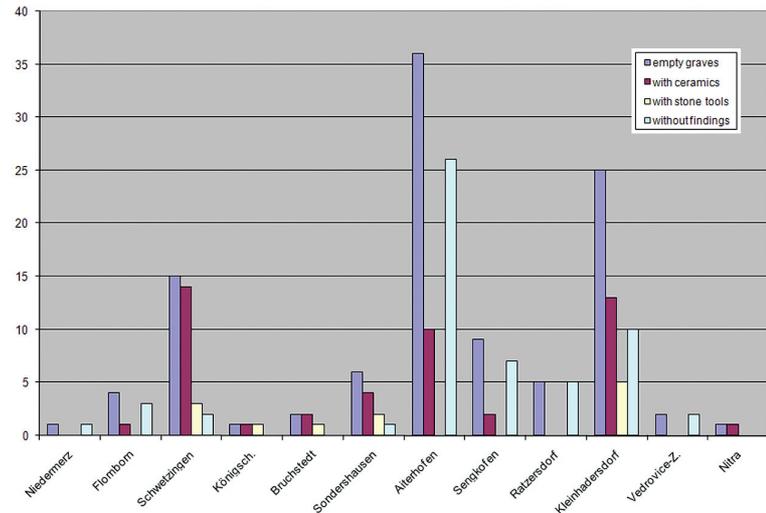


Fig. 3. Contents of empty graves.

sites, although badly excavated and not well documented, but yielding similar remains (for example: Taborac near Draßburg, Austria – *Mossler 1949*), one could suggest that similar practices occurred in other parts of LBK territory. Further investigation at Herxheim have shown that the human remains probably come from mass cannibal rites (*Boulestin et al. 2009*), and are not secondary burials. Will we ever know what people did with, perhaps, a tenth of their dead?

¹ As the real number of graves at Königschaffhausen is unknown, I did not calculate the ratios here.

² I am very grateful to Claudia Gerling for sending me this part of her manuscript; although I do not agree with her that only some are empty graves.

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Burial clothing in Neolithic cemeteries of the Ukrainian steppe

Nadezhda Kotova

Institute of Archaeology, Kiev, Ukraine

Nadja.kotova@gmx.at

ABSTRACT – Over 600 skeletons from numerous Neolithic cemeteries are known from the Pontic steppe. They came from the Lower Don, Azov-Dnieper and Surskaja cultures, with different sets of adornments on their burial clothing. The disposition of adornments provides valuable information on some items of burial clothing: caps, shirts with long sleeves, loincloths, and moccasins.

IZVLEČEK – Na področju Ponske stepe je na številnih neolitskih grobiščih dokumentiranih več kot 600 skeletov. Nahajajo se na področju kulture Spodnji Don, Azov-Dnjeper in Surskaja. Označujejo jih različno okrasje na mrtvaških oblačilih. Lega okraja omogoča sklepati o posameznih delih teh oblačil: pokrivalih, tunikah z dolgimi rokavi, predpasnikih in mokasinih.

KEY WORDS – Pontic steppe; Neolithic cemeteries; Lower Don culture; Azov-Dnieper culture; Surskaja culture; adornments; burial clothes

Introduction

Numerous Middle and Late Neolithic (5950–4850 BC) cemeteries have been excavated in the steppe area between the Dnieper and Don rivers (*Telegin, Potekhina 1987; Kotova 2003*), each containing from 30 to 160 burials.

Telegin considered all the cemeteries in the framework of the Dnieper-Donets culture, which occupied a huge area from the forest of Byelorussia to the dry steppe of the Crimea (*Telegin 1968; Telegin, Potekhina 1987*). However, analyses of their localization, burial rites, and analogies of grave goods among the settlement materials allowed us to propose their more detailed cultural differentiation (*Kotova 1994; 2003*). All cemeteries were divided into three groups (Fig. 1). The Eastern group, which is located near the Azov Sea, was related to the Lower Don culture: the Mariupol (*Makarenko 1933; Kotova 2003*), Karataevo and Chirskoy cemeteries (*Kijashko 1994*). The cemeteries in the Dnieper valley and steppe Crimea belong to the Azov-Dnieper culture: Dolinka, Mamaj-Gora (*Toscev 2005*), Vovnigi 2 (*Bodjanskiy, Kotova 1994*), Vasilievka 5, Nikolskiy, Lysaja Gora, the big pit at Jasinovatka (*Telegin, Potekhina 1987; Kotova*

2003). The Surskaja culture cemeteries were concentrated in the northern part of the steppe of the Dnieper valley: the Neolithic part of Chaply, Vovnigi 1 and 3, Vilnjanka, Sobachky, the small pits of Jasinovatka (*Telegin, Potekhina 1987; Kotova 2003; 2009*).

The numerous Neolithic burials allow us to reconstruct burial clothing. The first attempt was made in the 1990s by Kotova and Tuboltsev. Now, new materials from the rich Mamaj Gora cemetery have helped clarify some old reconstructions.

The Lower Don culture

The sites and cemeteries were excavated in the Northern Azov Sea region, which covers the territory from the Lower Don to the Kalmius River, and are dated to c. 6050–5200 calBC (*Kotova 2003*). It disappeared during an arid period about 5200 calBC, when the Sredniy Stog culture was formed. The Lower Don culture materiality was found at Razdorskoye 1 (*Kijashko 1987*), Rakushechny Yar (*Belanovskaja 1995*), Samsonovka (*Gey 1983*), Razdolnoe (*Kotova 2003*) sites and at sites located in the area

of the Tsimlaynskoe reservoir on the Don River. The flat bottomed and shell tempered pottery bears comb ornamentation. The stone tool assemblage consists of high trapezes with flat retouch on the rear, bifacial points, stone axes and maces. Other implements comprise bone points, plates and tubes, and *Unio* shells.

The cemeteries consisted of burials in individual pits forming a line. The biggest Mariupol cemetery included about 130 inhumations and one cremation. The supine position of the skeletons, east-west orientation of their heads, numerous grave goods and adornments of burial clothing mark the cemeteries (Fig. 2).

The adornments of the Lower Don culture were the most numerous and various among the Neolithic cultures of Eastern Europe (Fig. 3). For example, 59 of the 130 burials in the Mariupol cemetery had adornments. They are represented by sea shells with holes, rounded pearl beads, pearl beads with a cutting segment, round, rhombic, cylindrical, pear-shaped and figured beads from bone, flat and cylindrical jet beads, pendants from the teeth of deer, badger, wolf, fox, fish, and bone, as well as boar fangs with holes, and plates from the same material. It is possible to trace some regularities in the connection between adornments and the orientation of skeletons. The clothing in burials oriented to the west was decorated mainly with red deer teeth and the fangs of the wild bear with holes. The clothing of burials with an eastern orientation was ornamented with different beads and plates from the bear fangs (Kotova 1990; 1994).

Some ornaments from the Mariupol and Karataevo cemeteries were identical with adornments from the settlements of the Lower Don culture: plaques from wild boar fangs, plates from nacre, stone pendants, and figures of bulls (Fig. 3.37–40).

Many adornments with an accurate fix on their disposition in the Mariupol cemetery have offered the possibility of reconstructing the burial clothes.

The headdress of the Lower Don culture was adorned with boar fang plates (Fig. 4.1, 3) or splintered boar fangs with holes (Fig. 6.1, 3, 4, 6; 7.4). In two

cases, the pointed ends of two fangs met above the forehead (Fig. 6.2, 5); in one case, their pointed ends were located over the sinciput (Fig. 4.4, 5); in another variant, fangs were situated with sharp ends downward, while opposite ends were located near

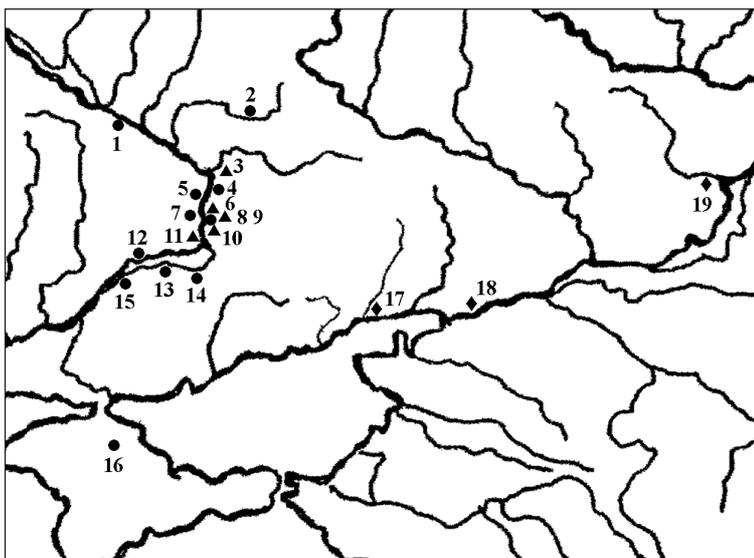


Fig. 1. Neolithic cemeteries of the Pontic steppe: 1. Dereivka; 2. Gospitalny Holm; 3. Chapli; 4. Vasilievka; 5. Nikolskiy; 6. Vovnigi 1; 7. Vovnigi 2; 8. Yasinovatka 1; 9. Vovnigi 3; 10. Vilnjanka; 11. Sobachki; 12. Kapulovka; 13. Mamaj Gora; 14. Lysaja Gora; 15. Kairy; 16. Dolinka; 17. Mariupol; 18. Karataevo; 19. Chirskoy. ● – cemeteries of the Azov-Dnieper culture; ▲ – cemeteries of the Sur-skaja culture; ◆ – cemeteries of the Lower Don culture



Fig. 2. Burials of the Mariupol cemetery (after Makarenko 1933).

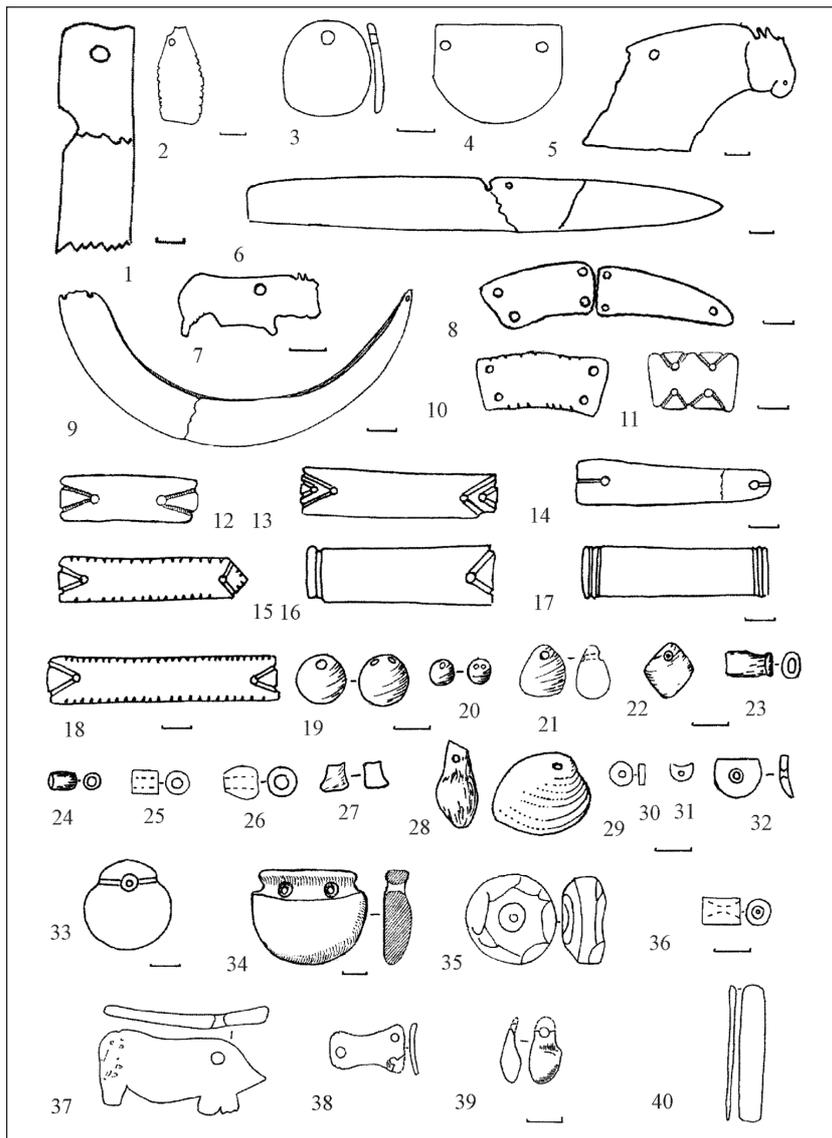


Fig. 3. Adornments of the Lower Don culture: 1–36. Mariupol cemetery (after Makarenko 1933); 37–40. Razdorskoe 1 site (after Kijashko 1994). 1–28, 37–39. Bone; 29–32, 40. Shell; 33–36. Stone.

the sinciput (Fig. 6.3). It allows us to suggest the existence of a cap with sewn fangs. Besides caps with two boar fangs, we know of a cap decorated with boar fang plates which were sewn along the lower part of the cap (Fig. 5). So far, we have reconstructed four types of cap (Fig. 7.1–4). It is possible that caps without bone adornments were also produced.

We have some evidence for the existence of a shirt with long sleeves and a hem lower than the pelvis. The level of the hem was fixed with the aid of the horizontal position of boar fang plates on the pelvic bones (Figs. 5.1, 2; 6.2–5). Long shirt sleeves are attested by pearl beads or boar fangs located near elbows, around the humeruses of wrists (Fig. 4).

They can not be bracelets, because they formed a diameter larger than an arm and had to be sewn onto shirts. The pearl beads were sewn around both elbows and the right wrist in burial IV–V (Fig. 4.2), but only the left elbow was decorated in burial XLVII (Fig. 4.3). Boar fang plates were sewn around the right elbow in burial VI (Fig. 4.4, 5).

The disposition of adornments suggests that the shirt may have had a slit at the left side. For example, splintered boar fangs were sewn on the central part of the yoke in the burial VI (Fig. 4.4, 5), which excluded the possibility of a central slit. The shifting of the slit to the left is also attested by the line of adornments along the body in the burials VIII and LIV (Fig. 5).

Collar adornments are rather variable; they could be decorated with one or two boar fangs (Fig. 6.4, 5), plates from fangs (Fig. 6.1, 2) and beads (Fig. 5.2). The location of two boar fangs near a collar in burial LVI, and plates in burial XXXa, confirm the left slit in the shirt (Fig. 6.2, 5).

Decorated belts were found in numerous graves, onto which plates of boar fang, pearl beads or combinations of these were sewn (Figs. 4.4, 5; 5; 6). Some variants of belts with different decorations can now be reconstructed (Fig. 7.5–9); no knots have been found. The belts of the Lower Don culture were similar, perhaps, to some Native American belts, where adornments were fastened to the sash.

A loincloth or breechclout was reconstructed in some burials of the Mariupol cemetery. Its lower part was decorated with plates (Fig. 4.4, 5). According to the disposition of adornments, its lower part shifted to the left or to the right, but in the majority of cases it was no wider than the legs.

Two burials suggest the existence of skirts, and it is especially interesting that one of these was in a male burial. It was one of two burials with a mace in the Mariupol cemetery. In this burial, boar fang plates formed an irregular line at knee level and could have replicated the pleats of a wide skirt (Fig. 5.3, 4). Two rows of shell beads in a child's burial were wider than the width of the legs, and fixed the hem of a skirt which was located slightly lower than the knees (Fig. 5.1, 2).

The disposition of adornments on the leg bones in the Mariupol cemetery allows us to assume the binding of the dead with a band decorated with boar fang plates (Figs. 5.3, 4; 6.5, 6).

The Azov-Dnieper culture

The Neolithic sites at Sobachki, Vovchok, Vovnigi, Semenovka 1, Kamennaya Mogila and others are located in the Dnieper steppe area, the Crimea and the western Azov Sea region. The cemeteries were found in the Dnieper Valley and the Crimean steppe (Kotova 2003). Two periods are recognized in the development of the Azov-Dnieper culture. The material culture is marked by flat-bottom pottery made

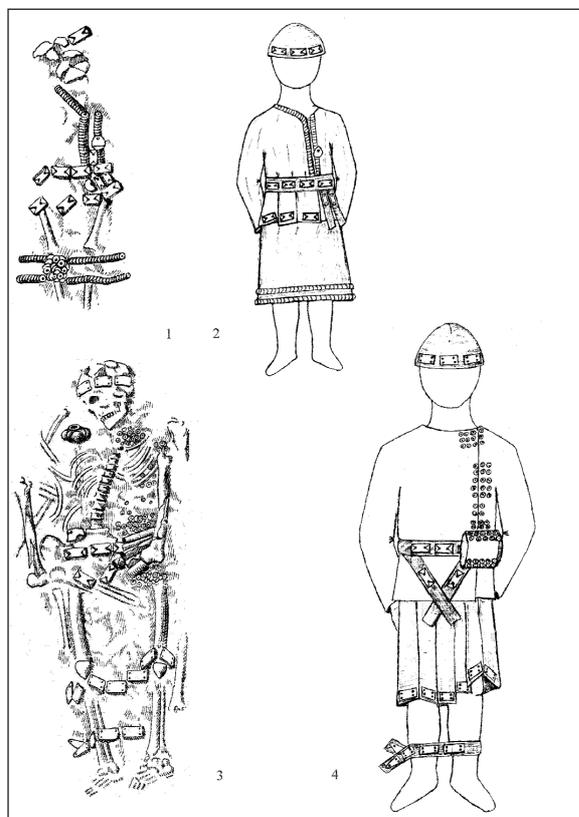


Fig. 5. Burials and reconstructions of clothing from the Mariupol cemetery: 1, 2. Burial LIV; 3, 4. Burial VIII. 1. Child.

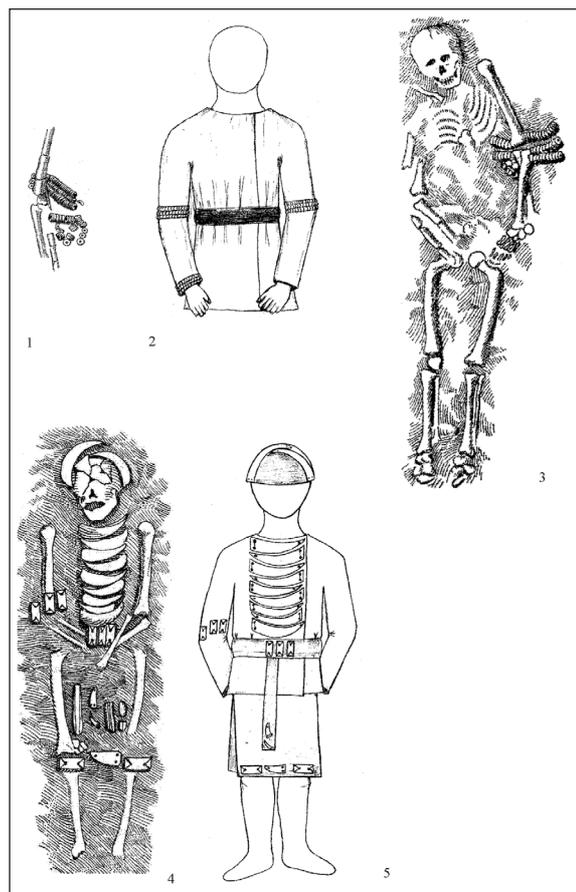


Fig. 4. Burials with reconstructions of the clothing from the Mariupol cemetery: 1, 2. Burial IV - V; 3. Burial XLVII; 4, 5. Burial VI; (1, 2, 4 after Makarenko 1933).

from clay with sand, tempered with plant remains, and decorated with comb imprints in the first period, and triangular impressions and lines in the second. Stone tool assemblages consists of flint blades and trapezes.

The cemeteries of the first period (6000–5200 calBC) consisted of single or double burials in small separate graves arranged in lines: Mamaj-Gora, Vovnigi 2, Vasilievka 5, the oldest part of Nikolskiy. Supine skeletons, the eastern and western orientation of heads, small numbers of adornments on burial clothes, and sacrificial sites on the surfaces of cemeteries with fires were typical of the cemeteries of this period.

The Nikolskiy, Lysaja Gora, and Yasinovatka cemeteries date to the second period (5200–4750 calBC) and include large pits, which were used repeatedly over a long period, resulting in the significant destruction of skeletons. The dead were buried supine, with eastern and western orientations; however, individual flexed skeletons and cremations are also

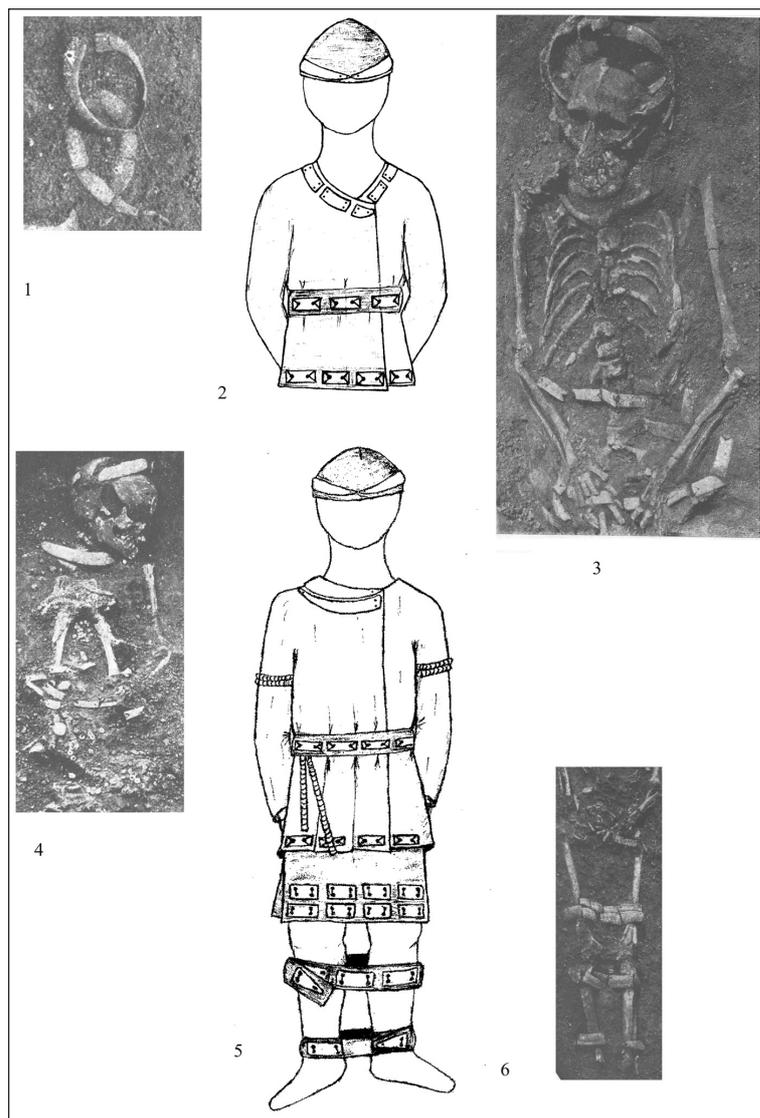


Fig. 6. Burials with reconstructions of the clothing from the Mariupol cemetery: 1, 2. Burial XXXa; 3. Burial LXXIV; 4 - 6. Burial LVI (1, 3, 4, 6 after Makarenko 1933).

known. The fires, marker stones, sacrificial places with broken pottery, tools and bones were located on the surfaces of the cemeteries.

The grave goods of the Azov-Dnieper culture comprise *Unio* shells, bone points, large and middle-sized flint blades, trapezes, including flat retouch on the back, scrapers on blades and flakes, bifacial points and stone axes.

The burial practices in the second period have given no information about clothes, due to the destruction of the majority of skeletons. Therefore, only the materials of the first period are considered here. The set of adornments of this period was rather poorer than that of the synchronous Lower Don culture: fish and deer teeth, pearl and stone beads (Fig. 8).

But beads were a rare decoration in the Azov-Dnieper cemeteries, occurring mainly in the oldest Mamaj-Gora cemetery.

The disposition of adornments allows us to reconstruct clothing elements. However, it is more difficult than with the Lower Don material, because the Azov-Dnieper adornments were smaller (mainly teeth and small beads) than in the Mariupol cemetery discussed above, and archaeologists did not draw all of them on the plans of the burials. The available diagrams and descriptions give helpful information about the main elements of clothes. Existing reconstructions of clothes include fewer adornments than the overall number found in burials, because publications and field reports do not provide necessary data about location, and include some contradictions between the descriptions and the drawings of burials.

We have reconstructed the faces of the deceased from the Vovnigi cemetery using the skulls of the Azov-Dnieper people as a base model (Fig. 9.1-3). This population decorated their headdresses with shell beads, pendants from red deer and fish teeth (Fig. 9.4, 5). The decoration is arranged in rows, which allows the reconstruction of a head ribbon or cap (Fig. 9.6-8). Deer teeth and beads located around the upper part of the head in two burials of the Mamaj-Gora cemetery indicate caps (Figs. 9.9; 10.2, 5).

The adornments of shirt collars or short necklaces were rare in the Azov-Dnieper culture context (Fig. 10.3). The disposition of adornments on the upper arms, near the elbows, and the vertical disposition of deer teeth on the arms confirm the existence of shirts with long sleeves (Figs. 10.5, 6; 11.1, 2, 4, 5). Pearl beads were located near the wrists in two burials, but, unlike the bracelet, they show the outlines of wide sleeves. The placement of a vertical row of beads and deer teeth in one burial at the Mamaj-Gora cemetery suggests a slit in the center of the shirt (Fig. 11.4, 5). However, the location of pendants from red deer teeth in another burial at this ceme-

tery allows us to assume a slit from the left side (Fig. 11.2).

A variant of the decoration of shirts, where lines of adornments on sleeves extended a line of ornaments on the breast, was typical of the Mamaj-Gora cemetery (Fig. 11.2, 5).

The hem of a skirt situated near a pelvis is fixed on the basis of a line of pearl beads (Fig. 10.1, 3, 5, 6).

Decorated belts were most uncommon in the Azov-Dnieper culture, but have been found in the Mamaj Gora and Vovnigi 2 cemeteries. They were decorated with one or two lines of shell beads (Figs. 10.2; 11.3), a line of stone beads (Fig. 10.5) and fish teeth (Fig. 10.4).

A loincloth or breechclout has been traced in two burials of the Mamaj Gora cemetery. The shell beads (Fig. 10.5) and red deer teeth fixed above the knees can be considered hem decorations (Fig. 11.3).

In one child burial at the Vovnigi 2 cemetery, we can reconstruct a long dress with fish teeth on a hem near the ankles (Fig. 10.4).

Only the oldest Mamaj-Gora cemetery, with numerous adornments, has provided information about footwear. The presence of leggings or long moccasins can be assumed on the basis of this material (Fig. 12.1, 2), and the vertical rows of beads located along shinbones could have comprised their adornment. All the vertical rows of beads extended to the knee and were absent higher, so we may assume that leggings reached the knee.

It has been hypothesized that short moccasins were also used; they were decorated near the knee and ankle and above the feet (Fig. 12.3, 4).

The Surskaja culture

The sites were investigated in the steppe Dnieper valley (Surskoy Island 1 and 2, the lower layer of Strilcha Skelja, Kizlevy, Vovchok *etc.*) and the western Azov Sea area (Semenovka 1 and 2, *etc.*) (Danilenko 1950; Kotova 2003; 2004). The ¹⁴C sequences and chan-

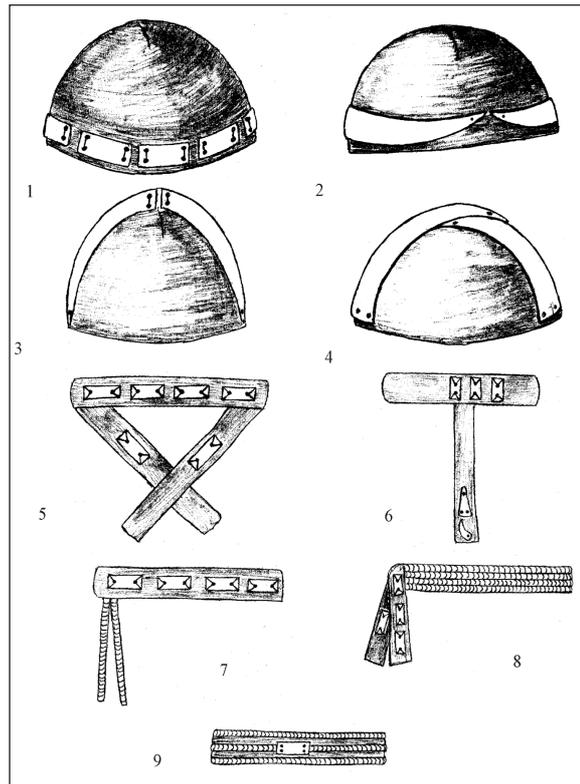


Fig. 7. Reconstructions of caps and belts of the Lower Don culture from the Mariupol cemetery: 1. Burial LIV; 2. Burial XXXa; 3. Burial LXXIV; 4. Burial VI; 5. Burial VIII; 6. Burial VI; 7. Burial LVI; 8. Burial I; 9. Burial XLIX.

ges in material culture structure allow us to divide the Surskaja culture into three phases (Kotova 2003).

The first is embedded within c. 6300–6000 calBC, and includes the Surskoy 1, 2, Vinogradny and Kodachok sites. Pottery was similar to the oldest ceramics of the Rakushechny Yar and Bug-Dniestr cultures. The second phase at Semenovka 1, Kamennaya Mogila 1 (the first ceramic layer), Igren 5 and Ena-

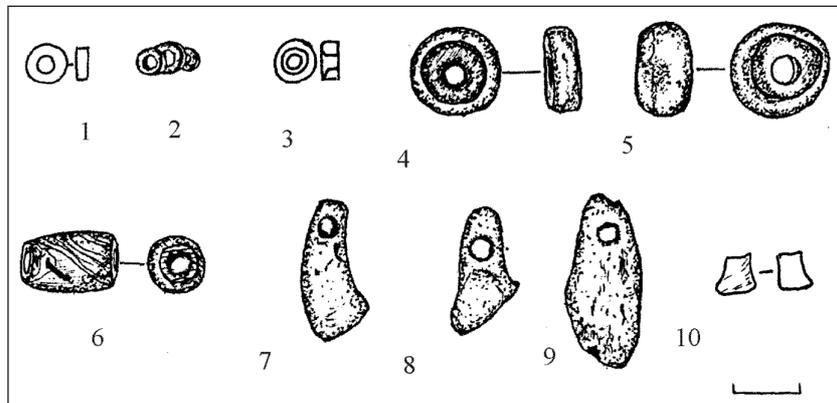


Fig. 8. Adornments of the Azov-Dnieper culture: 1, 3. Nikolskiy cemetery; 2, 4–9. Mamaj-Gora; 10. Vovnigi 2. 1, 2. Shell beads; 3–6. Stone beads; 7–9. Red deer teeth; 10. Fish tooth.

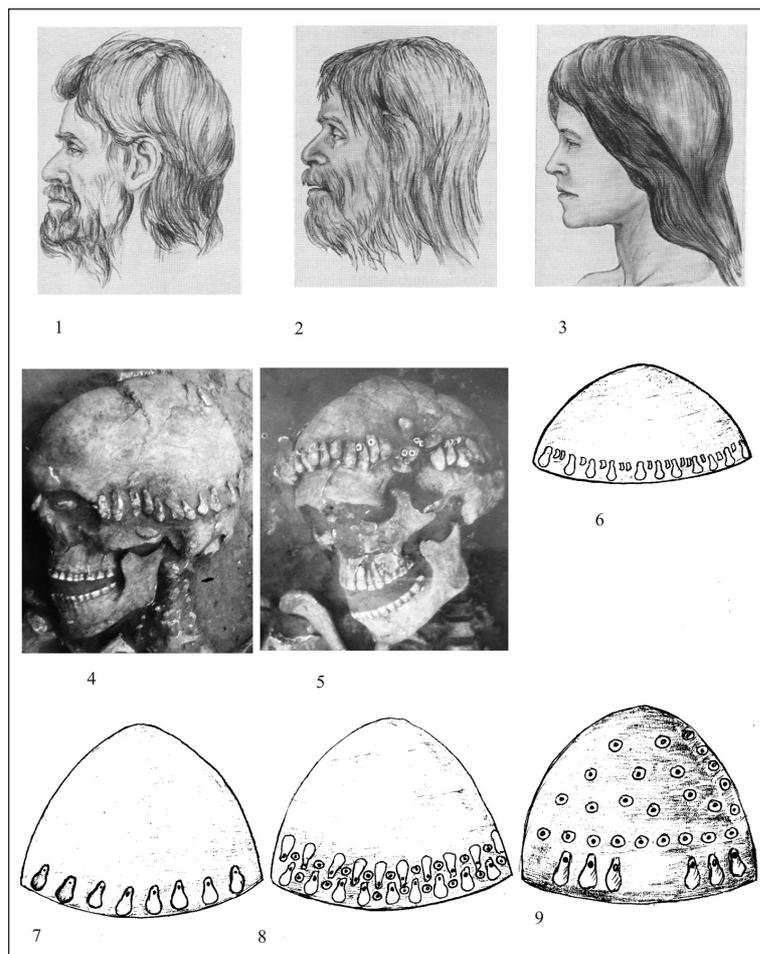


Fig. 9. The Azov-Dnieper culture: 1–3. Graphic reconstructions of people from the Vovnigi 2 cemetery (after Balueva et al. 1988); 4, 5. Burials 73 and 74 from the Vovnigi 2 cemetery; 6, 7. Reconstructions of caps from burials 73 and 74 from the Vovnigi 2 cemetery; 8, 9. Reconstructions of caps from burials 9 and 28a from the Mamaj Gora cemetery.

kievo is dated to *c.* 6000–5600 calBC. The influence of the 1a phase of Azov-Dnieper culture has been traced in pottery production.

The majority of investigated sites and cemeteries are in the third phase: the Strilcha Skelja, Igren-Gorodok, Vovchok, Kizlevy 5, Razdolnoe, Semenovka 2, Vovnigi, Vilnjanka, Vovnigi 1 and 3, Yasinovatka 1 cemeteries. The end of the Surskaja culture has been dated to *c.* 5100–5000 calBC, when it was assimilated by the Late Azov-Dnieper and Early Sredniy Stog cultures.

The skeletons in the Surskaja cemeteries were in a supine position, with north-south orientations. Grave goods included bone points, flint blades and flakes, trapezes, flint tools. The set of ornaments was very poor and included only pendants from red deer and fish teeth and separate small shell beads.

Thanks to the very careful work of Telegin (1956) at the Vilnjanka cemetery, we have reconstructed some elements of the Surskaja clothing. He fixed the disposition of the main part of the numerous small pendants in the burials. The anthropological materials at this cemetery have given some information for the reconstruction of the faces of Surskaja people (Fig. 13.1–3).

A Surskaja culture headdress was decorated with deer or fish teeth (Fig. 13.4–6), and only in three burials of the Vovnigi 3 cemetery with shell beads, in which caps with pearl beads in combination with red deer teeth were traced (Fig. 13.9, 10). Another corpse from burial 35 at the Vilnjanka cemetery had a cap with fish teeth (Fig. 13.7, 8).

The fish and red deer teeth pendants situated below the neck in some burials can be interpreted as collar adornments (Figs. 14.4, 5; 15.2).

Fish teeth were the main decoration on long sleeves; they were sewn onto sleeves around the elbows in the burial of a child in Vilnjanka (Fig. 16.4, 5) and on the upper arms in burials at Yasinovatka, Vovnigi 1 and Chaply.

Single red deer teeth were fastened near wrists only in two burials at Vilnjanka and Sobachki (Fig. 16.1, 2). Like the Azov-Dnieper shirts, some of the Surskaja shirts had lines of adornments running from one sleeve across the breast to the other sleeve (Fig. 16.3). Skirt hem decoration is very rare, and fixed in some burials as a horizontal line of fish or red deer teeth at the pelvis or below (Figs. 15.1, 2; 16).

The placement of a vertical row of red deer teeth was rather common in the Surskaja burials (Figs. 14.1–3; 15.3); all were located in the center of the chest, which suggest a central slit. These rows were of varying lengths.

Decorated belts were very uncommon in the Surskaja culture and can be assumed for only two burials. A number of fish teeth on the left part of the pelvis in one burial at Vilnjanka could be interpreted as

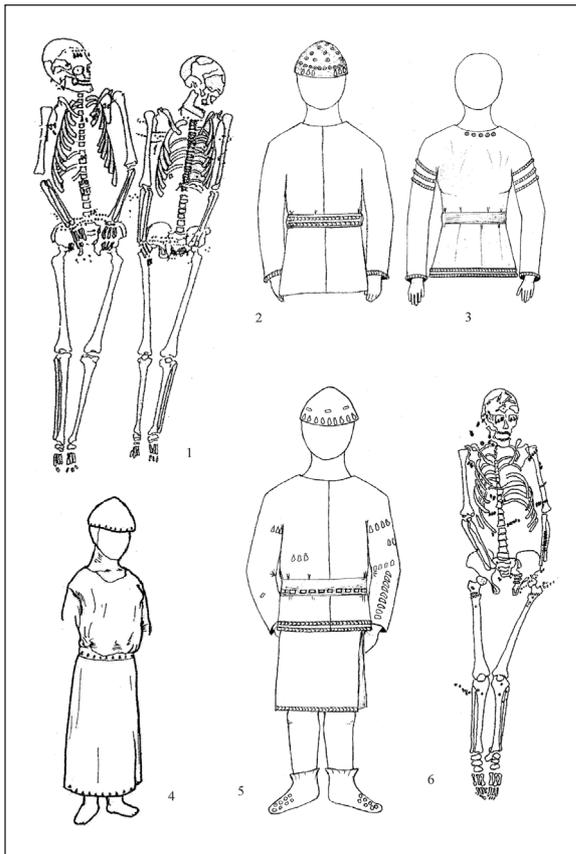


Fig. 10. Burials of the Azov-Dnieper culture with reconstructions of the clothing: 1–3. Burial 28 from Mamaj Gora; 4. Burial 121 from Vovnigi 2; 5, 6. Burial 36 from Mamaj Gora. 1. Man and woman 25–30 years old; 4. Child; 6. Man 35–40 years old (1, 6 after Toscev 2005).

decoration of the end of a belt. Another skeleton at this cemetery had three red deer teeth at the waist.

Ornamented loincloths are also very rare in the Surskaja culture (Figs. 15.1, 2; 16.1, 2), whereas decorated footwear is frequent. However, red deer or fish teeth were located only on feet, and were absent from the upper part of the legs, which may mean that only footwear with a short upper part reaching the ankles was used (Figs. 15; 16.3–5).

Conclusion

From the disposition of adornments in the Neolithic burials on the Pontic steppe we may assume the existence of diverse elements of funeral clothing. Small caps, shirts with long sleeves and hems located on the pelvis or below, and loincloths have been reconstructed for all cultures. But there are some special features in the decoration of clothes in the Azov Sea area (the Lower Don culture) and Dnieper valley (the Azov-Dnieper and Surskaja cultures). I

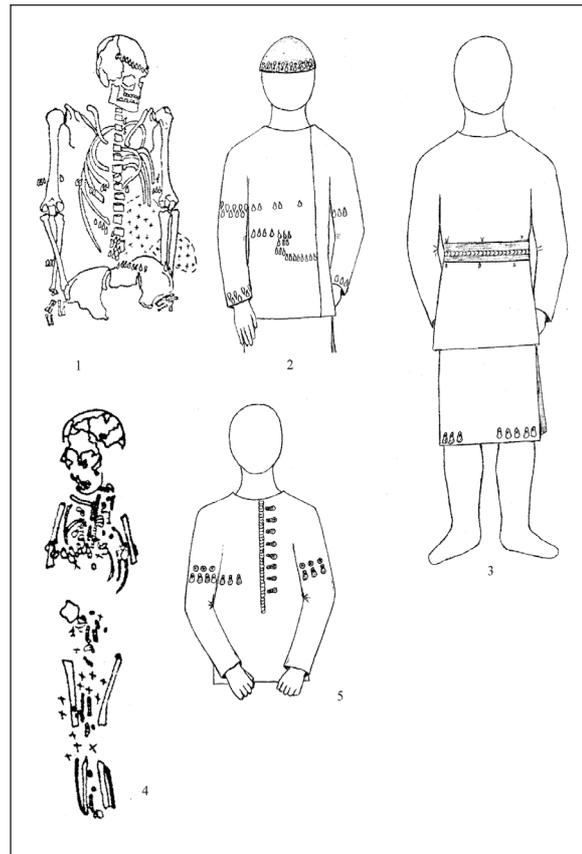


Fig. 11. Burials of the Azov-Dnieper culture from the Mamaj Gora cemetery with reconstructions of the clothing: 1, 2. Burial 9; 3. Burial 30; 4, 5. Burial 19. 3. Man 25–30 years old; 4. Child (1, 4 after Toscev 2005).

have hypothesized a vertical slit in the left side of shirts for the Lower Don culture, and the ornamentation of collars and belts. In the Azov-Dnieper and Surskaja cultures, a slit could have been situated in the center of the shirt, while collars and belts were rarely decorated.

The use of narrow loincloths which reached the knees can also be assumed for all three cultures. However, it was decorated mainly in the Lower Don and Surskaja cultures. A long skirt or dress has been found only in Azov-Dnieper cemeteries.

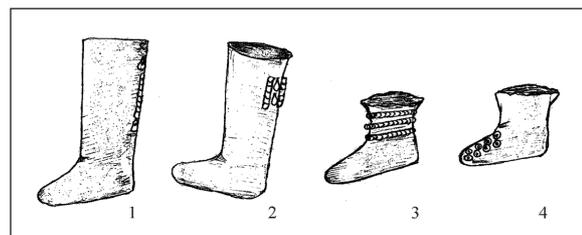


Fig. 12. Reconstructions of footwear of the Azov-Dnieper culture from the Mamaj Gora cemetery: 1, 2. Burial 22; 3. Burial 18; 4. Burial 36.

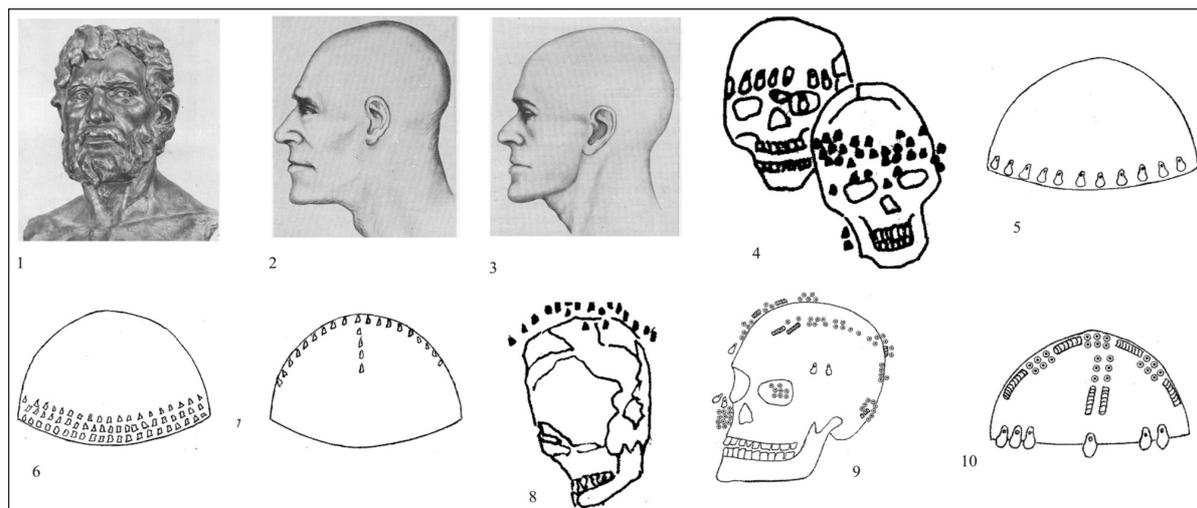


Fig. 13. The Surskaja culture: 1–3. Graphic reconstructions of people from the Vilnjanka cemetery (after Balueva et al. 1988); 4. Burial 31 and 32 from Vilnjanka; 5, 6. Reconstructions of caps from burial 31 and 32 at Vilnjanka; 7. Reconstructions of caps from burial 35 at Vilnjanka; 8. Burial 35 at Vilnjanka; 9. Burial 4 at Vovnigi 3; 10. Reconstructions of caps from burial 4 at Vovnigi 3.

Decorated footwear was prevalent in the Surskaja culture; there are separate finds from the Azov-Dnieper culture, but not from the Lower Don culture. So far, decorated leggings extending to the knee have been reconstructed only for Azov-Dnieper burials.

The individual burials of all three cultures had tied legs. Belts for binding in the Lower Don culture were sometimes ornamented with boar fang plates.

We can see some patterns in the use of decoration on clothes in the Neolithic of the Dnieper steppe region. The numerous skeletons of the Surskaja and Azov-Dnieper cultures had age and gender identifications. Unfortunately, the richest Mariupol cemetery of the Lower Don culture has not been studied by anthropologists. The anthropological data offer a chance to correlate the different type of clothes with gender and age groups: children, teenagers, young men and women (18–25 years old), men and women about 25–35 years, from 35 to 50 years, and over 50 years.

The children of the Azov-Dnieper culture had very lavishly decorated clothes, with a specific type, quantity and location of adornment, which included stone beads, otherwise very rare for this culture. More than 100 pendants or beads (maximum 672) were found in some child burials. Rows of fish teeth, not typical of this culture, were fixed in one child's burial.

Two of three teenage burials had decorated clothes, with a range and number of adornments similar to the adults.

The decorated clothes were typical of men from 18 to 40 years and 25–35-year-old women. Fish teeth were found only in male graves, but the teeth of red deer are known for both genders.

As opposed to the Azov-Dnieper culture, the Surskaja population had rare and modestly decorated children's clothes. Only six burials out of twenty-six had decoration sets and numbers of adornments. The numbers of burials with decorated clothes increased

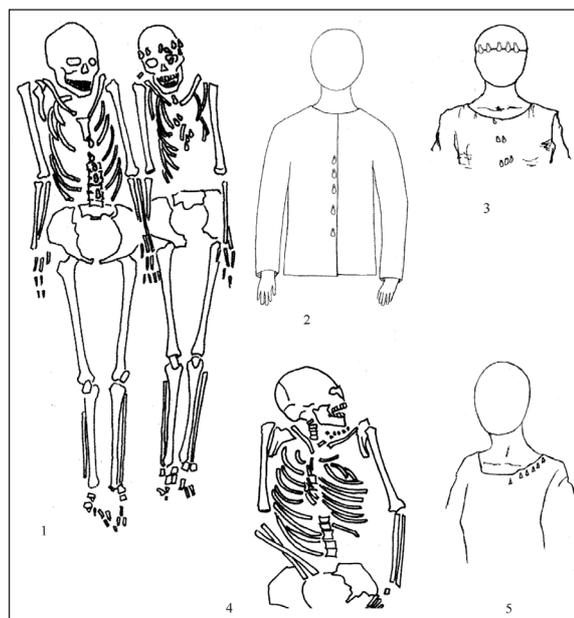


Fig. 14. Burials of the Surskaja culture from the Vilnjanka cemetery with reconstructions of the clothing: 1– 3. Burial 32 and 34; 4, 5. Burial 19; 2. Man 20–25 years old; 3. Man 30–40 years old; 4, 5. Woman 20–25 years old.

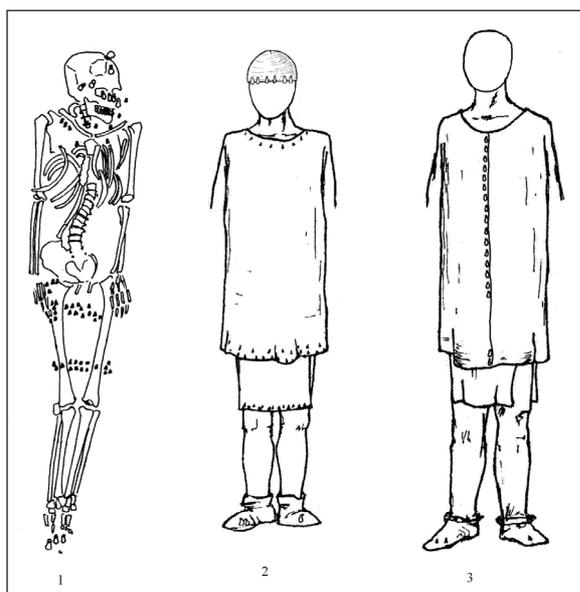


Fig. 15. Burials of the Surskaja culture with reconstructions of the clothes: 1, 2. Burial 20 at Vilnjanka cemetery (man 20–25 years old); 3. Burial 65 at Yasinovaika cemetery.

among teenagers. The disposition of ornaments in these age groups had some peculiarities. For example, fish teeth in the children's and adolescent burials laid in heaps or unsystematically, whereas rows of them are known only in adult burials.

Female clothes in the Surskaja culture were decorated mainly with fish teeth; male garments, with fish and red deer teeth in equal measure.

Among female burials, decorated clothes were typical only of 18–35-year-old women, while all age groups of men had adornments. But the most numerous burials with adornments were among men of 18–25 years (75%) and 25–35 years (56%). Their numbers decrease in older groups: 35–50 years (40%) and over 50 years (33%).

Thus we can conclude that the adornments were typical of women and men of childbearing age (18–

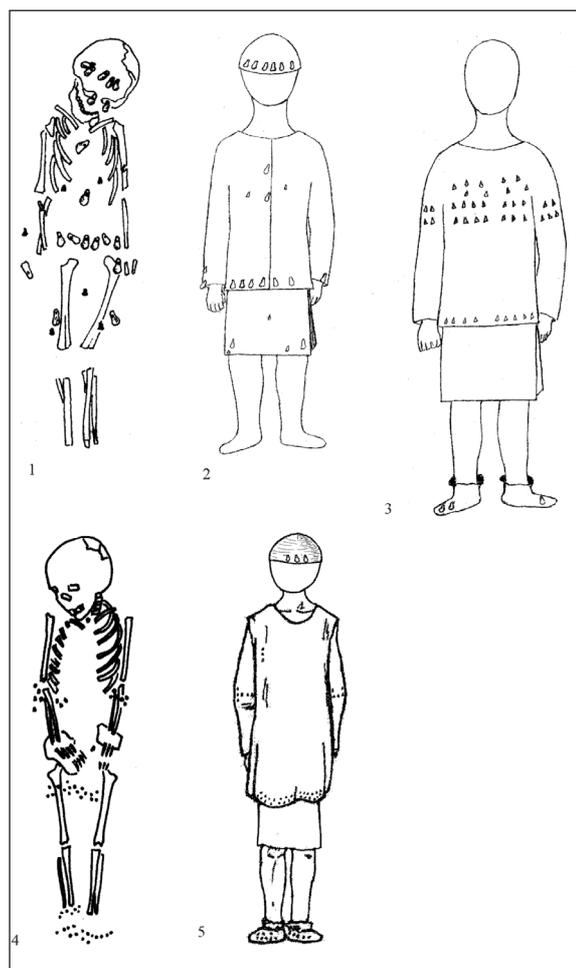


Fig. 16. Children's burials of the Surskaja culture with reconstructions of the clothing: 1, 2. Burial 14 at Vilnjanka cemetery; 3. Burial 56 at Yasinovaika cemetery; 4, 5. Burial 37 at Vilnjanka cemetery (1, 4 after Telegin 1956). 1, 2. Child – 10–12 years old; 3. Child; 4, 5 Child 6–7 years old.

35 years) in the Azov-Dnieper and Surskaja cultures, and of children in the Azov-Dnieper culture. While women over forty were buried without adornments in both cultures, men over forty had no adornments in the Azov-Dnieper culture. In the Surskaja culture, some wore decorated clothing.

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Ceramics in the burial rites of the Neolithic-Early Bronze Age in the Ukrainian steppe

Nadezhda Kotova, Larissa Spitsyna

Institute of Archaeology, Kiev, UA

kotova@i.com.ua, spitsyna@iananu.org.ua

ABSTRACT – Numerous Neolithic/Bronze Age burials have provided important information about the appearance and development of the tradition of using pottery in burial rites among the Pontic steppe population. The first pottery has been dated to the first period of the Azov-Dnieper culture (5950–5300 calBC). The small sherds found in graves were the remains of broken vessels used during funeral feasts on the surfaces of cemeteries. During the Early Eneolithic the sacrificial sites of the Azov-Dnieper culture became larger and included numerous broken pots, which were made especially for funeral feasts. Under the influence of the Balkans, the population of Sredniy Stog Eneolithic began to place vessels in graves, and continued to use pottery during funeral feasts near graves. The Middle and Late Eneolithic populations retained these traditions.

IZVLEČEK – Številni neolitski in bronastodobni grobovi so zagotovili pomembne informacije o uporabi keramike v pogrebnih ritualih med ljudstvi v Pontski stepi. Prva keramika je bila datirana v prvo fazo kulture Azov-Dnjeper (5950–5300 calBC). Keramični fragmenti v grobovih so ostanki razbitih posod, ki so bile uporabljene pri pogrebnih gostijah na grobiščih. Ritualni prostori v zgodnjem eneolitiku v Azov-Dnieper kulturi postanejo večji. Večje je tudi število posod, ki so bile narejene za pogrebne gostije. Pod vplivom Balkana so eneolitska ljudstva Srednji Stog začela polagati posode tudi v grobove. V srednjem in poznem eneolitiku so ohranila to tradicijo.

KEY WORDS – Neolithic; Eneolithic; Bronze Age; Ukrainian steppe; pottery; burial rites; sacrifice sites; grave goods

Numerous funeral monuments have been excavated in the Ukrainian steppe. The oldest comprise cemeteries with flexed inhumations dating to the Late Paleolithic and Mesolithic. During the Late Mesolithic, the first interments in supine position appeared, and this type of burial became prevalent at the end of the Mesolithic and the beginning of the Neolithic. The Vasilievka 2 cemetery dates to this period at c. 6850–6400 calBC. A tortoise shell from one grave at this cemetery has been interpreted as the first vessel.¹

Pottery use in everyday life spread among the Ukrainian steppe population at c. 6300 calBC – during

the Early Neolithic, but only after 300 years do the first ceramics appeared in Middle (c. 5950–5600 calBC) and Late Neolithic cemeteries (c. 5600–5300 calBC) (Kotova 2009). The pottery fragments were found in graves at Mamaj Gora (Toscev 2005), Vovnigi 2 (Bodjanskiy, Kotova 2004) and Vasilievka 5 cemeteries (Kotova 2003), all from the first period of the Azov-Dnieper culture. The culture spread across the western Azov Sea area, the Dnieper and the Crimean steppes. The cemeteries consisted of single and double burials in small separate graves arranged in rows. The small fragments of pottery in the graves most probably came from broken pots used in funeral feasts, remains being found in traces of fire

¹ Unfortunately, we have not had its image, because materials has not been published yet and a field report about the excavation in the 50-th of last century was not given in the archives of Institute of Archaeology of Ukrainian Academy of Science.

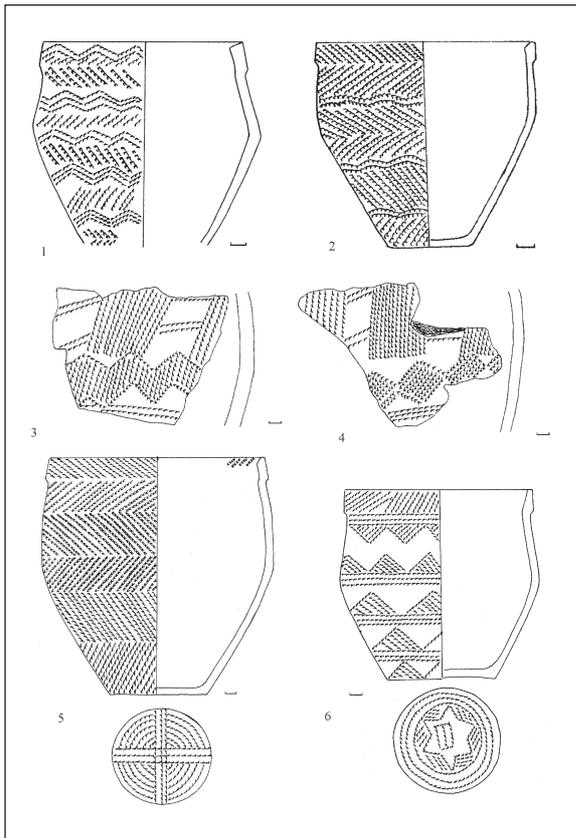


Fig. 1. Pottery from the Nikolsky cemetery from the second phase of the Azov-Dnieper culture.

on cemetery surfaces. All the fragments are very similar to pottery from Azov-Dnieper culture settlements.

The tradition of pottery use in funeral feasts developed in the Early Eneolithic, in the second phase of the Azov-Dnieper culture (c. 5200–4750 calBC). The Nikolskiy, Lysaja Gora, Yasinovatka and Kairy cemeteries of this phase consisted of large pits which were used repeatedly over a long period, resulting in the significant destruction of skeletons (Telegin, Potehkina 1987; Kotova 2003). People made sacrifice sites in the cemetery areas, as indicated by the remains of fires, abundant broken pottery, tools, adornments, and animal bones (Fig. 1). It is interesting that the pottery from these sites is similar to the pottery from late Azov-Dnieper settlements (flat bottom, collar on rim, linear and stroke ornamentations), although there are some differences. In everyday life, people

Fig. 3 (right). Pottery of the Sredniy Stog culture: 1. Burial 1 at Igren cemetery; 2. Burial 15 at Igren cemetery; 3–4. Burial 7 in kurgan 5 of Mukhin; 5. Burial 4 in kurgan 31/7 at Popov Khutor; 6. Burial 1 at Veselaya Roshcha 15; 7. Burial 5 in Mokry Chaltyr kurgan 2; 8. Burial 55 in Aleksandrovsk kurgan 1.

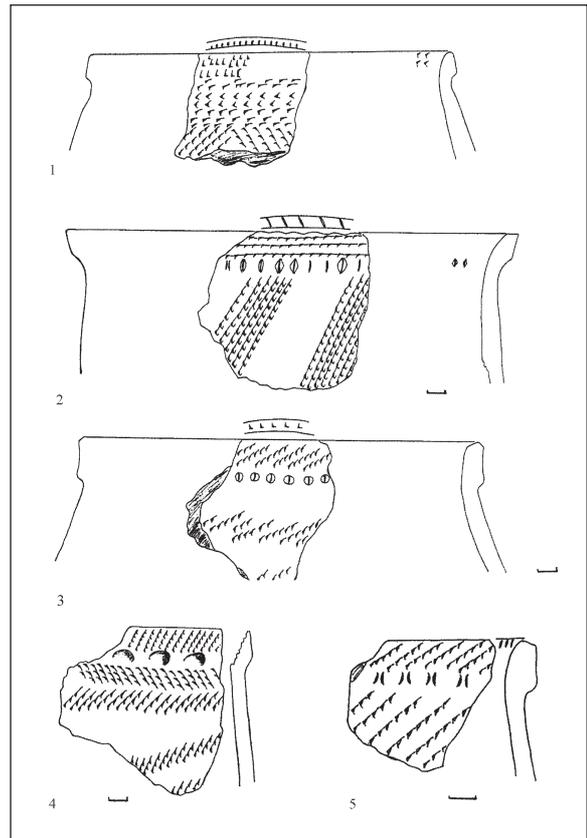
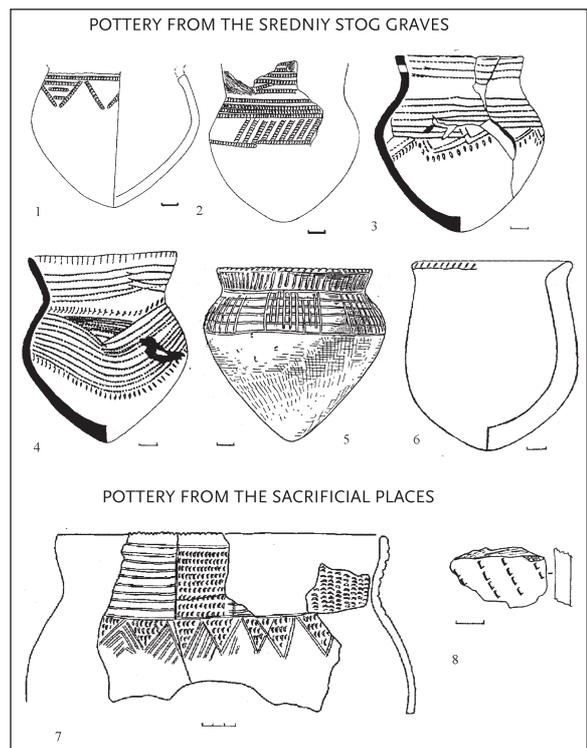


Fig. 2. Pottery from the Strilcha Skelya site in the second phase of the Azov-Dnieper culture.

used pots with necks, and with simple ornamental compositions (horizontal lines or rows, herring-bone pattern) (Fig. 2). This pottery was easy to use; the



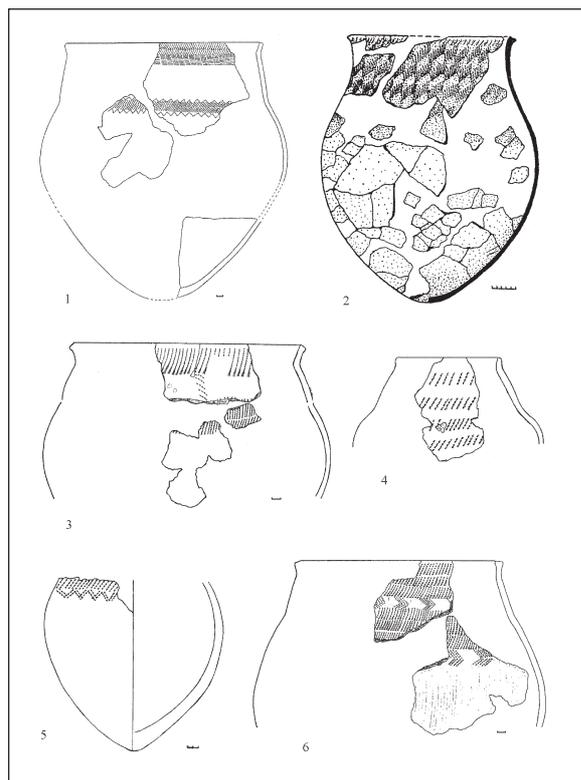


Fig. 4. Pottery from Dereivka culture sacrificial sites: 1. Balka Kvityana; 2. Burial 16 in the Novo-oleksandrovsky kurgan; 3. Burial 18 in Kamenka-Dneprovska kurgan 11; 4. Burial 5 at the Yasinovatka cemetery; 5. Burial 3 in Buzivka kurgan 1; 6. Burial 3 in from Vilnogrushivka kurgan 2.

narrow neck made it easier to carry. On the other hand, vessels without necks predominate in the pottery at cemeteries. They were ornamented with complicated compositions which included zigzags, triangles, rhomboids, and rectangles (Fig. 1), while the bases were decorated with stars and crosses. These facts allow us to assume that the Azov-Dnieper population made special pottery for funeral rituals, and its ornamental symbolism was connected to ideas about death and the transition from life to death. Pots without necks were difficult to handle and not intended for prolonged use, being broken during funeral rituals on the surfaces of cemeteries.

In the Early Eneolithic, the Sredniy Stog culture spread across the Pontic steppe, and the northern Azov Sea area (Kotova 2008). People constructed individual graves with flexed inhumations in small cemeteries or under kurgans. Pottery appeared in burial rites after the migration of some Sredniy Stog people to the Dnieper valley at c. 5000 calBC. Traces of sacrificial sites and funeral feasts near graves are not numerous. They include pottery fragments (Figs. 3.7, 8), and flint and bone artifacts.

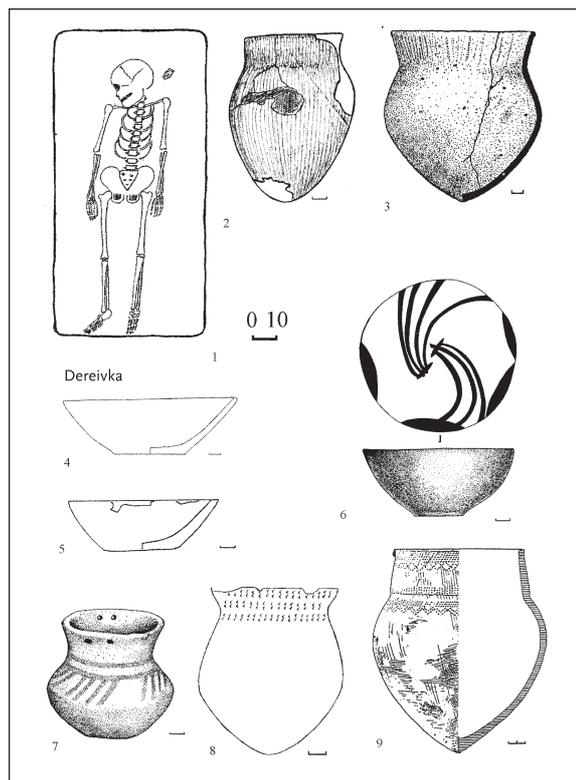


Fig. 5. Burial and vessels of the Dereivka culture: 1-2. Burial 1 at Boguslav 23; 3. Burial 4 at Dereivka cemetery; 5. Burial 13 at Igren cemetery; 6. Destroyed burial at the Igren cemetery; 7. Burials 7 and 8 at Igren cemetery; 8. Burial in Kabaki kurgan 1; 9. Burial at Balka Kvityana.

The pottery was first used as a grave good at this time in the Igren cemetery and Mukhin kurgan of the Sredniy Stog culture (Fig. 3.1-6). This practice was borrowed from Balkan-Carpathian cultures as a result of contacts and exchange connected with the distribution of copper tools and adornments in the Eastern European steppe from western regions.

Most vessels among the Sredniy Stog grave goods were broken before being placed in graves. Pots were placed near the head of the deceased. In chil-

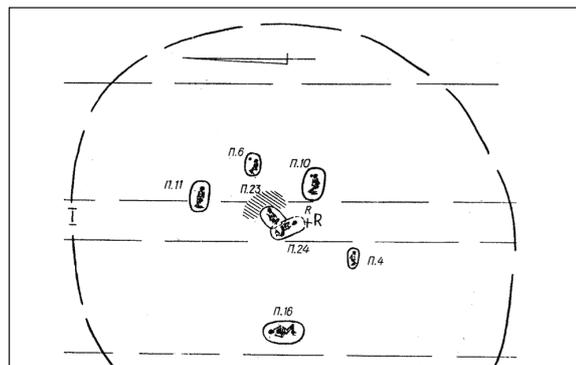


Fig. 6. Kurgan 2 at Obloyi.

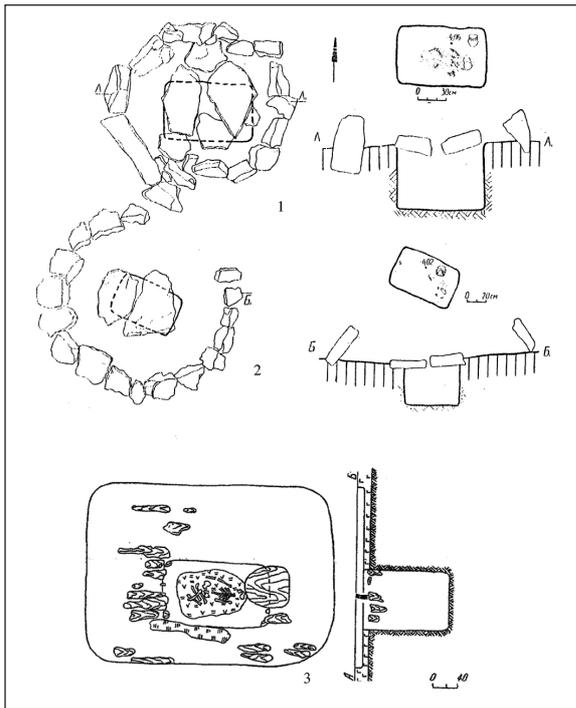


Fig. 7. 1. Burial 5 in Volonterivka kurgan 1; 2. Burial 4 in Volonterivka kurgan 1; 3. Burial 19 in kurgan 3 at Sokolove III.

dren's burials the pottery was found twice as often as in adult graves (Kotova 2008). The vessels deposited in graves were smaller than the pots from the Sredniy Stog settlements. We may hypothesise that it is possible that the Sredniy Stog people made special small vessels as grave goods.

The tradition of using pottery as grave goods and at funeral feasts was also present in the Dereivka Middle Eneolithic culture, which replaced the Sredniy Stog culture in the Pontic steppe. The Dereivka culture was formed in the southern region of the modern forest-steppe zone of the Dnieper basin during an arid period at c. 4300–4200 calBC. Its formation was the result of the assimilation of the local Neolithic population (the Dnieper-Donets and the Azov-Dnieper cultures) by migrants of the Sredniy Stog culture from the steppe zone (Kotova 2008). The Dereivka people inherited the tradition of funeral feasting not only from the Sredniy Stog culture, but also from the latest peripheral groups of the Azov-Dnieper population. These groups survived on the northern border of the steppe zone before 4300–4200 calBC, whereas other groups of Azov-Dnieper people in the southern steppe were assimilated by the Sredniy Stog population at c. 4750 calBC.

The inhumations in flexed and supine positions with different orientations were characteristic in Dereiv-



Fig. 8. Burial 9 in kurgan 1 at Verkhnya Mayivka XVIII.

ka culture. Cemeteries were located near settlement sites, but the burials were under kurgans which were located some distance from settlements.

In funeral feasts, the Dereivka population used large pots with peculiar shapes and ornamentation which differed from the ceramics found at settlements (Fig. 4). The funeral pots had very long convex necks with an everted rim. It was decorated with comb imprints, including 'walking comb' (Fig. 4.3).

The tradition of placing small pots in the Dereivka graves was a Sredniy Stog legacy. As opposed to pottery from sacrificial sites, some pots in graves were very similar to ceramics from Dereivka culture settlements (Figs. 5. 2–5; 8 and 9). But some others were imports from the Tripolye culture, which was located

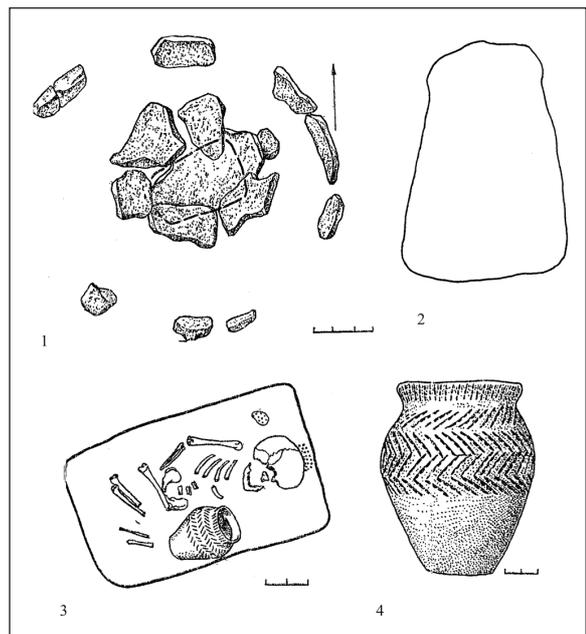


Fig. 9. Burial 13 in kurgan 1 of Kovalivka IV.

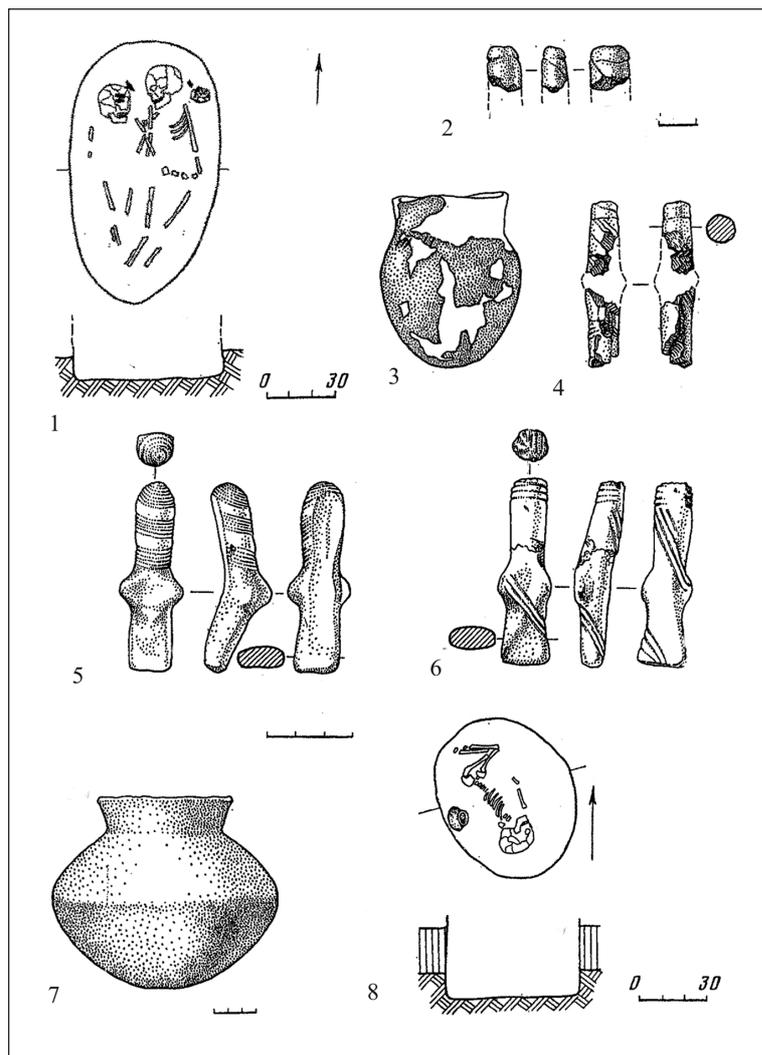


Fig. 10. Kurgan 3 at Chkalivske: 1-4 burial 25; 5-8 - burial 32.

to the north-west in the forest-steppe zone between the Dnieper and Dnestr Rivers (Figs. 5.6., 7).

The Rogachik culture in the Late Eneolithic and Early Bronze Age was located in the Crimea steppe, between the Dnieper and Southern Bug Rivers, and the Repin culture between the Dnieper and the Don. The settlements are bigger and the burials are more numerous in Rogachik than in the Repin culture. This may relate to the different environments - the dry steppe near the Azov Sea and the more humid Crimean steppe.

The funeral practices in both cultures were similar. The majority of burials were placed under kurgans, which attained a height of 0.5-2.5m and diameters up to 20.0m. Burials often formed small

cemeteries from several graves below the one burial mound, where they were placed in a circular arrangement, or formed from one to six rows (Fig. 6). Ditches and stone cromlechs appeared around the kurgans. Cromlechs were also constructed around separate graves (Figs. 7.1; 9.1). The burial pits were often covered with stone blocks or massive logs (Figs. 7.2, 3, 4; 9.1), including an anthropomorphic stele (Fig. 9.2). (Rassamakin 2004; Spitsyna 2007).

Flexed supine inhumations were oriented to the east, sometimes with minor deviations. A few burials were intensively painted with ochre. In other cases, skulls and limbs were powdered, or stains of ochre were located on the floor. The inventory included mainly pots and flint tools. The Rogachik grave goods included cylinders or cylinder fragments from ochre, and Serezlievka type clay figurines (Fig.10.2, 4, 5, 6).

The pots placed in burials were more numerous than the vessels used for ritual activities near the graves (Fig. 11). The pots, sometimes in pairs, were placed near the head, back, chest or pelvis of the deceased (Figs. 8; 9.3; 10.1, 8). The tradition of funeral feasting near graves was also maintained; traces are seen in traces

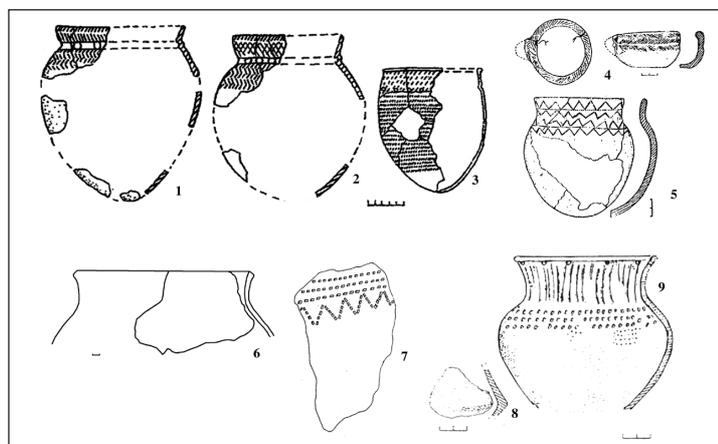


Fig. 11. Pottery from funeral feasts in Repin (1-5) and Rogachyk cultures (6-9). 1-3. Kurgan 3 at Sokolove III; 4-5. Volonterivka kurgan 1; 6. Augustynivka kurgan 7; 7. Lupareve kurgan 1; 8-9. Kurgan 1 at Kovalivka VII.

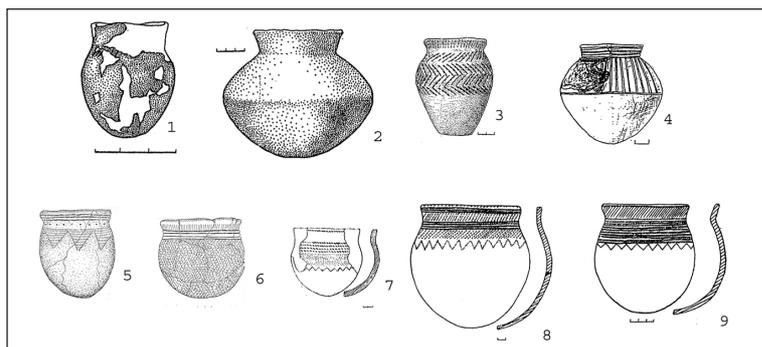


Fig. 12. Pottery in graves in Rogachyk (1–4) and Repin (5–11) cultures: 1. burial 25 in Chkalivske kurgan 3; 2. burial 32 in Chkalivske kurgan 3; 3. burial 13 in Kovalivka kurgan 1; 4. burial 1 in Chkalivske kurgan 3; 5–6. burial 7 in kurgan 1 at Verkhnya Mayivka XVIII; 7. burial 4 in Volonterivka kurgan 1; 8. burial 9 in Kremenivka kurgan 6; 9. burial 8 in Kremenivka kurgan 6.

of fire and accumulations of animal bones and broken pots (Fig. 12).

Conclusions

The Neolithic, Eneolithic and Bronze Age burials the Pontic steppe show the gradual inclusion of pottery in burial practices. The tradition of using ceramics during funeral feasts on cemetery surfaces appeared in the Azov-Dnieper Middle Neolithic culture (c. 6000 calBC) and continued during the Late Neolithic c.

5600–5200 calBC. At that time, people did not make special pottery for the burial rituals, and only a few small fragments of vessels appeared in graves or on the surfaces of cemeteries. In the Early Eneolithic in the Azov-Dnieper culture (c. 5200–4750 calBC) pots with complicated ornamentation was produced especially for funeral feasts. It was intentionally broken on cemetery surfaces. Later, in the Sredniy Stog culture (c. 4800–4300 calBC) the Balkan-Carpathians tradition is recognized in the use of small pots as grave goods. In the Middle Eneolithic, the number of burials with pottery in-

creased, and the Dereivka culture preserved both traditions: placing small pots in graves and making special ceramics for funeral feasts held near graves (c. 4300–3300 calBC). Imported pottery was sometimes placed in graves, but only local ceramics were broken on sacrificial sites. In the Late Eneolithic, the burial constructions of the steppe population became more complicated and the quantity of vessels in graves and at sacrificial sites increased. In addition, some imported pots came into use during funeral feasting.

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Mounds and rituals in the Jomon Period

Takamune Kawashima

University of Ljubljana, Department of Asian and African studies, SI
k_takamune@hotmail.com

ABSTRACT – *I will examine the possibility that earthen mounds were the result of ritual acts in the Jomon period. In the Kanto district, ring-shaped earthen mounds developed in the Late and the Latest Jomon settlements. While the number of settlements decreased from the Middle Jomon, abundant ritual artefacts have been discovered in settlements and deposits adjacent to the mounds. Burnt soil, charcoal, and burnt bone contained in the mounds could be the remains of feasting. As food processing facilities and vessels increased in the Late Jomon, I assert that the development of feasting led to the formation of the mounds.*

IZVLEČEK – *Proučujemo možnost, da so bile zemljene gomile rezultat ritualnih dejanj v obdobju Jomon. V pokrajini Kanto so se okrogle zemljene gomile pojavile v poznih in zadnjih Jomon naseljih. Medtem ko število naselij v srednjem obdobju Jomon upade, je bilo v naselbinskih depozitih in depozitih, povezanih z gomilami, odkritih veliko artefaktov, povezanih z rituali. Ožgana zemlja, oglje in ožgane kosti v gomilah so lahko ostanki gostij. Domnevamo, da je mogoče veliko število pripomočkov pri pripravi hrane in posod v poznem obdobju Jomon povezati z gostijami, te pa z gradnjo gomil.*

KEY WORDS – *Jomon; mound; ritual; food; feasting*

Introduction

In the Kanto plain, ring-shaped earthen mounds developed in the Late and Final Jomon sites (*Ehara 1999; Okimatsu 2005*) (Fig. 1). When the mounds were found in 1991 at Teranohigashi and recognized as dating to the Jomon period, two interpretations were proposed. One is that this site played a role as a ritual center (*Kobayashi 1996*), and the other is that this site was a normal settlement. Most archaeologists now see these sites as normal settlements (*Abe 1996; 2005; 2006; 2007; Ehara 1999; 2005*) for the following reasons: first, most houses in this period were found at a mound site; secondly, rich artifacts, including commodities were uncovered, and thirdly, no other settlement sites were found nearby. The process of, and reasons for building mounds were treated to a lively discussion. In order to clarify the process of mound building, I will first describe the landscape of the sites in the Late

to Final Jomon. The area surrounding Lake Kasumigaura has not been the subject of this study. I will compare the site landscapes in this area, and investigate the reason the mounds were built in the residential area of the Late to Final Jomon.

Settlements in the Late to Final Jomon

Abe (1996; 2005; 2006; 2007) asserts that these mounds resulted from an accumulation of deposits from the construction materials of houses, because the structure of houses was not same as in the Middle or early Late periods. Usually, houses in the Middle Jomon are dug into the ground more deeply than those in other periods. Probably for this reason, the number of houses in the Middle Jomon is greatest in the Jomon Period. They have 4 to 5 main posts, and the house pits are relatively deep. On the other hand,

houses in the Late Period have small postholes along the wall, in addition to the main posts. Some archaeologists think that small postholes imply the existence of a mud wall structure (Abe 1996). As the result of the repeated construction of houses, the materials for the walls could have accumulated in the surrounding area of settlements. However, in the western side of Teranohigashi, for example, there are no mounds, even though contemporary houses were found (Fig. 2).

Teranohigashi and Inonagawari are well known as good examples of mounds. Although research on the mounds has focused on the area around these two sites, the other area where the same pottery type is distributed should also be examined. A small-scale excavation was carried out at the Heisambō shell-mound site (Kawashima 2007; Kawashima et al. 2008), which is located by Lake Kasumigaura. Mounds were expected to be found, because the landscape of this site had a shape similar to other mound sites. In conclusion, there is no clear evidence of a mound, such as observed at Teranohigashi, but there is similarity in the point of the landscape of the sites, including the area around Lake Kasumigaura. Most of the mounds are not preserved well, because of cultivation in the later periods. For this reason, it is difficult to define this type of mound precisely. However, it is clear that most settlements in this period formed ring-shaped earthen mounds or something similar. The common characteristics of these settlements with mounds were depressions in the center, mounds, rich artifacts, long-term occupation, and the distribution of structures, such as houses and pits (Kawashima 2008a).

Shell mound sites in the Late and Final Jomon can be used to compare the formation process of the mounds, because shell mounds also have similar forms. Shell mounds were found from the early stage of the Jomon period, but after the Late Jomon, the horizontal shape became circular or U-shaped (Fig. 3). They were mainly made of shells, the re-

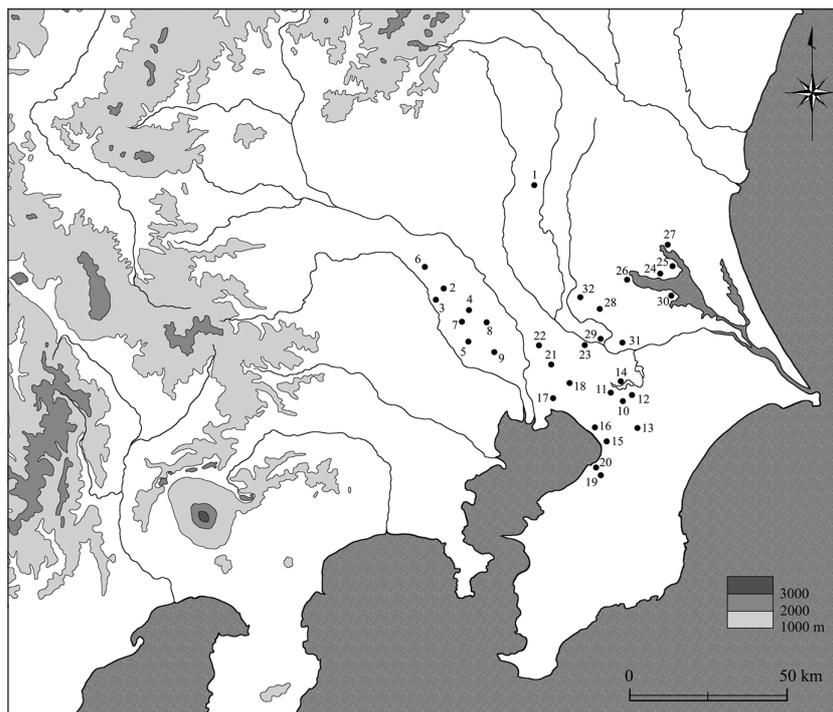


Fig. 1. Distribution of ring-shaped earthen mounds and sites which have a similar feature: 1. Teranohigashi, 11. Inonagawari, 15. Kasori, 24. Heisambō, 32. Maedamura.

mains of food consumption. Subsistence in the coastal area could have been different from that in the inland areas, but there is a possibility that the style of food consumption was similar.

It is said that the mounds were built after the middle Late period, because houses and pits of the early Late period were found under the mounds. This means that the Late to Final Jomon houses could be found in the mounds or inner spaces. In fact, houses and pits were inclined to be gradually distributed closer to the centers of sites. This tendency is clearly seen at Maedamura (Fig. 4). At most sites, the Final Jomon artifacts, houses and pits were uncovered from the edge of the central depression. This supports the idea that the position of houses moved toward the center of the sites gradually, and that the mounds were made behind the residential area.

In the excavation report on Teranohigashi, the layers consisting of mounds were categorized into two types. One type of layer mainly consists of brown soil with relatively less loam, and contains fragmented bones, charcoal. The other mainly consists of loam, and contains thin layers of dark soil and burned soil. These two types of layer indicate the different processes of accumulation in the mounds. The soil for the mounds could have been supplied at least by digging pits and house pits, and by food proces-

sing and consumption. The soil from the house pits and pits was yellowish loam, which is the basic layer of this region. It has been pointed out that the central depression also provided soil for the mounds, because it lacked the upper layers which should be observed in natural stratigraphy.

In the central depression, while there are few features remaining, rich ritual artifacts were discovered. There are some archaeological changes in this period, which support the development of ritual activities (Kawashima 2008b). Ritual features, such as stone structure and accumulation points of unusual pottery and artifacts were uncovered from the central depression of some sites. These facts imply that the central depression was a communal space and was used for rituals. The mounds may have been formed partially by disposals from house reconstruction. However, this theory is not enough to explain the existence of fragmented burned bones, and increasing numbers of ritual objects in the Late to Final Jomon period at the mounds.

In addition to the development of ritual activities, some other cultural changes are recognized in the

first half of the Late Jomon such as large houses, wooden water reservoirs, and coarse pottery; and communal graves appeared in the transitional period from the early Late to the middle Late Jomon. Of these changes, wooden water reservoirs are thought to have been for food processing, and the coarse pottery is thought to have been as food processing vessels for nuts and acorns. In the next section, I will describe the change in food processing in the Late Jomon, focusing on the wooden water reservoir.

Food processing facilities – wooden water reservoirs

There are several items which evidence food processing in the Jomon. Of these, wooden water reservoirs (Fig. 5) seem to be most related to processing abundant food, such as nuts and acorns. While it is said that acorns and nuts were the main staples in the Jomon, there are some periodically different uses of these. In the Middle Jomon, chestnuts are characteristic and predominate in the uncovered botanical remains. On the other hand, in the Late Jomon period, the ratio of horse chestnuts rapidly increases.

They are uncovered especially from water reservoirs. The technique of processing horse chestnuts is difficult, because they contain saponin, which is toxic. According to ethnographic research in Japan, it takes at least a few days to bleach horse chestnuts (Watanabe 1975; 1989). In the Jomon period, in order to eat horse chestnuts, efficient processing facilities may have been needed, as it is unlikely they were processed for only one meal.

The structure of wooden water reservoirs also changed in the Late Jomon (Sasaki 2007). A reservoir was uncovered from the Early Jomon. In the earlier periods, the structure of reservoirs was simple and could be used for shorter periods. In the Late Jomon, larger wooden structures were constructed several times at the same point. At some sites,

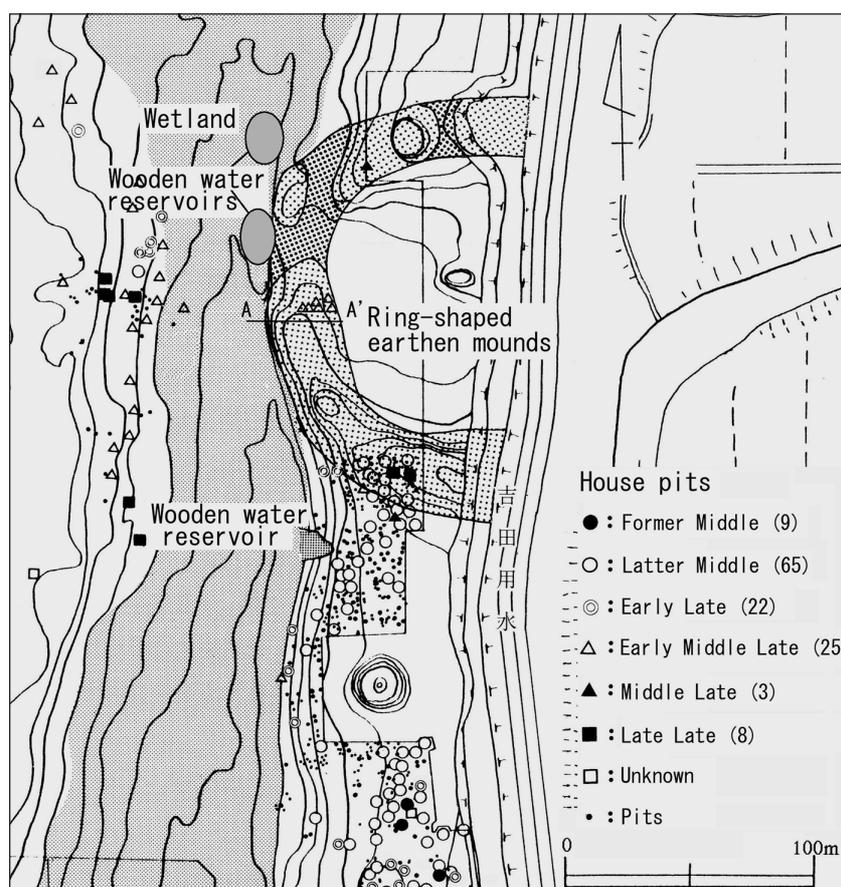


Fig. 2. Ring-shaped earthen mound at Teranohigashi (after Ehara et al. 1997.Fig. 7).

preserved wooden parts are discovered. After the Late Jomon, it seems that the reservoirs were constructed according to a solid plan, with wooden planks, piles, and sometimes a stone pavement, and were maintained. This implies the continuous use of a spring, and may indicate a long-term sedentary village.

The Teranohigashi site shows the difference between the reservoirs of the Middle Jomon and the Late periods. A simple reservoir that belongs to the Middle and the early Late Jomon, was found in the southern part of this site (Fig. 2). On the other hand, in the north of this site, a complex of reservoirs was found, which is thought to have been repaired and reconstructed several times.

I will compare the size of water-reservoirs in the Late to Final Jomon and that of processing facilities for horse chestnuts in contemporary Japan (Tab. 1). In some parts of the mountainous regions of Japan, horse chestnuts were a staple until around World War II. Two processing techniques have been recorded (Watanabe 1975; 1989). One technique, *Kozawashi*, requires a facility called a *Tochidana* and two days to process horse chestnuts. As the other technique, *Tochimochi*, usually suggests that processed horse chestnuts were mixed with rice, it may not be applicable to a comparison with the technique in the Jomon. In cases where horse chestnuts are consumed every day, two facilities are used in sequence. The result of a comparison between the Jomon facilities and contemporary ones shows that the earlier wooden water-reservoir is larger and deeper than the contemporary facility. Although wooden water-reservoirs must have also been used for other purposes, such as to hold drinking and cooking water, leaching plants for fibers, and rituals, the existence of husks of horse chestnuts in a reservoir shows that it was used for processing horse chestnuts. Thus, horse chestnuts could have been used widely and in larger

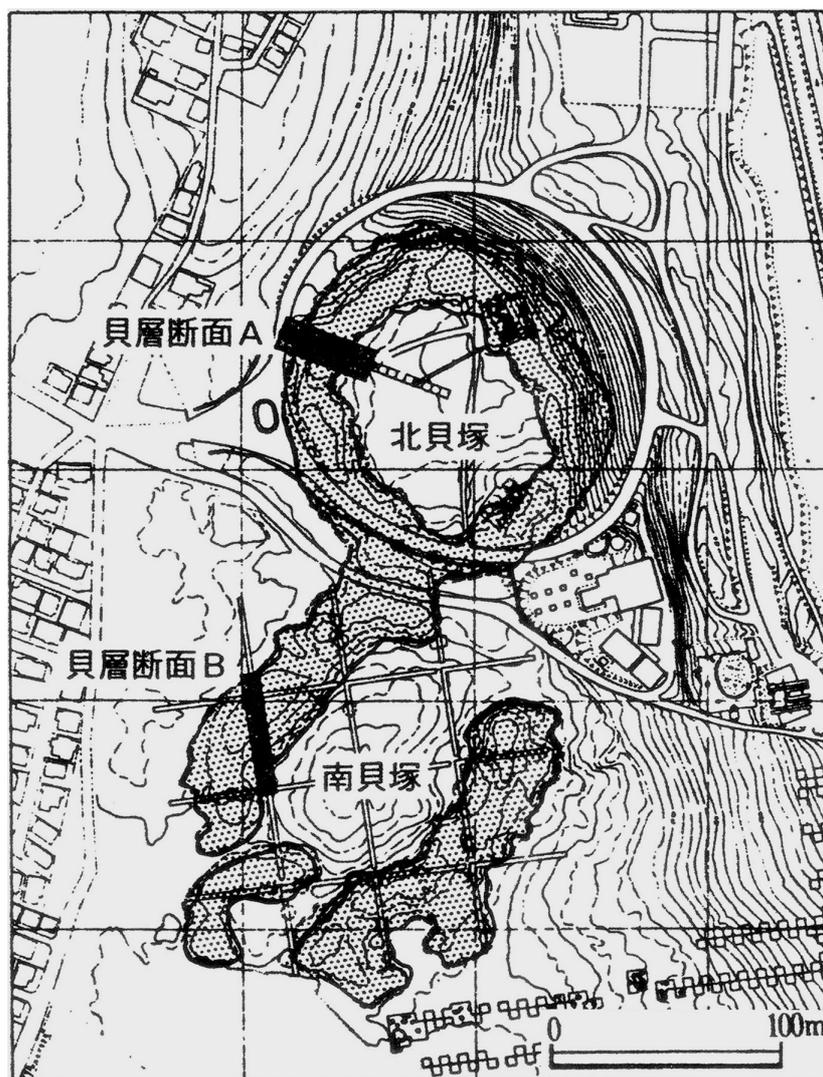


Fig. 3. Kasori shell mounds (after Sugihara et al. 1976.Fig. 1).

amounts after the Late Jomon. Evidence of food consumption should be found at settlements of this period.

Food consumption: feasting in Late to Final Jomon societies

In the Jomon studies, techniques of subsistence have been analyzed, but the consumption of food has not been discussed. While the number of settlements decreased after the Middle Jomon, abundant ritual artifacts were discovered from the inner spaces of sites after the Late Jomon. Rich ritual artifacts and the remains of food in the mounds imply an increase in opportunities for mass food consumption such as feasting. Although it is difficult to identify each feast, it is possible to estimate the scale and frequency of feasting from the total amount of feasting remains.

At the Late to Final Jomon sites, there is more evidence of food consumption, such as large fire fea-

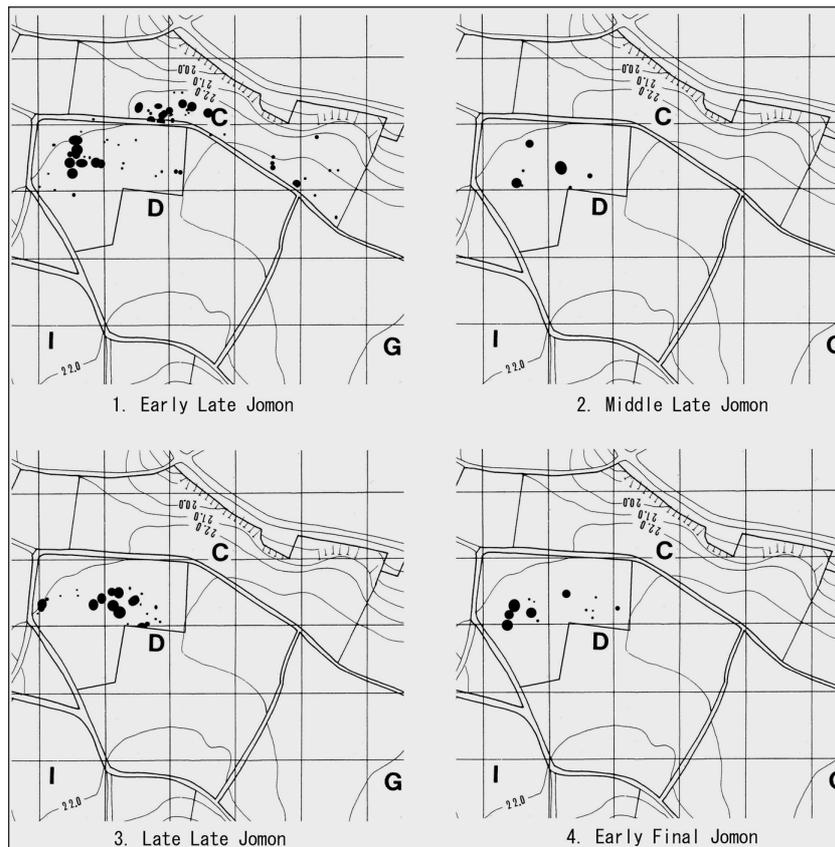


Fig. 4. Distribution of house pits and pits at Maedamura (after Yokobori 1997.Fig. 4).

tures, charcoal and fragmented bones in the soil. It is rare to find animal bones in their original form: they are often excavated in small fragmented pieces, and most are well burned. Although these can not be direct evidence of mass food consumption, these

characteristics are not observed before the Late Jomon. These characteristics are observed at sites with mounds and wooden water reservoirs.

Generally, the amount of food consumption should relate to population size. However, it is unlikely that the increase in food consumption in this period was caused by population growth. As at the Teranohigashi site (Habu 2004.Fig 5.29), the number of recovered house pits from the Middle Jomon is generally larger than from the Late Jomon. It is thought that there is little evidence of population increase in the Kanto Plain of the Late to Final Jomon. In this case, population increase can not be the reason for an increase in food consumption; therefore, feasting could be a reason for this increase.

Late to Final Jomon society and food consumption

As I have noted elsewhere (Kawashima 2005; 2008a; 2008b; 2009), the settlements which include

site	Wooden water reservoir			Ethnographic examples					
	structure	size (m)	Depth (m)	No.	size (m)	depth (m)	Amount (ℓ)	References	
Teranohigashi	SX077	3.0x5.2	0.4	A1	1.5x1.5	0.15	27	Watanabe 1989	
	SX048	14.5x4.6		B4	0.45x0.45		36		
	SX053	4.5x1.0~2.5		B5	0.7x0.7	0.15			
	SX054	2.7x1.1		B8	0.6x0.6	0.12			
	SX041	1.3x1.3		0.5	B10	1.2x0.9	0.9~0.12		18
	SX075	2.0x2.0		0.5	B11	0.9x0.9			
Myojin-mae		2.0x1.8	0.4	B12	1.2x0.9	0.1	18		
Ushi-roya	1	4.4x1.1	0.8	B18	1.6x1.6				
	2	1.5~1.9x1.0		Koshinami	0.7x0.7				Nomoto 2005
	3	1.7x0.8							
	4	1.0x1.0							
Shimoyakebe	7	4.0	0.4						
	8	6.0x8.0							
	10	6.2x2.8							
Aka-yama	4	(4.0x4.0)	0.3~0.5						
	processing area enclosed	9.0x1.4~1.9		0.9					
		5.0x2.0							

Tab. 1. The size of wooden water reservoirs and Tochidana (after Kawashima 2009.Tab. 1).

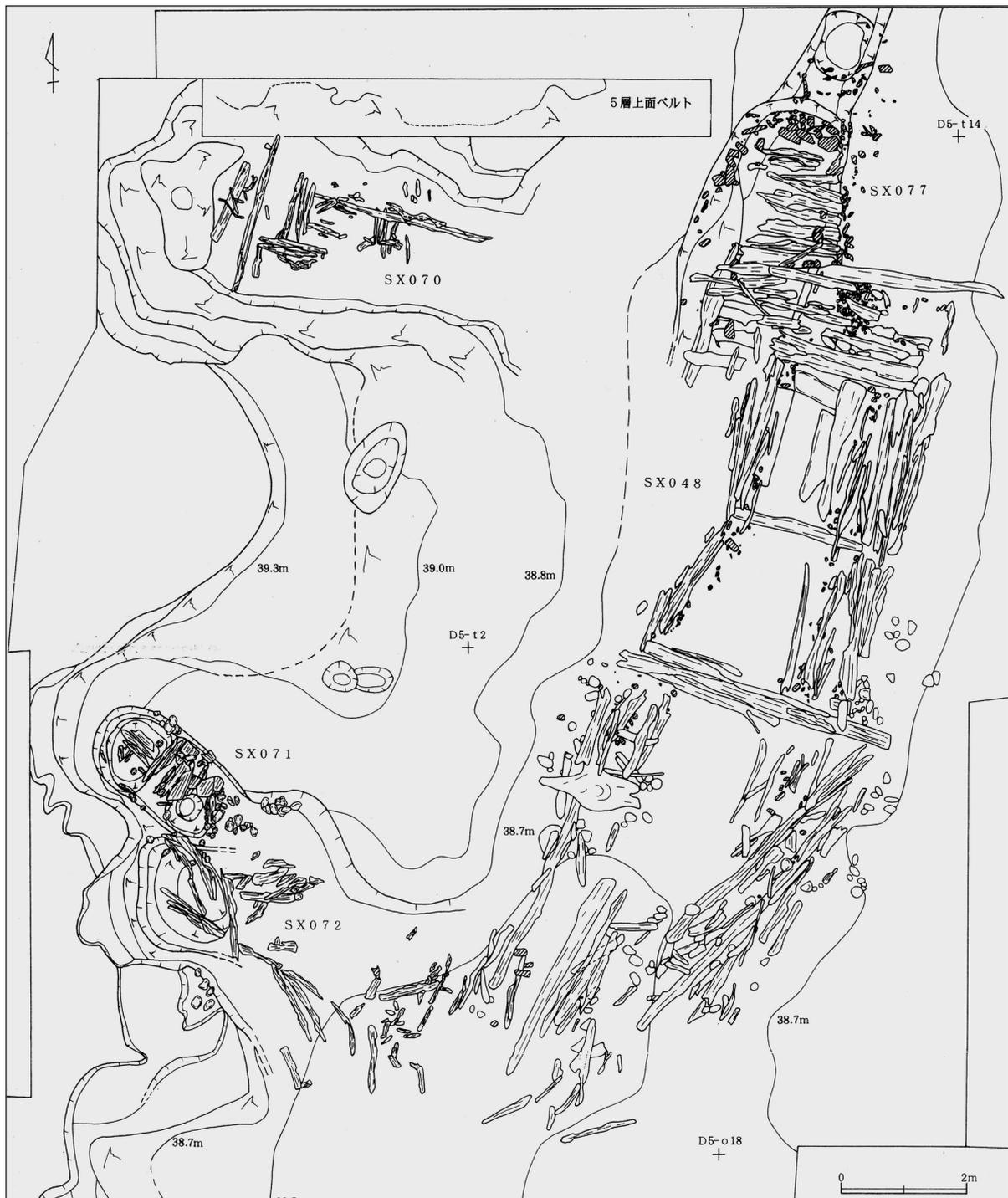


Fig. 5. Wooden water reservoirs of the Late to Final Jomon at Teranohigashi (after Ehara et al. 1998.Fig. 24).

rich ritual artefacts tended to have lasted longer, usually from the beginning of the Late to the end of the Jomon period. At most of these sites, ring-shaped earthen mounds are also distributed. In the Late to Final Jomon, the number and variety of ritual artefacts such as figurines and stone rods increased. Increasing evidence of food consumption and rituals at the Late and the Final Jomon settlements can be interpreted in a feasting context. In Jomon

studies, archaeologists have assumed a minimal consumption of food, simply because the occupants were hunter-gatherers. However, it is clear that some hunter-gatherers, such as the tribes of the Northwest Coast of North America, achieve politically complex societies, and consume atypical amounts of food during feasts. Comparing the Late to Final Jomon with the Middle Jomon, evidence of feasting apparently increases particularly at large and long-term settlements.

As I noted above, there is evidence of rituals at the mound sites in the Kanto region. Given the cultural changes of the early Late Jomon, I assert that the settlements of the Late to Final Jomon were more sedentary villages, compared with those before the Middle Jomon, while few scholars agree, because many houses have usually been discovered at Middle Jomon settlements. It seems that rituals played an important role in maintaining the social structure of these settlements, and that the mounds were built as the result of various activities driven by rituals at sedentary villages.

Although there is no archaeological evidence of a population increase in this period, new facilities for food processing appeared and the scale of food consumption is thought to have been greater than before. Food processing facilities in the Jomon seem to be used not only for the minimum usual processing

of food, but also for atypical processing. It is thought that more complex societies hold larger feasts more frequently (Hayden 2001). This theory can be applied to the social change from the Middle to the Late Jomon. The results of this study represent the development of feasting and food processing in the Late to Final Jomon. Increasing food consumption could create accumulating mounds of refuse. These activities are connected to changes in settlement patterns. In the Late to Final Jomon, settlements became more sedentary places, where larger scale feasts were held with foods processed in a wooden water reservoir. The appearance of large and systematic food processing facilities may imply not only technological development, but also greater scale of social change, also in social structure. Although it is within the range of hunter-gatherers, the society in the Late to Final Jomon period experienced a cultural transformation from the society in Middle Jomon.

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Bodies, houses and gardens: rhythm analysis of Neolithic life-ways

Dimitrij Mlekuč

Ghent University, Faculty of Arts and Philosophy, Department of Archaeology and Ancient History of Europe, BE
dimitrij.mlekuz@UGent.be

ABSTRACT – *Paper discusses the ways in which rhythmic temporality of yearly course was woven into the way people lived, experienced and transformed their life in the Balkans Neolithic. It examines how routine social and material practices on gardens that were structured within a year extend their duration to the lifecourse of people, objects, generations and historical change. By attending the garden during the year, people not only observe the process of growth, but actively participate in it. The generative and regenerative powers of gardens are maintained through work and accumulation of substances, which originate from elsewhere, house, midden, animal pens. This flow of substances is not only way of linking houses, gardens, animals and people in a web of relations, but also creates the history of the particular plot. Through the agency of gardens, the substances of humans, plants, animals and ancestors become intertwined and feed into each other.*

IZVLEČEK – *Članek se ukvarja z ritmi letnega cikla v neolitiku Balkana. Poglavitno vprašanje, s katerim se ukvarjamo je, kako so materialne in družbene prakse letnega cikla postale del življenjskih zgodb ljudi, predmetov, menjav generacij ter tako ustvarjale zgodovino. Skozi delo na vrtu ljudje niso le opazovali procesa rasti, temveč so v njem aktivno sodelovali. Moč vrta, da obrodi in obnovi, so vzdrževali s kopičenjem snovi iz hiš in odpadkov iz živalskih obor. Ta tok snovi ni le povezal hiš in vrtov, ljudi, živali in rastlin v omrežje družbenih odnosov, temveč tako tudi ustvarjal zgodovino posameznega vrta. Vrtovi so tako igrali aktivno vlogo pri prepletanju tokov snovi med ljudmi, živalmi in predniki in pri ustvarjanju povezav med njimi.*

KEY WORDS – *time; yearly course; rhythms; gardens; houses; Neolithic; Balkans*

Introduction

Human activities are not only embedded in long-term historical developments, but also in the more repetitive rhythms of daily and seasonal cycles. Environmental archaeology has developed a number of tools and approaches which may determine the seasonality of a site from organic finds (presence or absence of certain species), physical indices on the bones and teeth of animal remains, or, more recently, stable isotope analysis. Even with these impressive achievements, there have been very few attempts to temporalise this sequence, apart from divisions into well-defined discrete blocks of time and seasons, and the tasks associated with them.

This approach leads to the perspective that the flow of seasons serves only as an ecological backdrop

which structures human activities, and portrays pre-industrial communities as timeless, locked in an ever-recurring agrarian year and living outside history.

But how do repetitive tasks performed within an annual cycle relate to each other? How do they structure relations between people, other social agents and the material world? How does history emerge from these relations?

The main inspiration for this paper is Henri Lefebvre's *rhythmanalysis* project (2004), where he uses rhythm as a tool to analyse daily life. Everyday life is made up of repetitions or recurrences, and for Lefebvre, rhythm is where body, society, time and space come together.

This paper is concerned with how the rhythmic temporality of the annual cycle was woven into the way people lived, experienced and transformed their life. It examines how routine social practices that were structured within a year extend their duration to the life cycle of people, objects, generations and historical change.

The music of social life

The main point of departure is 'being in the world', or dwelling perspective (*Heidegger 1962; Ingold 2000*), where human experience consists of relationships with other people, other social agents and the material world, and is performed through tasks and activities. These are always material practices and by changing the material world, their effects extend beyond their immediate execution.

Life consists of an uninterrupted flow of daily tasks. People are always already at their task, no matter how insignificant or trivial they might seem. Walking, cooking, caring for children, animals, tending plants, hunting, building, talking are all parts of a flow of activities which carry on life and create time. We are born into this flow of tasks and begin to participate in it from the beginning. But these tasks are not isolated, discrete events, like beads on a string; they are more akin to music. In music, we do not hear isolated tones, but melody, as Husserl (*1964*) illustrated in his highly influential writings on the phenomenology of time consciousness, and melody is created by repeated acts of remembering past tones (retention) and anticipating the next (proten- tion).

Analogously, every task 'has its own thickness and temporal spread' (*Gell 1992.223*). Each makes sense only when related to those already performed and those to be done. Life is thus not merely a succession of isolated seasonal tasks; it is a flow of tasks meaningfully related to one another. Tasks are implicitly or explicitly connected with other tasks, separated in time and space. Each task is made possible by the number of past tasks, and future tasks give it purpose. This network or 'referential system' (*Gosden 1994*) of tasks unfolds over space and time. Thus, Evans-Pritchard (*1940.101–102*) describes the Nuer seasonal round as 'primarily the succession of pastoral tasks and their relation to one another'.

Tasks have their own temporalities, which emerge from interactions between people and the material world around them. The temporality of tasks is inhe-

rently social; it emerges from attending to, adjusting and timing our actions in relation to other agents and the rhythms of the material world (*Ingold 1993; Ingold 2000.196–197*). Tim Ingold (*1993; 2000*) calls this process 'resonance'. Just as music emerges from the interactive attention of musicians to each other and their instruments, social life emerges from the mutual attentive performance of social agents and world around them. But we do not resonate with other human beings only; by performing tasks, we are alert to conditions and changes in the environment and adjust our actions accordingly. We tend animals, and are aware of their own tasks and bodily rhythms; we resonate with plants, their growth cycles, changes in the weather or the ebb and flow of rivers. Plants respond to the actions of people, and animals resonate to the rhythms of other beings, creating a sociality which transcends species boundaries. In this perspective, environmental rhythms are imposed from the outside, but become woven into the melody of social life.

Mark Harris (*1998*) describes the rhythms of sociality in the Amazon floodplain, where not only the flow of tasks and activities, but the whole sociality resonates with the rhythm of the seasonal flood. During the flood season, people are confined to their houses; it is a time of low moods, illness and potential danger. But when the water recedes, there is a burst of social activity and cooperation; people are in a good mood, and this is a time of feasting, but also tension and conflict. The rhythmic temporality of social life is not only a reflection of the seasonality of the Amazon, but emerges from peoples' active engagement with the ebb and flow of the river and each other.

Rhythm is what makes music move on and flow. The same can be said for the flow of life. It is the repetition of tasks that creates time, and gives the pace and tempo to the social life. As Lefebvre (*2004.15*) defines it, "Everywhere where there is an interaction between place, a time and an expenditure of energy, there is a rhythm". Thus, rhythm also implies a relation of time to space or place. Lefebvre talks about a localised time, or a temporalised place, to underline the spatio-temporal reality of rhythms and their role in the production of space. But the central theme of rhythm analysis is the body (*Lefebvre 2004.38–45*).

Through rhythmic repetition, tasks can become habitually learned and embodied as practical skills and postures. Through rhythmic patterns of involvement

with their surroundings, routines performed in specific ways, people acquire specific 'dispositions', a 'logic of practice', of knowing how to go on (*Bourdieu 1977*). This entire subjective experience of the world, or *habitus*, does not need discursive formalisation, because it is learned through participation in the flow of life, through being submerged in it.

There is a recursive relation between dwelling perspective and Bourdieu's *habitus*, between event and structure (*Harding 2005*). Persons who skilfully attend to their tasks and each other are always already bodies – focused, gendered. They have learned skills for the practical mastery of the world which they apply to everyday situations and the tasks they perform. Tasks are material practices, involving bodies, things and places. People till gardens with hoes, harvest crops with sickles, store grain in the container in the house, dump refuse on the midden, prepare food in a container, share and eat it, excrete and dispose of substances. They perform these tasks through their bodies. People and things are always conjoined in actions, and there is mutual constitution between people, things and places (*Knappett, 2005; Latour, 2005; Miller 1987*). It is through the performance of tasks that things, places and bodies are changed; and through this mutual constitution, people are also changed.

The material world, landscape, material culture and bodies are vital links between *habitus* and dwelling perspective. Tasks leave traces on matter, tools, places and bodies. Through repetition, these traces accumulate or form layers one upon another. Through layering, a process of creating sediments, assemblages of traces that accrue over time, repair, adapt, modify or curate, life histories become sedimented and layered, and the biographies of objects, bodies, and places are created (*Gosden and Marshall 1999; Knappett 2006*). Things and places change; people become more skilful and older after each performed task, each day and season. Their bodies accumulate traces, skills, knowledge of how to perform movements, gestures and postures, which in turn constitute human beings. The rhythms of daily or yearly engagement with the world are thus 'techniques of the self' (*Foucault 1988; Warnier 2001*), ways through which people constitute themselves, create or maintain their identities.

Mutual making is a continuous historical process. The rhythmic flow of tasks never repeats itself; there can be no cyclical temporalities of task, only rhythms through which people, things and landscape mutu-

ally constitute each other. This is, of course, a result of the inherently material nature of tasks; they always involve and change bodies, objects and substances. In this way, the material world is always in the process of becoming. As Chris Gosden (*1994*) puts it, a "*world created by people will be a world into which their children will be socialised...*". Each action, even if repeated, has potential for change and renewal.

The non-discursive nature of most practices, therefore, does not mean that they cannot create meaning. Routines may be embodied, but they are seldom neutral. The *habitus* has an endless generative capacity. It can produce ideas, perceptions, emotions or actions. The material world has a crucial role in the production of people and fixing the relations between them. The famous example of the Kabyle house, which is a principal locus for the objectification of *habitus*, and gives meaning and significance to daily and seasonal tasks by providing analogies between the spatial division of houses and the arrangement of material culture within it and the agrarian cycle. The Kabyle house brings together both space and the material world with the rhythms of daily life and the agrarian calendar (*Bourdieu 1990*). Meaning is generated at the intersection of the material world with the temporalities of social life.

In discussing the generation of meaning at the interface of space and rhythmic time, one can employ Mikhail Bakhtin's concept of the 'chronotope'. Bakhtin, a Russian semiotician and literary theorist, defines chronotopes as "*organising centres for the fundamental narrative events in the novel...*" (*Bakhtin 1981.250*). It is a figure that merges the spatial and temporal; the chronotope generates not only encounters that advance the plot, but also the principal symbolic and metaphorical patterns of a work, potential narrative matrices, performative frameworks and networks of signifiers. Chronotopes are loci "*where time becomes palpable and visible; chronotopes make narrative events concrete, make them take on flesh, causes blood to flow in their veins...*" (*Bakhtin 1981.250*).

Thus the chronotope, as the primary means for bringing together time and space (and one might argue, bodies, tools and persons with their own embodied temporalities), is a both a nexus from where representation can emerge, and a force giving body to the flow of tasks. In chronotopes, abstract aspects of social life – cosmological and social generalisations, ideas and symbols – take on flesh and blood, permit-

ting the imaging power of metaphors to do their work: “every entry into the sphere of meaning is accomplished only through the gates of the chronotope” (Bakhtin 1981.258). Chronotopes provide contexts for the creation of meaning through the rhythmic association of objects, persons and places. By bringing objects and incorporating them into places through a rhythmic pattern of activities associated with those objects and places or patterns of encounters at those places, chronotopes mediate the transfer of meanings of places and the material world into temporal relationships. In this way, the flow of tasks and mutuality become vehicles for collective representations such as idealised concepts about society, the past, personal or group identity, or cosmology.

Thus, chronotopes are not only matrices of reproduction, but nexuses where ‘actual historical persons’ emerge in ‘real historical time and space’ through the combined agency of people, places, bodies and material culture.

Case study: Neolithic gardens

What makes ‘Neolithic’ life-ways different from the life of ‘Mesolithic’ groups is the different quality of their relations with the material world, animals, plants and each other. This difference is played out through daily activities, and tasks and activities associated with material culture, animals, plants, places, the landscape and other people.

In the seventh millennium BC, people in Greece and Balkans created new social settings by selecting particular places in the landscape and erecting durable structures. These places were centres of activity, and they structured the way people interacted with each other, animals and the surrounding landscape (Bailey 2000; Borić 2008). These were the settings for the bulk of activities, daily rounds, seasonal tasks and life-cycles of people. Houses and settlements are places where time and space intersect and fuse, and thus give meaning to the flow of social life.

But there are also marked differences in the way people organised and reproduced their social settings. In some villages, especially in Greece and Bulgaria, houses were close together; people and animals lived together in a cramped social environment. People emphasised the sense of bounded space by digging ditches or erecting palisades around settlements (Fig. 1). Houses were not relocated; instead, they were overlapped, reworked and incorporated

into new buildings. Cycles of destruction, reworking and building over generations created large artificial tells.

In the Northern Balkans, but also Greece, there is evidence of short-lived settlements, consisting of widely spaced wattle and daub houses (Fig. 2). Many houses were (intentionally) burnt down, creating deposits of daub which were moved around or incorporated into pits and other features. New houses were rebuilt elsewhere, and settlements were abandoned after a few generations. There is a general ‘sense of ephemerality’ (Thissen 2005) on extended sites, marked not only by the destruction and displacement of houses, but also of traces of people and animals leaving and coming to the site (Valamoti 2007; Whittle 2007). Evidently, there were other places where

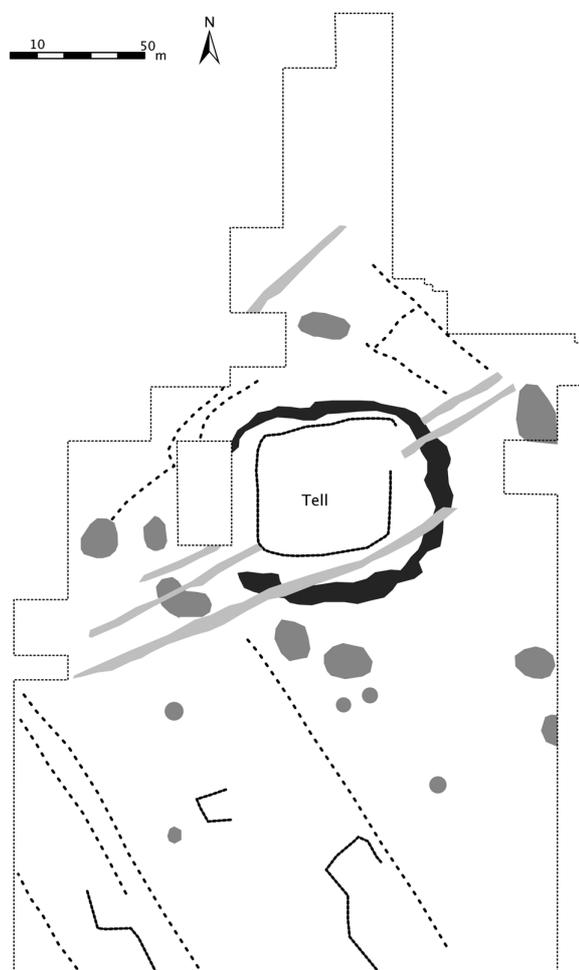


Fig. 1. Eneolithic tell, Podgoritsa (Bulgaria) with off-site structures. The tell is separated from the surrounding landscape by a ditch. Ditches, other linear features (field boundaries or water management structures) and anomalies which might be rubbish tips or off-site structures can be seen in the area around the tell. Gardens were located outside the tell (redrawn after Bailey et al. 1998.Fig. 4).

encounters that advanced the flow of social life took place. But villages with their new social setting and intrinsic temporality were not the only new thing that emerged from new associations. New tasks emerged, based on new associations with people, material culture, plants, animals and landscape. These associations were not uniform, part of a totalising and unifying 'package', but patched together from the 'repertoire', from interrelated sets of the 'new' and 'old' material resources available (Thomas 1999; 2003).

The relative importance of specific cereals such as emmer, einkorn and barley, and legumes such as bitter vetch, grass pea, and chickpea (Kreuz et al. 2005; Marinova 2007; Valamoti and Kotsakis 2007), and animals such as goat, sheep, cattle and pig (Halstead 1996) might differ from site to site, but the importance of cereals and legumes and domestic animals can be seen not only in the quantity of charred plant remains and bones, but also in the new social relations which they embody. It seems that not only were raising crops and tending animals the main economic activities of Neolithic communities, but that their whole life revolved around them "growing crops and raising animals are not just ways of producing food; they are forms of life..." (Ingold 1996: 24).

Gardens

Data from weed composition suggest that intensive garden cultivation was a widespread form of crop production in Neolithic Europe, Greece, the Balkans and Central Europe (Bogaard 2004a; 2004b; 2005). Intensive garden cultivation implies very close relations between people, crops and gardens. It requires a constant human presence, monitoring and working on plots, tilling and protecting crops, manual weeding and manuring. There was a rhythmic flow of substances such as manure and midden deposits to garden plots, and grain, chaff and straw back from the gardens.

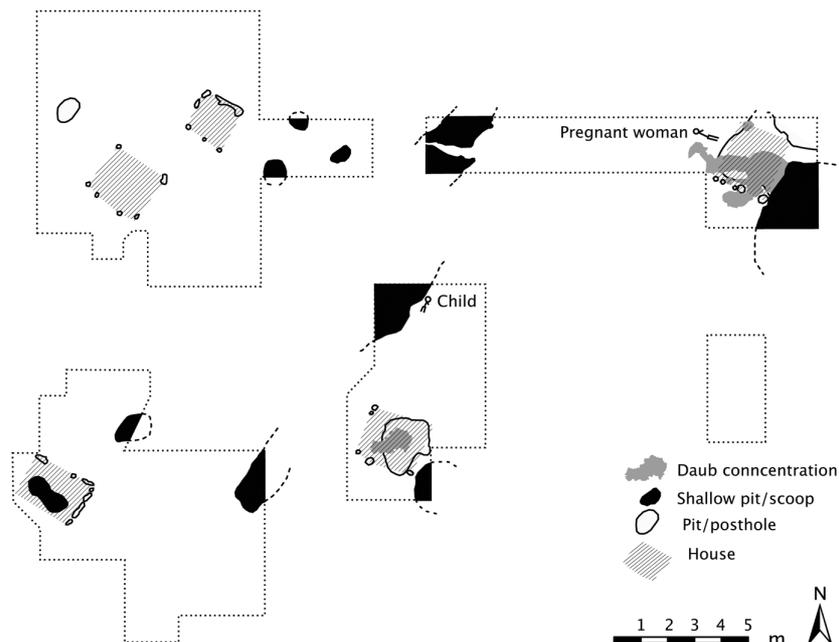


Fig. 2. Starčevo phase of the Divostin settlement (Serbia). Houses separated with open areas, surrounded by large, irregular shallow pits filled with daub, ash and bone. The area between the widely spaced houses was probably used for agriculture (gardens), animal pens, paths, rubbish pits, tips and other activity areas. A pregnant woman and a child were buried next to the edges of the shallow pits. (re-drawn after Bogdanović 1988, Plan I, Fig. 5.7).

This association with plants presupposes strong connections between the rhythms of animals, gardens and people, including grazing fallow land, grazing young cereals to prevent lodging, and protecting ripening crops from animals (Halstead 1996; 2006).

This close association also means the close proximity of garden plots to settlements and houses (Jones 2005). The intensive cultivation of small garden plots can provide enough grain for subsistence (Bogaard 2004b; Halstead 2000; Jones 2005), implying that plots were permanent and not extensive. This is further supported by the lack of evidence of large-scale clearances in the European Neolithic.

On an extended settlement, gardens might be located within the settlement between widely spaced houses (Kotsakis 1999: 73) (Fig. 2). Large shallow features and series of pits filled with domestic debris, including burned cereal processing waste rich in phytoliths, burned bone, fish remains and coprolites, and the burned remains of stock herding (burnt animal fodder, bedding, dung) might be the remains of middens which were spread on gardens (for example at *Ecsegfalva*, Macphail 2007; Whittle and Zalai-Gaál, 2007). At nucleated tell settlements, gardens were located outside the settlement (Fig. 1). Physically demarcated domestic and agricultural spa-

ces in the form of ditches and palisades, as at some nucleated settlements, became a means of creating the identity of households, together with controlling space within the settlements themselves. On the other hand, the close association of gardens and houses at dispersed settlements may have played an active part in the negotiation of social identity within households (Johnston 2005; Kotsakis 1999).

Environmental evidence provides a 'synoptic' view of agricultural tasks on gardens in the seasonal cycle: gardens were sown in autumn (Bogaard 2004b; Bogaard et al. 2007; Marinova 2007); spring for grazing young cereals, followed by weeding, and as a crop ripened, protecting plots; then followed a flow of dense summer activities, culminating in harvest in July or August, with all the processing and storage of crops, then the grazing of fallow, tilling and manuring, and sowing in September or October.

But gardens were not only places of production, but locales where people and animals and plants interact with each other, where environmental knowledge and skills are learned and controlled, and social roles and identities defined, maintained and contested (Johnston 2005.212). Garden plots are places where the rhythmic temporalities of plant growth, the daily and annual rhythms of tasks, people and animals came together and become visible. The rhythm of seasonal tasks associated with tending plants and animals provided a way for people to relate to the garden plots and wider landscape. Through activities and the flow of substances, people and garden plots mutually establish each other.

It is often suggested, based on ethnographic evidence, that gardens were worked and maintained primarily by women, but this might be too simplistic. Following Judith Butler (1990.25), we might say that gender identity was performatively constituted through a series of repeated acts performed on gardens. Activities connected with caring for plants evoked connotations which connected gardens, plants, and activities with certain qualities associated with 'women' (Brück 2005.150–151) and which might become hegemonic and naturalised.

Annual plants, such as cereals, with rapid life cycles, participate in the social world of interpersonal relations, because people can observe their growth (Hastorf 1998; Rival 1993). In this sense, working the garden, caring 'with almost individual attention to crop plants' (Bogaard 2004b.41) and 'establishing the conditions for growth' can be related to caring

for children (Hastorf 1998). The relation between garden plots and people is mutual; people establish the conditions for the growth of plants by working in the garden, and the garden provides food for the reproduction of humans (Ingold 2000).

Gardening tasks are implicitly or explicitly connected with other tasks in the flow of social life; people who work and associate in gardens have patterns of rhythmic movement and association with other people, animals and other places, and these constitute other aspects of their identities. The flow of substances, people and animals links gardens with other places and thus establishes material and conceptual connections between places and activities. The rhythmic temporality of the agrarian cycle can become grounded in different sets of temporalities through complex networks of material, mnemonic and anticipatory relations, which are played out as specific social practices.

In this way, activities performed in gardens acquire their own 'temporal thickness' which extends beyond their duration. Gardens can be described as chronotopes in the same way Keith Basso (1996) calls Apache places locales 'where time and space have fused and where, through the agency of historical tales, their intersection is 'made visible for human contemplation'. Gardens were chronotopes, where many sets of temporalities became interwoven into their biographies through the daily maintenance into gardens, the annual growth of plants and indices of the agency of the ancestors, who created and maintained the plot in the past.

Garden biographies

The biography of a particular clearing begins with the choice of a site for a settlement and the act of making the clearing in the forest and building huts. Clearing, houses and garden plots thus provide durable material evidence, a memory that links the ancestors who created the particular setting with people who live in the clearing, and maintain continuity through the rhythm of seasonal and daily routines.

These people have their own life courses, which are intrinsically connected with the place, houses and gardens. They were socialised in this place, acquired skills and knowledge of how to treat people, crops, animals, and substances. They became skilled individuals, with social knowledge and knowledge of the material world. Their identity was constructed and negotiated through daily and annual rhythms.

Gardens were worked, manipulated, changed and curated, and in this way, their life histories became sedimented and layered. They needed constant daily maintenance and a flow of substances to replenish the nutrients in the soil. By middening a discard from houses, they became incorporated into the matrix of the garden. This changes the properties of the soil, as it becomes organic, fertile and darker in colour (Jones 2005). By accumulating of substances, imprints, residues and traces, the identity of people becomes incorporated into the soil of the plot. These traces can be encountered during daily work; for example, tilling could expose the remains of a midden buried in soil, or pottery or bones. In this way, the agency of the ancestors is exposed and visible. The mnemonic aspects of these locales resided primarily in their constant maintenance, re-building and manipulation as an ongoing flow of agricultural tasks through the seasonal cycle, rather than being complete and finished works (cf. Borić 2002b.50). Their existence was not a given. Left alone for a few months or even weeks, gardens can completely change shape, become overgrown with weeds and abandoned, lacking all sign of human agency.

Laura Rival (1993) writes about Huaorani relations to trees and groves. The slow growth of the trees planted by the ancestors provides a material index of the continuity between generations. Groves provide giving environments, since the people receive nourishment from the past that ensures the feeding of the future through their present practices (Rival 1993). Thus the agency associated with providing the conditions for growth is distributed among ancestors and people.

Gardens, with their accumulated histories, are also media for nurturing the agency of ancestors; but growth and care for annual plants also testifies to the skill, effort and knowledge of the people maintaining them (Malinowski 1965). The rhythmic flows of activities performed in gardens produce and reproduce historical knowledge and moral wisdom (cf. Basso 1996). Gardens exercise their own agency in the process, as they not only provide a context for the growth of plants, but through their material presence, through their continuous transformation during the agrarian cycle, they remind people of the past and serve to shape future conduct.

Gardens and houses

The agrarian year can be divided into a less labour-intensive, but longer 'production period' of establi-

shing conditions for growth through weeding and protecting plants, and brief, but labour-intensive 'working periods' which includes tilling, sowing and harvesting (Marx 1967.Ch. 12). Grain becomes available only after harvest, which marks the end of a long production period; this temporality of 'delayed return' (Woodburn 1980) means that grain must be stored for future use.

After harvesting, grain becomes incorporated into a house – in storage bins, vessels on the floor, bags, and baskets hanging from the ceiling, or stored as sheaves in the rafters (Marinova 2007) and storage pits around the houses. Stored, seeds are dormant, waiting to be consumed, or planted back to the gardens.

Controlling the flow of materials from gardens to storage is an important way of maintaining the identity and coherence of the 'house' (sensu Borić 2008). In her approach to storage, Julia Hendon writes, "storage, whether utilitarian or ritual raises issues of secrecy, memory, prestige and knowledge that help construct the moral system where people live in..." (Hendon 2000.50). Control over the flow of substances and storage is a material embodiment of the ties and claims of houses over gardens. In this way, stored grain not only embodies labour through the agrarian year, but is also the agency and work of the ancestors.

Houses embody a different kind of sociality from gardens. A house is a focus for the accumulation, preparation and distribution of food. It is a place of mutual obligations between its residents; but this also true for whole community, which oversees the whole production process. Thus the house is not necessarily opposed to the community, but is rather an embodiment of various relations expressed at different times in the annual cycle (Harris 1998.78). The transfer of grain to a house and its storage is a period when different relations between people become explicit and identities are contested and negotiated. If the 'production period' is a time of shared work and free association in the open space of the garden, then after the harvest, tasks are confined to the house and focus on storing substances. Thus the seasonal rhythm of agrarian tasks associated with tending annual plants also embodies contradictory social relations of production: one based on collective production, the generalised sharing of work on the gardens, conviviality; the other on the appropriation of crops and their accumulation by houses.

Obviously, there were different ways in which houses were connected with gardens through the flow of substances and people. Saultana Valamoti (2005) noticed that nucleated sites appear to be rich in grain, cereals and pulses, while extended sites are rich in chaff. This is the result of a different flow of substances through tasks in which plants were being used and deposited, the storage of grain in houses and the (intentional?) destruction of houses with storage, and the deposition of burned chaff in pits, hearths, ditches and floors. While burnt grain is an index of storage, chaff is a result of husking, a time-consuming process which was part of the preparation and consumption of grain.

Thus, on nucleated sites, with a clear demarcation of space between settlements and surroundings, and between the houses themselves, the flow of substances between houses and gardens was tightly controlled. An absence of chaff at these sites means that it was disposed of outside the settlement, on gardens or refuse areas.

Domestic waste is not necessarily neutral refuse, but can be invested with vitality (Douny 2007). The flow of refuse from houses to gardens may be part of the 'economy of vitality', where substances are exchanged between gardens and houses, not only establishing conceptual relations between both, but playing an active role in the renewal of both.

On extended settlements, where houses were located amidst the gardens, house refuse was routinely spread on the gardens, blurring the border between gardens and houses (Valamoti 2005). The remains of deliberately burnt houses – daub – was also incorporated into storage pits or spread around the house, and possibly on gardens (Bogaard *et al.* 2007; Macphail 2007).

In this way, different temporalities were conceptually woven together through the power of metaphor. The rhythmic temporalities of house histories and the cycles of residents become connected with the visible growth of annual plants. Burnt daub was 'stored' in storage pits, lying dormant in anticipation of new growth, or 'sown' on gardens.

In the same way as grain was stored, the bodies of children were deposited in storage pits, a practice common in Starčevo and Körös villages; or the bodies of women were deposited in shallow pits and scoops around houses (Leković 1985), and possibly in gardens. Thus, for example, in Divostin, a preg-

nant female was found associated with the edge of a daub concentration, and a child was deposited near a shallow pit filled with chaff (Fig. 2). The fact that the bodies had not been disturbed means that they were deposited at the end of an occupational cycle (Bogdanović 1988). Bodies were therefore 'sown' in gardens, or 'stored' in pits in the same way as daub from a burnt house and seeds from gardens. This is almost a literal citation (*cf.* Borić 2002a; Fowler 2001) of the activities of the agrarian cycle, which evokes the agency of gardens to provide a caring environment for new growth.

Thus, the rhythmic temporality of plant growth that is embodied in grain becomes linked with the temporality of the human life cycle, as grain provides 'conditions for growth' for humans in the same way as humans take care of plants. In this way, the boundaries between temporalities become blurred, and fused, as the garden "*fuses the cradle and the grave (the same little corner, the same earth), and brings together, as well as childhood and old age (the same grove, stream, the same lime trees, the same house), the life of the various generations who had also lived in that same place, under the same conditions, and who had seen the same things.*" (Bakhtin 1981. 210)

The metonymic connections between houses and garden plots would be strengthened by using chaff, chopped straw or even wheat grains as temper for the daub or mud bricks, and possibly straw for roof thatch, a common feature of Neolithic houses in the Balkans and Greece. Through the incorporation of substances imbued with the vitality of the garden, houses might have acquired their powers. The quantities of plant material incorporated into houses were considerable (Stevanović 1997.358–359). House construction was therefore embedded in the agricultural year. It took place after the harvest, when chaff and straw were available in large quantities; but this was also a potentially dangerous time, when there was an opposition between a period of intensive inter-house cooperation during the growing season and a period of appropriation of crops by individual houses.

Peter Gose (1991) describes a house re-thatching ritual in the Andes, where house re-thatching creates more than just a new roof; it is also a festive and even carnivalesque (*sensu* Bakhtin 1984) ritual, held during the seasonal shift from private appropriation to collective production, which plays out the opposing moralities, whose intersection and strug-

gle animate the symbolism of the act and provide its practical grounding.

Social practices are an extension of the body. This also means that the body is also a site of resistance and active struggle against hegemony and hierarchical power. Lefebvre (1991.384) located this struggle in the 'festival', the site of participation and of the possibility of creating new situations from desire and enjoyment. The festival, carnival, is always related to time, either to the recurrence of an event in the rhythmic temporality of the agrarian cycle – such as the harvest – but also to moments of crisis, breaking points and points of transformation (Bakhtin 1984). The carnival, with its emphasis on 'the material bodily lower stratum' (Bakhtin 1984; see also Bailey 2005), on ambiguities of identity, the openness of the body, the fluidity of its borders with the world, its potential to absorb, eject and transform substances, often in a grotesque way (excessive eating, sex, excretion) is a process of transformation of substances through and into bodies and objects. Death, birth, revival and change lead to a carnivalesque, festive perception of the world through affirmations of becoming, ecstatic collectivity, through superseding the individual principle, the demystification of social roles, relations of power, creative growth and flexibility performed through speeches, songs, dances, feasts and profanities.

There is evidence that large-scale feasts were recurrent events in at least the Neolithic of Greece (Halstead 2004), if not elsewhere. In Makriyalos, a massive deposit of animal remains was found that probably derive from large-scale feasting on domestic animals (Pappa et al. 2004). There is evidence that slaughter took place especially in the autumn (Pappa et al. 2004), which was also when the majority of animals returned to the site from summer pasture (Valamoti 2007).

Harvest is a time of abundance, but it also marks a shift of activities and flow of substances from gardens to houses, with a corresponding negotiation of social relations and identities. This is a time when ambiguities embodied in the agricultural year become exposed, celebrated, mocked and subverted through the carnival, with its emphasis on the grotesque, and the body and its transformative powers. It is a time of transformation.

However, a strict structure and tradition always dominates this creativity, and the carnivalesque feast, while it celebrates ambiguities, subverts and renews,

also retains, reinvents and restores the past (cf. Boric 2002b.59–60).

Conclusion

Gardens are places where the rhythmic temporality of annual plants is clearly visible and palatable. By tending a garden during the year, people not only observe the process of growth, but actively participate in it. The generative and regenerative powers of gardens are maintained through work and the accumulation of substances which originate from elsewhere – the house, midden, animal pens. This flow of substances is not only a way of linking houses, gardens, animals and people in a web of relations, but also creates the history of a particular plot. Through the agency of gardens, the substances of humans, plants, animals and ancestors become intertwined and feed into each other. Gardens become imbued with the vital essence of the people, houses, while the animals and substances that originate from the gardens are inalienable to the process of rene- wing society (cf. Fowler 2004.108). Gardens thus form a complex amalgam of temporalities and relations created through rhythmic flows of substances. Here, temporalities acquire a material presence through the agency of the garden. Gardens provide 'material metaphors' (Brück 2004), which are used to produce analogical relations between different tasks and temporalities, woven together by the tasks performed during the year, the movement of people and the flow of substances. Gardens are chronotopes, places where time become palatable and observable.

But the rhythm of seasonal tasks associated with tending annual plants has a breaking point, the harvest, which marks the period of a shift in the flow of activities and substances, with corresponding change in social relations. This transition is associated with a special time, the carnival. Carnival implies change from stability to a state of new possibilities, and is thus an integral part of the year. It is time 'out of time', when substances acquire new forms, and the carnivalesque power of undermining and forgetting through laughter and parody provides the potential for renewal, new growth, change and reproduction.

Seasonal material rhythms not only carried on time and created new material things and substances, but also created new persons. Neolithic persons emerged from a mutual rhythmic engagement between people, animals, gardens and material culture, thus making the 'Neolithic' a historical process.

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Dance in Prehistoric Europe

Yosef Garfinkel

Institute of Archaeology, Hebrew University of Jerusalem, IL
garfinkel@mscc.huji.ac.il

ABSTRACT – *Indications for dancing activities in prehistoric Europe appeared as early as modern humans, at the start of the Upper Palaeolithic era. However, only limited data are available for this stage. In the Neolithic period, evidence for dancing appeared at many more sites, but the territory is confined to south-eastern Europe. The dancing in this case is probably part of the 'Neolithic package', which diffused from the Near East.*

IZVLEČEK – *Prvi indici in omejeni podatki o plesu so v prazgodovinski Evropi povezani s pojavom modernega človeka v starejšem paleolitiku. V neolitiku je podatkov mnogo več in vsi so omejeni na prostor jugovzhodne Evrope. Ples je bil verjetno del neolitskega paketa, ki se je širil iz Bližnjega Vzhoda.*

KEY WORDS – *prehistoric dance; Upper Paleolithic; Neolithic; decorated pottery; figurines*

Introduction

This study presents and analyses dancing activities in prehistoric Europe. This subject covers such a vast geographical area and large span of time, that we must limit our discussion to a number of case studies in order to demonstrate the types of evidence that we have on this very elusive aspect of human behaviour. Researching the dance of past societies is usually limited to historical periods, and relies on written sources or graphic representations of dancing. The history of dance in the ancient world has focused mainly on drawings on Greek pottery of the mid-first millennium BC. Some attention has been devoted to the description of dancing in Pharaonic Egyptian (the second and third millennia BC). In my previous work, I enlarged the historical perspective of dance to include the Early Neolithic period in the Near East, up to c. 9000 BC. Recently, however, it can be shown that the history of dance can be started as early as the first appearance of modern humans in Europe, nearly 40 000 years ago.

Ancient human dance is a very neglected topic of study. Seldom can one find articles dealing with

dance, while books are almost non-existent. The study of dance by archaeologists is challenging for two main reasons:

❶ Dancing activity does not leave visible remains, so the chances of finding foot-prints in a circle, or a group of human skeletons trapped and buried during a dance are minimal. Until relevant data become available, we are dealing with a very fragmented record.

❷ Modern archaeological and anthropological research evolved in western civilization, which is dominated by a Christian point of view. Unlike most other religions, its attitude to dance is negative. In the New Testament, the term is mentioned only once, in the extremely dramatic dance of Salome, which concluded with the beheading of John the Baptist (Mark 6, 21–26). In contrast, the Old Testament described dancing dozens of times, using ten different verbs (Gruber 1981). Indeed, dance is not part of any official Christian liturgy. The unawareness of western scholarship of the importance of

dance in human activity must be seen against this background. This unawareness combined with fragmentary evidence resulted in dance being overlooked even in the very few cases in which it can be recognized. Thus, the first step in developing dance research is to create the intellectual environment which recognizes dance as an important human activity, and opens our mind to the evidence available to reconstruct dance in the past.

Dance is a rhythmical movement which can be classified as a form of non-verbal communication. It is not limited to humans and is preformed by various animals such as bees, birds and mammals. In the animal world, it is always performed by a solo individual. In human society, dance is usually preformed by groups of people, and in a variety of situations. The importance of dance in human evolution has been specifically emphasized by McNeill (1995), while many other scholars have written general introductions as well as discussions of various aspects of dance (see, for example, Sachs 1952; Lange 1976; Royce 1977; Hanna 1987). In traditional societies, dance is a major social activity, as demonstrated by the many dancing activities of the San Bushmen of South Africa (Marshall 1969; Biesele 1978; Katz 1982). Part of this rich ethnographic data, as well as of other human groups, was summarised in *Dancing at the Dawn of Agriculture* (Garfinkel 2003). An important observation is that, after hours of rhythmical circular dancing, a few of the participants often fell into a trance. The trance was understood to be a form of contact between the community and supernatural powers; in other words, a mystical event, the core of religious experience. The clear connection between dance and trance is probably the main reason for the depiction of intense dancing in many religions ceremonies.

Elsewhere, I have summarised the implications of various ethnographic observations for the study of dance (Garfinkel 2003), some of which have direct implications for the archaeological data:

- ❶ Dancing is an activity done at the community level and reflects interaction between people.

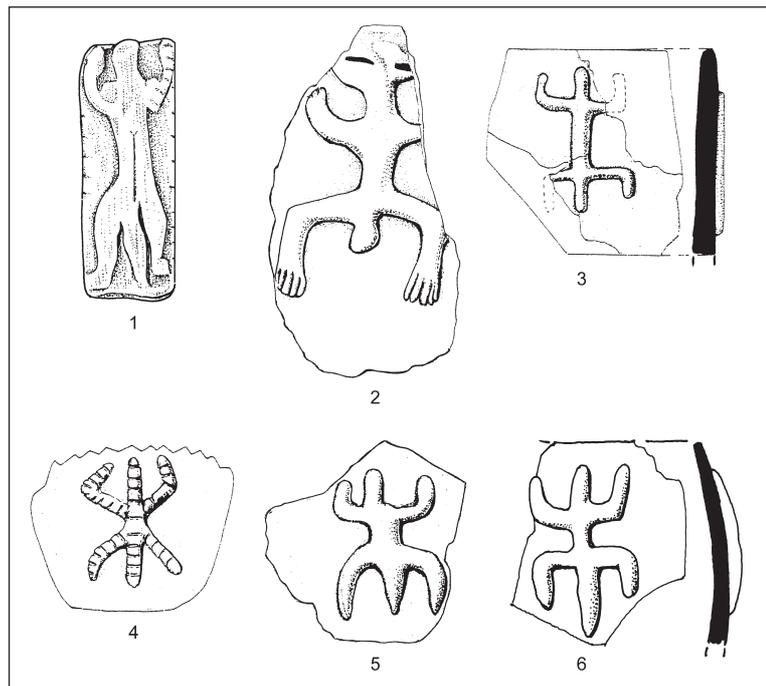


Fig. 1. Dancing male figures. 1. An engraved ivory from Geissenklösterle (after Conard et al. 2006.Fig. 16.2). Applied human figures on pottery vessels from: 2. Villanykovesd (after Kalicz 1970.Pl. 52); 3. Scinteia (after Mantu 1992.Fig. 1.2); 4. Holasovice (after Gimbutas 1982.Fig. 143); 5. Trusești (after Gimbutas 1982.Fig. 144); 6. Trusești (after Nitu 1968.Fig. 1.1).

- ❷ Dancing is performed in an open space, and not within any structure.
- ❸ The activity involves men and women in close proximity, although they do not mix in the same row or circle.
- ❹ The dancing is often performed with special decorative elements: coiffure, head coverings, masks, body paintings and dress. In many cases, the dancers use very elaborate accessories whose preparation begins months before the event itself.
- ❺ Dancing is usually performed at night.
- ❻ Dancing is accompanied by rhythmic music: singing, clapping hands, or musical instruments such as drums or rattles.
- ❼ Dance is an ecstatic event, involving an altered state of consciousness (trance) and is considered a deep spiritual experience by the participants.

The central role of dance in modern hunter-gatherer societies, like the Bushmen of South Africa or Australian Aboriginals, clearly indicates that dance must have been a primal form of human behaviour in prehistory, and played a major role in human evolution (McNeill 1995). Thus, if we wish to have a better understanding of prehistoric societies, it is our duty to trace dance activities when possible. The identification of dance on ancient depictions is not always

clear, but there are a few factors which help us to recognise dance when it appeared. Complete scenes, on either stone slabs or pottery vessels, usually bear the following characteristics:

- ❶ More than one figure is depicted on the item.
- ❷ The figures in any particular scene are usually identical.
- ❸ The figures are portrayed in a dynamic posture, sometimes with bent body, or bent arms and legs.

In light of the above mentioned factors obtained from ethnographic observations, and the artistic criteria, we will examine some samples of dancing activities in Prehistoric Europe, first from the Upper Palaeolithic era and then from the Neolithic.

The Palaeolithic

Upper Palaeolithic (Aurignacian)

In recent years, it became apparent that the earliest modern humans (*Homo sapiens sapiens*) in Europe lived in the Swabian Jura region of southwestern Germany, and dated to c. 40 000 years BP (Conard and Bolus 2003; Conard et al. 2006). In the caves of Geissenklösterle, Hohle Fels and Bocksteinhöhle,

remarkable numbers of symbolic artifacts were found, including anthropomorphic and zoomorphic figurines, an engraved human figure with bent hands and legs, eight bone and ivory flutes, and large quantities of ornaments (Conard 2009; Conard et al. 2006; 2009).

The engraved human figure with bent hands and legs was found at Geissenklösterle (Fig. 1.1; Conard et al. 2006, Fig. 16:2). At the time of discovery, the early date of the item was not yet determined and did not receive much attention. About ten years ago, it was suggested that the figure shows the constellation Orion combined with a pregnancy calendar (Rappenglück 2003). However, before jumping to explanations in the sky, we should try to find explanations on the ground. The elongated human figure is presented as a silhouette. It has an elongated head, neck and torso, all much longer than in actual human anatomy. The two arms bend upwards and end at the same height as the head. This is clearly a non-functional position and the hands do not hold any object. The proportions of the lower body, in contrast to the upper part, are shorter than in humans. The pelvic area is wider than the torso.

The legs are bent slightly downwards, and are not symmetrical with each other. A protruding element between the legs seems to be the male organ, but since it is as long as the legs, it may be understood as an animal tail. Artistically, the figure is symmetrically balanced from both left to right, and the upper part to the lower. This may explain the distortion of the actual anatomy of the head and sex organ. The general impression is created by the bent hands and legs, which give the figure a dynamic appearance, as if it were dancing. Many similar representations of dancing male figures are known from the Neolithic period of Southeast Europe and the Near East (Fig. 1. 2-6; Garfinkel 2003). With its general masculine outline, the engraved figure from Geissenklösterle appears to be male, and is clearly different

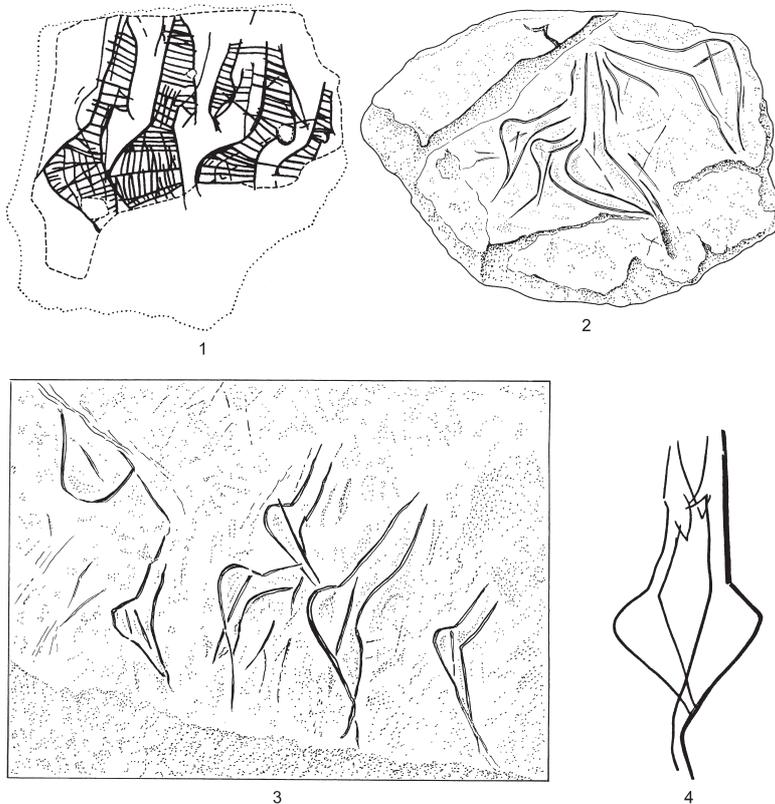


Fig. 2. Engraved stone slabs with dancing female figures: 1, 4. Gönnerdorf (after Bosinski and Fischer 1974); 2-4. Lalinde (after Marshack 1972.308-309).

from typical representations of females in Palaeolithic art. These 'Venus' type female figurines are presented with extremely emphasized breasts and buttocks, as can be clearly seen in the recently discovered ivory statuette from the nearby and contemporary site of Hohle fels (Conard 2009). This engraving presents the earliest known representation of a dancing human figure.

Remains of eight flutes were found in these same caves at the Swabian Jura, some made of animal bones and some of ivory (Conard et al. 2009). These musical instruments were not played at concerts, but were probably used in dance ceremonies. The combination of music and dance is very common, and appeared in every human society: hunters and gatherers, farmers, pastoralists and urban dwellers. Even the Bushmen of South Africa, whose material culture is rather simple, without elaborate music instruments, use plain rattles in dance ceremonies (Marshall 1969; Biesele 1978; Katz 1982).

From ethnographic observations, it is clear that dancing ceremonies are usually characterized by elaborate body decoration, clothing and dance accesso-

ries. The preparation of these accessories was sometimes begun months ahead. Indeed, many body ornaments and a rich assemblage of beads and pendants were found in excavations at these caves (Conard et al. 2006, Fig. 17; Hahn 1972). The combination of the three elements – music, a human figure presented in a dynamic body posture, and rich beads for body decoration – is not accidental, and can be taken as a clear indication of the existence of elaborate rituals involving dancing ceremonies among early modern humans in Europe.

Upper Palaeolithic (Magdalenian)

In the much later Magdalenian period, c. 14–12 millennia BC, an unusual assemblage of dancing figures was found at Gönnerdorf, an open-air site on the eastern bank of the Rhine near Koblenz in Germany (Bosinski 1970; Bosinski and Fischer 1974). This rich artistic assemblage is composed of 224 anthropomorphic figures engraved on 87 stone plaques and 11 anthropomorphic figurines. The engravings on the stone plaques usually present groups of figures, while the isolated representations occurred on broken plaques, so they are probably a part of a larger group. Usually, the figures were depicted in a row,

one behind the other, in profile, most often facing to the right, with up to 10 such figures in a row (Fig. 2.1). Another type of engraving presents only two figures in each scene, facing each other (Fig. 2.2). All these engravings are of girls or young women in half crouching positions, sometimes with their arms partly raised. The excavators suggested that these figures are dancing (Bosinski 1970, 93–94; Bosinski and Fischer 1974). Indeed, these groups of figures are not presented in a daily activity, like hunting, fighting, or holding a baby. The female figures are presented in rows, posed in a dynamic body gesture, both features of dancing.

Dance research commonly classifies dance into three basic types: circle dance, line dance and couple dance (Garfinkel 2003, 41–43). It seems



Fig. 3. Neolithic sites in southeast Europe with dancing figures.

that at Gönnerdorf, we can see two different types of dance. The figures presented one behind the other in profile may indicate a line or a circle dance. But as they are usually depicted facing to the right, this is probably a circle dance with a counter-clockwise movement, typical of dancers in a circle (Garfinkel 2003.44–47). The scenes with only two figures facing each other probably indicate a couples' dance.

Eleven pendant figurines, some 5% of the human representations at Gönnerdorf, were found, posing young females in the same gesture as on the engravings. Sometimes, a few such pendants were found in a pit, indicating that they were meant to represent groups of young females dancing together.

Several similar depictions have been reported from the site of Lalinde in the Dordogne, France (Fig. 2.3–4). In each, a number of female figures appear in the same general silhouette that characterised the female figures from Gönnerdorf. They appear one behind the other, in a row, which indicate that they are following each other, probably in a circle. In his detailed discussion on these engravings, as well as similar items from other sites, Marshack (1972.305–313) defined them as 'buttocks form'. However, the possibility that these engravings represent dancing figures has not been taken into consideration. This is not surprising, as in most of the classic books on

the art of Palaeolithic Europe the term dance is not found in the index at the end of the book. However, the dynamic body gesture, the appearance of a number of identical human figures, their arrangement in a row, clearly indicate a group of dancing females.

The dancing characteristic of these scenes and figurines is achieved by a few aspects:

- a. The same body gestures are repeated for all the individuals.
- b. In each row of figures, all the individuals face the same direction of movement.
- c. Most of the rows are moving to the right, which in a circle would create a counter clockwise movement.
- d. Heads were not portrayed, as the scenes emphasise the group, rather than the individual. This characterised most of the dancing scenes (Garfinkel 2003).

The Neolithic

Dancing figures appeared in many Neolithic sites in southeast Europe (Fig. 3). This is part of a larger Neolithic artistic tradition whose earlier manifestation is known as early as the Pre-Pottery Neolithic B of the Levant in the 9th millennium BC (Bienert and Fritz 1989; Molist 1998; Garfinkel 2003). Later dancing figures appeared at Neolithic and Chalcolithic

sites throughout the Near East: Mesopotamia, Iran, Anatolia, Cyprus and Egypt (Garfinkel 2003). In the 6th millennium BC, dancing figures appeared in Southeast Europe as well (Figs. 1.2–6, 4–7). In my book, published in 2003, examples from 41 sites were presented from Greece (4 sites), Bulgaria and former Yugoslavia (5 sites), Romania and the Dniester Basin (17 sites) and Hungary, Slovakia and the Czech Republic (15 sites). The other parts of Europe were not included in that study, since dancing figures are not a characteristic feature of sites there, although some extremely rare examples are known (see, for example, Nitu 1970.Fig. 5.3; Müller-Karpe 1968.Pl. 199. G, 222.6–7, 223.1; Von Rimute 1994.Fig. 41, Pl. 52.1–2).

Over the years, three different interpretations have been suggested for these depictions:

- ① Representations of supernatural powers, gods and goddesses. The most influential scholar supporting this interpretation was

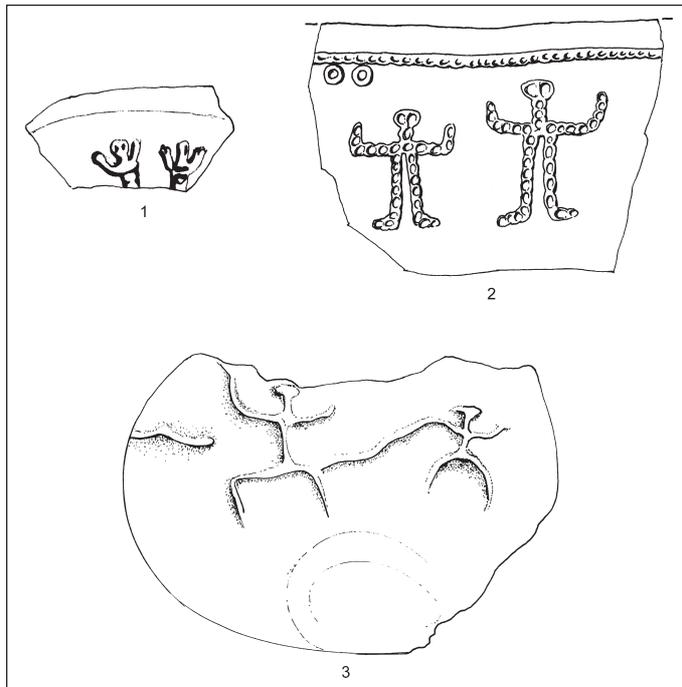


Fig. 4. Applied human figures on pottery vessels: 1. Szegvár-Tüzköves (after Korek 1987.Fig. 24); 2. Gumelnița (after Ionescu 1974.Fig. 1.1); 3. Gomolava (after Gimbutas 1982. Pl. 172).

M. Gimbutas, who created a whole pantheon of prehistoric goddesses: 'birth-giving goddess', 'birth-giving goddess in the shape of a toad', 'bee goddess', 'bird goddess' and 'snake goddess' (Gimbutas 1982; 1989). This interpretation has been accepted by others (see, for example, Kalicz 1970. 52, Pl. 52; Mantu 1992.315). As a result, the two human figures on a large pottery vessel from Dumesti in Moldavia, Romania, relating to the Cucuteni A3 culture, have been interpreted as two goddesses, one of them in a birth-giving position (Maxim-Alaiba 1987.270).

② Representations of dancing figures, basically humans, in cultic activity (Nitu 1970; Marinescu-Bilcu 1974; Garfinkel 2003).

③ Representation of cultic marriage has been suggested in one case. A large pottery jar from Scinteia, attributed to the Cucuteni culture, was decorated with two applied human figures, a male and a female, and was understood as representing 'the great goddess' and her acolyte or the divine couple: 'hieros gamos' (Mantu 1992.315).

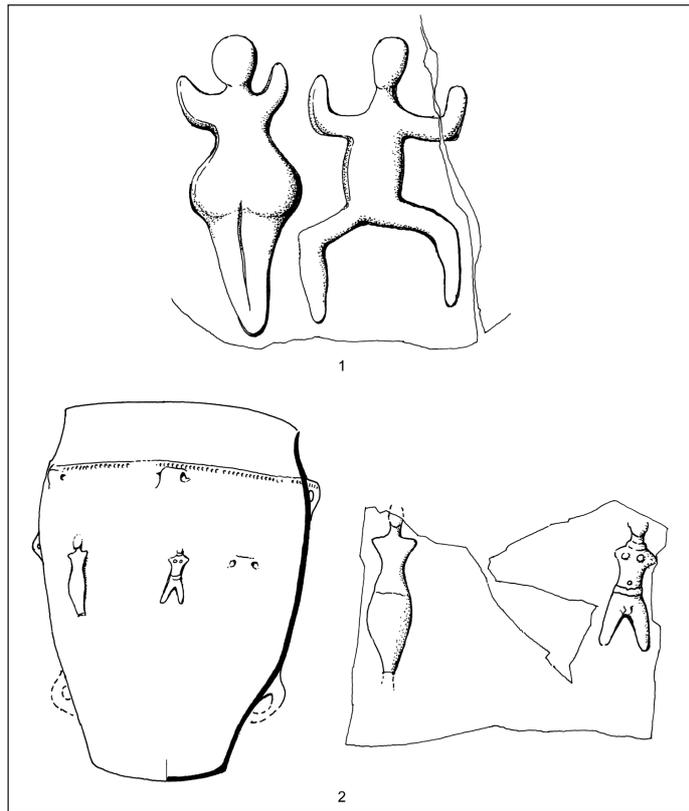


Fig. 5. Applied human figures on pottery vessels: 1. Dumesti (after Maxim-Alaiba 1987.Fig. 13); 2. Scinteia (after Mantu 1993.Figs 2-3).

The early agricultural communities of Southeast Europe in the 6th-4th millennia BC produced large quantities of art and cult objects, such as figurines, statues, anthropomorphic and zoomorphic jars, architectural models and decorated pottery vessels. Dancing figures are a common motif on decorated pottery vessels and have been reported from at least 41 sites. From a technical point of view, most of the items from southeast Europe were decorated with plastic applications. Only a few items were incised, and still fewer were painted. The most common find was a broken sherd with one figure. The complete vessels that have been discovered bear the following characteristics (Fig. 4):

- ① More than one figure is depicted on the item's perimeter.
- ② The figures on the same vessel are usually identical. Only when we have representations of mixed gender, are males and females portrayed differently (Fig. 5).
- ③ The figures are portrayed in a dynamic posture, usually with bent arms and legs.
- ④ No other scenes depicting interaction between people have been reported.

These features suggest the following points:

① A single anthropomorphic figure on a sherd should be interpreted as part of a dancing scene, with several identical figures originally having been depicted around the vessel.

② The scenes represent ordinary human beings in dancing positions and not supernatural powers, as sometimes suggested - e.g. 'male gods', 'the great goddess' (Kalicz 1970.52, Pl. 52; Mantu 1992.315), or the female pantheon created by Gimbutas, with her 'birth-giving goddess', 'birth-giving goddess in the shape of a toad', 'bee goddess', 'bird goddess' and 'snake goddess'.

Close connections existed between the Near Eastern and the European artistic traditions, as was emphasised by Nitu (1970):

- ① The dancing figures appear in the area of Europe closest to Anatolia.
- ② This motif appears in the sixth and fifth millennia BC in both regions.
- ③ In this period, both regions underwent a similar socio-economic development - the process of 'Neolithisation', i.e. the adoption of subsistence strategies for food production and the clustering of large communities into village-type settlements.

- ④ In stylistic terms, many of the European figures appear in the same dynamic postures used in the Near East, and in cases where large parts of the vessels have been preserved, more than one figure appears.

On the basis of these points, it seems that the dancing motif should be interpreted similarly both in the Near East and in Europe. During the process of Neolithisation, some Near Eastern myths and religious practices were adopted by European communities (Garfinkel 1998). The dancing-figure motif is one aspect of this complicated and protracted process.

Dance scenes on pottery vessels

The examples in Figures 1.2–6, 4–5, 6.1–2 illustrate the most common way in which dancing figures were depicted on pottery vessels in the Neolithic period. In southeast Europe, the figures were usually applied to the vessel before firing. In the Near East, the depiction of the motif was done mainly by painting.

Another category of dancing figure is the ‘vessel of the reel type’, known from a number of sites in Ro-

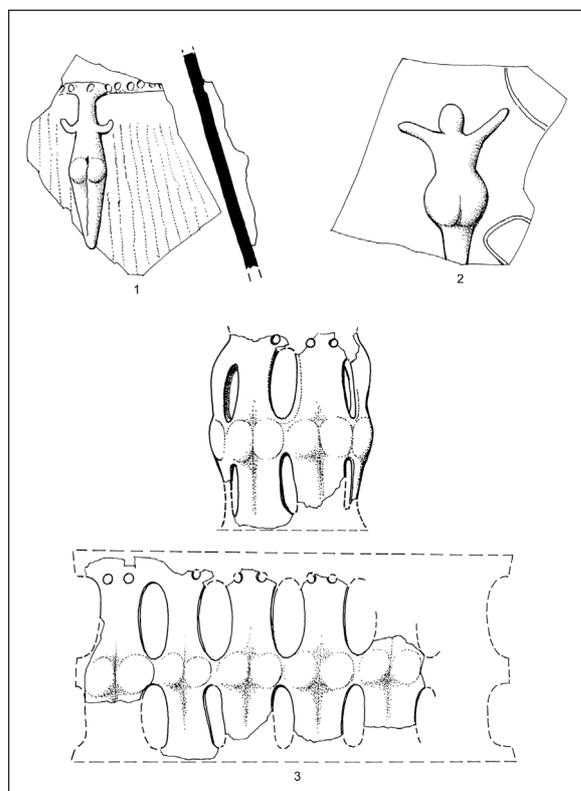


Fig. 6. Applied female figures on pottery vessels: 1. Traian (after Dumitrescu 1974.Fig. 232.1, Nitu 1970.Fig. 10.1); 2. Birlalești (after Nitu 1968.Fig. 3.1); 3. Pottery ‘reel vessel’ from Frumușica (after Marinescu-Bîlcu 1974.Fig. 3.1a–b).

mania related to the Cucuteni A3 culture of the late-fifth millennium BC (Fig. 6.3; *Marinescu-Bîlcu 1974. Figs. 1–3; Dragomir 1987.Fig. 1; Mantu 1993.131–132*). These are either stands or high pedestal bowls, with four to six identical schematic anthropomorphic figures around their circumference. The areas between the openings are identical to each other, and were designed in the shape of a schematic anthropomorphic torso and emphasised buttocks, as seen from the back. The heads, arms and sometimes the legs are not portrayed. These items concentrate on the circle of dancers rather than specific individuals.

Dancing figurines

One of the outstanding phenomena in southeast Europe is the appearance of anthropomorphic figurines that depict dancing figures. The clearest example is known from Dumesti, Moldavia, Romania, related to the Cucuteni A3 culture and dated to the late-fifth millennium BC. A large pottery jar was found buried with 12 figurines, six females and six males. They are depicted in dynamic postures, and were interpreted as dancing figures (Fig. 7; *Maxim-Alaiba 1987. 270*). It is curious that the shape of both the female and male figurines resemble the shape of the female and the male figure found on the pithos from Scintea (Fig. 5.2).

Before being buried, the 12 figurines were probably used as three-dimensional models to show dancing. Ethnographic observations clearly indicate that mixed dances are not common in traditional societies, so it is hard to believe that the 12 figurines were arranged together in a circle. They may have been used for two different purposes. They could have been used to represent two separate dancing circles, one male, and the other female. Or perhaps a couples’ dance was represented, with six mixed couples. Many similar anthropomorphic figurines were found in very large quantities in numerous Cucuteni sites, and possibly a good number of these also represent dancing figures. Since dancing is a large group activity, the association of these figurines with dancing can explain why so many are found.

In the Near East, no dancing figurines are known to date. Only in pre-dynastic Egyptian graves have a number of dancing female figurines been found. At Ma’ mariya, two items were found in Grave 2 and 16 items in Grave 186 (*Needler 1984.336–343*). As in the European examples, the Egyptian clay figurines were depicted in the same body pose as the dancing figures on pottery vessels. In both cases, the figures

had their arms lifted upwards, with hands curving inwards.

Discussion

Dance is not performed in isolation, but as part of a more complex ritualistic activity. Rituals and ceremonies are elaborate events, with a complex set of actions, involving talking (praying, blessing, story telling), eating (drinking, feasting), physical gestures (clapping hands, putting one hands on others' heads) and movement (dancing, moving in procession, circling). While feasting does leave clear and direct archaeological remains (see, for example, *Dieter and Hayden 2001; Goring-Morris and Horwitz 2007; Ben-Shlomo et al. 2009*), dancing leaves only elusive evidence. Thus, researching dancing activities of the past is mainly dependent on the identification and analysis of dancing scenes, many of which have not even been recognised as displaying dance.

Two basic patterns can be observed in prehistoric European dance. For the hunter-gatherer societies of the Upper Palaeolithic, evidence is very sporadic. The few depictions which do exist are spread over a vast geographical area and an immense time span, almost 30 000 years. Nevertheless, they include two significant case studies. The earlier finds, from the Aurignacian caves of Swabian Jura are the earliest known confirmation of modern human figures in Europe, and they are alongside a dancing figure, musical instruments and body decorations. These finds relate to all the basic aspects of dancing: dynamic body gestures, with the hands bent upward and the legs bent downward, musical instruments in the form of eight flutes and elaborate body ornaments used as dance accessories. The later case study is the Magdalenian site of Gönnerdorf, where 224 young female dancing figures were found engraved on stone slabs, plus an additional 11 figurines of young dancing females. This site produced more dancing figures than all the other prehistoric sites combined. Clearly, intensive ceremonies involving dance took place at this location, perhaps initiation rites for girls. The site of Lalinde in the Dordogne produced a few

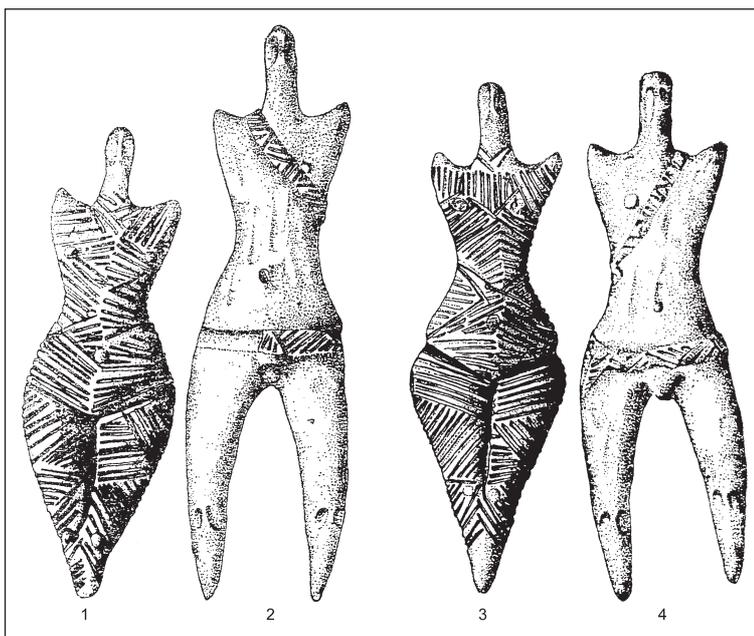


Fig. 7. Four dancing clay figurine from Dumesti, part of 12 items found buried together in a pottery jar (after Maxim-Alaiba 1987).

similar engravings, but no more than 10 young female dancers were presented.

In the Neolithic period, dancing figures were commonly depicted on pottery vessels. The rounded vessel creates an ideal three-dimensional surface on which to present a circle of dancing figures. Sometimes, the figures were applied or painted, and sometimes the clay was melded to create human figures in the round. In one example, 12 dancing figurines were buried together, apparently having been used as a three-dimensional model for dancing. The dancing activity of the Neolithic period is much more limited in time and space than the Upper Palaeolithic. It is concentrated in southeast Europe, and lasted around 3000 years.

In the Upper Palaeolithic period, there are no earlier or contemporary dance depictions in the Near East. In the Neolithic period, however, the dance motif first developed in the Near East, and then, with the diffusion of agriculture, moved into Europe. It first appeared in Greece and Bulgaria, the areas closest to Anatolia, and later spread north, to sites in the former Yugoslavia, Rumania, Hungary, and up to the Czech Republic. Dance was part of the 'Neolithic package' and was probably closely associated with rituals connected with the agricultural cycle of seeding and harvesting.

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The representation of phalli in Neolithic Thessaly, Greece

Stratos Nanoglou

Department of History, Archaeology and Social Anthropology, University of Thessaly, Volos, GR
nanoglou@hist.auth.gr

ABSTRACT – *This paper is an attempt to elucidate a rather understudied aspect of Neolithic imagery from Thessaly, Greece, objects representing phalli, and at the same time to consider the possibility that gender was not a prominent structuring principle in the past, allowing for the fact that phalli did not elicit a pervasive binary categorization of bodies, but instead were invoked in specific circumstances with particular objectives.*

IZVLEČEK – *V članku poskušamo osvetliti faloše, slabo analiziran vidik neolitskega imaginarija v Tesaliji (Grčija), in oceniti možnost, da spol ni bilo ključno in vseobsegajoče načelo v preteklosti. Fáli tako niso služili binarni kategorizaciji teles, ampak so lahko označevali identitete, povezane z drugimi konteksti.*

KEY WORDS – *gender; materiality; representation; phalli; figurines*

Introduction

The view that Greek Neolithic imagery is dominated by female figures has been considered a fact for some time and is still widely circulated (*Gimbutas 1982; Kokkinidou and Nikolaidou 1993.58; 1997.91; Marangou 1991.15; 1992.163; Orphanidi 1998; Perlès 2001.256; Bailey 2005.151*). Usually, this view is accepted unproblematically, either without actual statistics to back it up (*e.g. Kokkinidou and Nikolaidou 1993; 1997*), or with criteria that are clearly projections of current presuppositions, *e.g.* when gender is attributed on account of the general form of the human body, equating women with voluptuous bodies, having protruding buttocks and a thin waist (*Kokkinidou and Nikolaidou 1993; 1997; Marangou 1991; Mina 2007; 2008a; 2008b*). Accordingly, a reassessment of the evidence is long overdue, especially in view of recent work done in other cases where similar assertions were made for years (*e.g. Çatalhöyük, see Meskell and Nakamura 2005; 2007; 2009; Nakamura and Meskell 2004; 2006; 2008; see also Kuijt and Chesson 2005; 2007 for the Near East*). This new work clearly shows that certain

arguments cannot stand scrutiny, and that we need a more rigorous methodology in categorizing bodies, either of clay, stone, bone or flesh. It is mandatory to put our criteria in the open and change our perspective to gain a better, that is a more reflexive understanding of the material. To do so, and in accordance with arguments in favour of blurring our accepted categories and subverting our disciplinary boundaries (*Meskell 2004; 2008; Nakamura and Meskell 2004*), I will refrain from tracing sexed/gendered figurines and instead attempt to follow a different path, one that could produce alternative associations within the material. I will try to map the occurrence of particular traits across types of artefact and ask how these are represented in the various media, focusing on the materiality of each representation and, accordingly, the potential effect on the people using it (*see also Nanoglou 2009a; 2009b; Nanoglou and Pappa 2009*).

Clearly, if someone wished to map all the characteristics usually associated with gender, a significantly

longer treatise than a mere paper would be necessary. Accordingly, and in a further attempt to bring out aspects of Neolithic imagery that have been largely neglected (but see *Marangou 1991*), I will focus on the representation of phalli in Neolithic Thessaly, following recent reappraisals of similar material in other studies (*Meskel and Nakamura 2005; Meskel 2007; see also Nakamura and Meskel 2009; Mithen et al. 2005; Nergis 2008; Özdoğan 2003*). One could argue that this is an insignificant aspect of Neolithic imagery in Greece, but a review of the available numbers shows that it is as good as any, at least as good as vulvae or even breasts (see below). The specificities of the representation of phalli will show that there is an important array of unexplored issues regarding the production of bodies in Neolithic Greece, and will allow us to consider the possibility of ontological questions quite different from our own.

The sample

The discussion offered here is based on an analysis of a sample of more than 1250 figurines from sites all over Thessaly (*Nanoglou 2005.appendix; 2006. 158*). I have examined most of them personally, but for some I had to rely on published reports. In the latter case, I have not used items with no published photos of the relevant anatomical parts. Of course, not all of the objects preserve these parts, so the total number of artefacts on which the research is based is limited to less half of the total (Tab. 1). Before embarking on the analysis per se, a caveat is in order: the sample does not entirely come from controlled excavations or surveys. Some objects do, but many were collected randomly over the years, and many are the product of excavations conducted long ago with questionable retrieval strategies. So, the sample is statistically problematic – one might say, biased – since it was likely that figurines with more pronounced traits would have been favourably treated. I suggest that this, in fact, strengthens one of the arguments of this paper, which is that the occurrence of genitals has been overestimated in the re-

presentational landscape of Neolithic Greece (see below).

There are many issues concerning the identification of a trait as a phallus or a vulva, issues that bear upon the quantification of the sample and the results offered. I will not go over them now, but I need to say that, based on an extensive study of figures from Greece, it seems to me that in most cases the incision usually identified as a vulva is no more (or less) than an incision that separates the legs of the figures, something that is more visible in some examples, less in others, where most probably the representation of anatomical parts is more condensed (*Nanoglou 2005.144, Figs. 3–4*). Accordingly, I will include here only examples where such ambiguity can be reasonably rejected.¹ Considering all that, plus the fact that most researchers have talked about the overwhelmingly female character of representational material in Neolithic Greece, but unfortunately with no actual statistics to verify their claim², it is significant to see the occurrence of genitals on figurines from Greece, to get an idea about this unquestionable fact.

The figures are divided according to their preservation: items preserving the upper torso (at least from neck to waist) are used to tabulate the occurrence of breasts, and items preserving the lower torso (at least from waist to hips) are used to tabulate genitals. The two sets are not straightforwardly comparable and thus any discussion of the occurrence of both breasts and genitals must be limited to figures preserving both the upper and the lower torso (at least from neck to hips). As shown in Table 1, this last category includes somewhat more than half the sample, whereas the number of fragments preserv-

a. Preserving only the upper torso	249	
b. Preserving only the lower torso	175	
c. Preserving the upper and lower torso	386	386
d. Not usable for tabulating breasts	630	
e. Not usable for tabulating genitals		704
f. Total amount of figurines used for tabulating breasts (a+c)	635	
g. Total amount of figurines used for tabulating genitals (b+c)		561
h. Total amount of figurines studied (a+c+d or b+c+e)	1265	1265

Tab. 1. The sample

¹ I realize that this strategy may result in underestimating, rather than overestimating, the occurrence of vulvae, but, given the focus of the paper, I will refrain from a detailed discussion of the issue here.

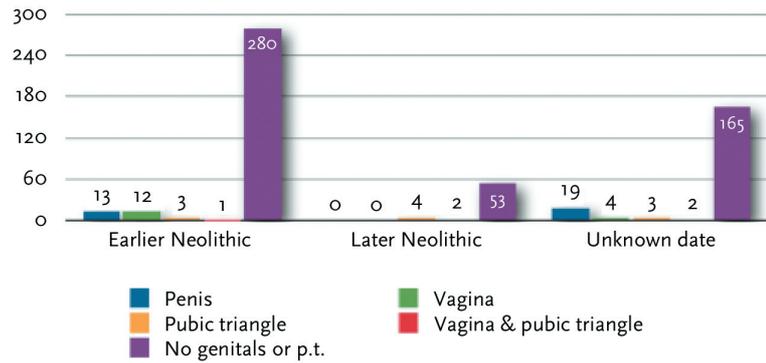
² Both *Marangou (1992)* and *Mina (2008b)* provide numbers and percentages of their categories, but it is not possible to see the characteristics they recognize on each figurine, since there is no catalogue with the traits recognized on each object and therefore our databases cannot be juxtaposed. For a detailed catalogue of my database up to 2004 see *Nanoglou 2004*.

ing the upper torso is more or less twice the number of those preserving the lower torso.

Discussion

A first analysis of the sample is presented in Tables 2–3. It is immediately apparent that genitals and pubic triangles are indeed scarce. In Thessaly as a whole, figures with genitals amount to 9.45% of the total. Breasts, however, are more common, but not very common, either – the percentage is 21.25%³. If we limit the sample to material from excavations rather than unsystematic collection, the figures are almost always even lower (Tabs. 4 and 5)⁴. There are important issues concerning distribution and dating to which I will return presently, but it is necessary to state the obvious: a) the traits on which gender identification are usually based are not that common on the whole, and b) nothing suggests the overtly feminine iconographic landscape, which is often presented (*Kokkinidou and Nikolaidou 1997; Marangou 1991; 1992; Mina 2007; 2008a; 2008b; Orphanidi 1998*). In fact, phalli and vulvae are more or less equally represented, making need to focus on the neglected phalli more critical than ever.

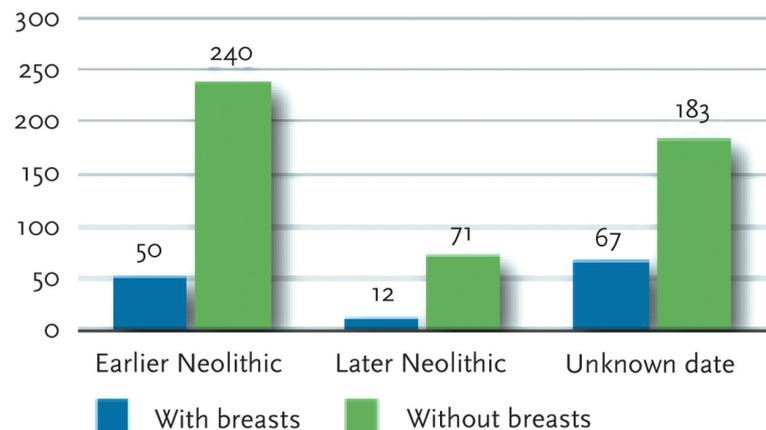
The tables show that most of the artefacts with genitals are from the earlier part of the Neolithic. This difference pertains not only to the absolute numbers of artefacts, but also to the relative percentage of figures with genitals within the total number. From 8.41% in the earlier Neolithic (6500–5300 BC) the percentage declines to 3.39% in the later Neolithic (5300–4000 BC). There is also a decline in the percentage of figures with breasts, but the fall is at first sight less significant (17.24% to 14.46%). It should be stressed, however, that these numbers pertain only to clay figurines; stone figurines, which proliferate during the later Neolithic (*Nanoglou 2008a*),



Tab. 2. Occurrence of genitals and pubic triangles on clay figurines from Thessaly.

show neither genitals nor breasts, something that lowers even further the percentage of figures with genitals and/or breasts in this period (to 11.43% for figures with breasts and 2.60% for figures with genitals). This trend resonates with the diminished desire for detail that is observable in the later Neolithic, when figures focused more on the generic human image (*Nanoglou 2005*; see also below). Although there is great variety during the earlier Neolithic, some types can be teased out of the total population. Generally, phalli are associated with these types of artefact (starting with figurines and moving on to other media):

- ① Human figures with a phallus (Figure 1 and vignette a in Figure 4),
- ② Clay vessels with a handle in the shape of a phallus (Fig. 2),



Tab. 3. Occurrence of breasts on Neolithic clay figurines from Thessaly.

³ The discrepancy between this number and the one provided in Nanoglou (2005:146) is because the 2005 figure includes material coming from both Thessaly and central Macedonia.

⁴ I include here Paliambela, although the site is not in Thessaly, because it has the most rigorous retrieval and sampling procedures (see *Kotsakis and Halstead 2002* and *Katsianis et al. 2008*) and in order to show that there are differences among sites, see also *Nanoglou 2006* and below.

③ Stone pendants in the shape of a phallus (Fig. 3).

I should stress the point already made by Hourmouziadis that all examples of purportedly autonomous phalli (e.g. *Marangou 1991.Fig. 4; Theocharis 1973.Fig. 242*) are actually broken at the base (*Hourmouziadis [1974] 1994.89*), and although they might not be handles, but some other part of a vessel, or part of a different type of vessel, I include them in the second type, since this is the only one with intact examples. Lastly, I should say that I do not include here possible clay pendants in the shape of a phallus (*Kyparissi-Apostolika 2001.cat. nos. 14 and 17*), because I think their interpretation as phalli is rather ambiguous; nevertheless, I think their inclusion would only affect certain aspects and not the whole argument put forward here (mainly regarding the relation of autonomous body parts and their material, see *Nanoglou 2008a*).

A first significant point is that certain representations of genitals show a rather specific geographical distribution (see also *Nanoglou 2006*). For example, a group of figures with a phallus as their only distinctive body part that date to the earlier Neolithic (see *Hourmouziadis [1974]1994.88, Fig. 9* for some examples) was found over the same area, in the southwestern part of the plain of Thessaly (the modern Karditsa-Farsala region). A different subtype of figures with a phallus, again of earlier Neolithic date, is well known from various publications: figures seated



Fig. 1. Figurine with a phallus from Prodromos (Early Neolithic). Photo by the author.

on a stool which often, although not always, have a phallus. Their distribution is wide, ranging from the southeastern to the northwestern part of Thessaly (Fig. 4). This kind of information is not very helpful, but the study of some examples which have gained a lot of attention lately (*Bailey 2005.163–4; Hamilton 2000; Talalay 2000*) can be more informative. This sub-subtype combines the seated posture and phallus with the presence of breasts, and a crescent-like artefact in the right hand, which rests on the shoulder or leg (vignette a in Figure 4). There is also a standing figure with these features (vignette b in Figure 4). A significant point is that all the figures in this group come from nearby settlements – shown with triangles and a diamond on the map – in the middle of the plain of Thessaly (Fig. 4). In this restricted region, then, there is a group of figures that make sense as being seated (at least most of the time), with a phallus and breasts, and holding an object. These are figures that invoke the genitals in particular combinations (namely, in relation to a pair of breasts and a crescent-like object) and, I would suggest, in particular contexts. It would not be out of bounds to say that genitals would have no meaning if they stood on their own.

Site	Number of clay figures preserving the lower part of the body	Number of clay figures depicting genitals
Prodromos	121	5
Otzaki	36	2
Paliambela (central Macedonia)	23	1

Tab. 4. Figures with genitals from selected excavations.

Site	Number of clay figures preserving the upper part of the body	Number of clay figures depicting breasts
Prodromos	126	19
Otzaki	38	4
Paliambela (central Macedonia)	24	11

Tab. 5. Figures with breasts from selected excavations.

It is, perhaps, pertinent that the third type of artefact, vessels (ladles) with handles in the form of a phallus, comprises objects that can be carried in one hand, and are vaguely reminiscent of the crescent-like objects in the hands of the figures mentioned above (or vice-versa). In any case, even if the object depicted on the figures is not a ladle, we still have a correlation between the representation of a phallus and a very specific artefact. Significantly, the vessels are

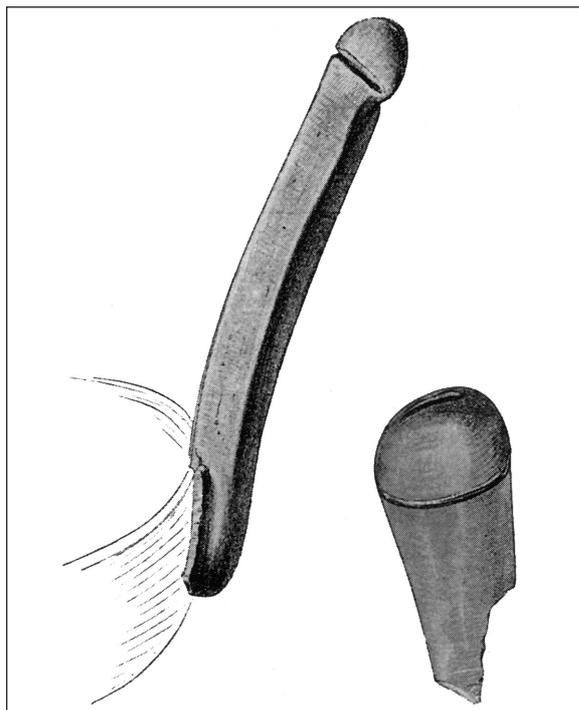


Fig. 2. Ladles with handle in the form of a phallus from Sesklo (after Tsountas 1908.Figs 102–103. Reproduced by permission).

contemporary with the figures, but do not share the same distribution, which should warn us against an easy association of thematically similar representations (although there are two seated figurines with a phallus and protruding breasts from Sesklo, but with no artefact in the hand). On the other hand, it might suggest that similar requirements (e.g. the presence of a vessel with a phallus) materialized through different avenues (either as an actual vessel, or as a figure with such a vessel).

This emerging picture of high specificity is still evident in the last of the types I mentioned: stone pendants in the form of a phallus (unfortunately, most have no clear dating information, see *Kyparissi-Apostolika* 2001, but perhaps of later Neolithic date, *Nanoglou* 2005.152). The general trend during the entire Greek Neolithic was to represent the whole body, rather than just parts of it. The rare finds that represented only a part of the body almost always had a suspension hole and were made of stone. In this case, the stone phallus becomes a detachable part of the body that wears it – if indeed we agree that this was their use – enabling someone to have a phallus, irrespective of its materiality, whether of flesh, marble or any other material. It seems that if someone required a phallus for a specific occasion, then one could as well bring one along (more on this below).

As in other cases, contextual information on the figurines is scanty (*Nanoglou* 2008b), and for the particular artefacts, non-existent. So any inference about their use cannot be strongly supported, but it is possible to suggest that figurines in the earlier Neolithic were used in groups, or at least were comprehensible in terms of groups (*Nanoglou* 2008b). Whatever the occasion of their use, their presence would have affected the frame of reference for whatever actions were taken, and for whatever subjects were constituted. Figurines would have conditioned the way people understood themselves and the world, being material referents for the action taken (see the concept of ‘citation precedents’ coined by *R. Joyce* in *Joyce* 1998; 2000a; 2000b; 2008). So, particular bodies would have been produced in relation to these figures, which framed the field of intelligibility, providing and maintaining models of sanctioned and possibly desirable bodies with which people could identify generically or specifically.

So, how should we approach these artefacts? What kind of bodies were they produced within a world populated by these figures? Were they articulated as part of a discourse that highlighted reproduction? It seems significant that, from the thousands of figures we know, only a Late Neolithic one from Sesklo seems to depict an adult and child (*Theocharis* 1973. *Fig* 56, but see two recent finds from Promachon-Topolnica, *Koukouli-Chrysanthaki et al.* 2007, again of Late Neolithic date). The figure has no genitals or even breasts. Apart from this, the only other case of



Fig. 3. Stone pendant in the form of a phallus from Theopetra (after Kyparissi-Apostolika 2001.PI 33. 24. Reproduced by permission).

figures interpreted as a family (*Gal-
lis 1985; 2001*) is the well-known
building-model from Platia Magoula
Zarkou which contained eight figurines.
These figurines have no genitals,
although some have breasts. They
were deposited as a group, following
an earlier Neolithic tradition, and
they depict some kind of action
(either posture or gesture), again
following an earlier Neolithic tradition.
In fact, the contradistinction between
the actions depicted by the figures
may well have been a significant
feature of the assemblage, whereas
genitals are absent from the scene. It
is possible then that these figures
suggest a categorization of bodies
according to their actions, rather than
their 'gender role' (see *Meskel
and Nakamura 2005; 2007; Nakamura
and Meskel 2004; 2006; 2009* for
similar observations on the material
from Çatalhöyük).

So, again: what kind of bodies were
produced when these phalli were
invoked? Their occurrence is highly
particular, with specific combina-
tions, suggesting that their meaning
resides in these combinations. Phalli
were brought to bear upon the lives
of people in articulations that were
anything but common, and further-
more, seem to have defined a specific
context for them to be 'useful' or
appropriate. As stated, we know
little about their context of use, but
if we presume that they were at
least visible in some gatherings,
of whatever sort, then they would
have affected the whole process of
addressing others and being address-
ed by others. A person would have
been able, and to a certain extent
obliged, to find a place within this
gathering, but also beyond it, in
reference to the figure and the arti-
culation of genitals along with the
other traits. In one distinctive case,
what mattered was the presence of
a body, preferably seated, with
breasts, a phallus and a crescent-
like object. Someone, or many, had
to perform this combination, either
in clay, in flesh or any other possi-
ble material, in order to be able to
represent themselves in an intelli-
gible manner. They may or may not
have had to carry a ladle with a
handle in the shape of a phallus;
they may have had to carry a pen-
dant in the form of a phallus; but
the point is that they would have
to describe themselves by referring
to these fi-

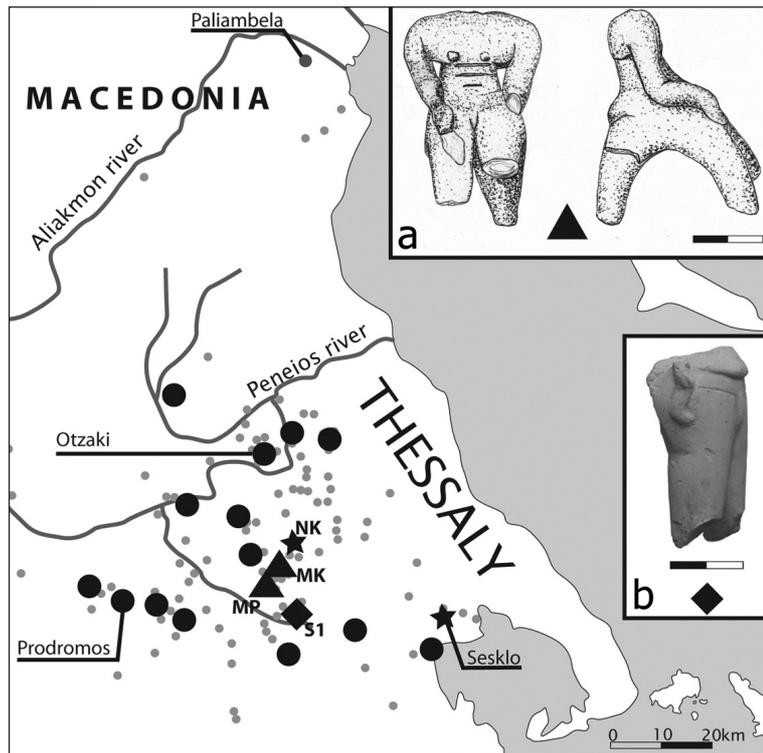


Fig. 4. Map of Thessaly and part of central Macedonia, Greece, with sites discussed in the text. Dots in light grey: sites from where the sample comes. Black dots: sites with figures seated on a stool. Triangles: sites with seated figures with a phallus, breasts and holding an artefact. Diamond: site with standing figure with a phallus and holding an artefact. Stars: sites with seated figures with a phallus and breasts. NK: Nees Karyes; MK: Magoula Koutsouro or Koutouki (*Zappeio 2*); MP: Magoula Panagou (*Chara 1*); S1: *Sitochoro 1*.

gures along with other things, and accordingly produce themselves in relation to these bodies. We could suggest that this was a special role reserved for someone in the long term, or for everyone at a specific time. The discovery of similar examples in different locales suggests an iterated occasion and not a unique event. So these scenes where people, figures and/or vessels converged would probably have been sufficiently institutionalized to produce multiple moments of articulation. However, within the wider context of representational practices, these scenes, or in any case the roles reserved for figures with genitals, were only small elements. The first point is that these figures would have informed the actions and concomitant identity of these people in a way that does not resemble our prioritization of gender. Anthropomorphic figures generally helped produce genderless bodies, by which I do not mean ambiguous bodies (*Talalay and Cullen 2001*), but bodies that did not refer to a categorization according to their genitals. For the most part, the bodies that anthropomorphic figures in earlier Neolithic Thessaly facilitated or imposed cited a varied gamut

of actions (gestures and postures,) and only occasionally genitals, again in relation to specific actions. If the common denominator of these representations was the action performed, and genitals were invoked only in the context of a certain group of actions, then we should seriously consider whether genitals were only a secondary attribute of a particular role in specific scenes where people engaged with these objects and each other. The reiteration of these combinations would have naturalized a body with a general requirement to act (at least, on the particular occasions) and only sporadically to bring along breasts, a phallus and/or a phallus-shaped object. Even then, the body was obliged to do something, not merely have breasts and a phallus. The invocation of genitals was in excess of the general requirements a body had to fulfill in order to be acknowledged as such. Figurines and other representations in earlier Neolithic Thessaly enabled and, perhaps, inflicted a categorization of bodies according to their actions, and reserved the invocation of genitals only for specific contexts where they were needed.

It seems significant that, on a certain level, in most of the cases where phalli are present, they seem to be something additional to the body, at least from our point of view, either in terms of 'superfluous' genitals and/or breasts, or pendants that hang from the body, or even vessels carried around. Whether all these were actually considered additional or not is impossible to know, perhaps; but the point is that at least some of them present the possibility of an ambiguous status, due to their materiality: they can be brought along or left aside; they are not fixed, and their character enables people to invoke them at will. This does not mean that their invocation would not have been sanctioned by certain rules, which would have conditioned any intentionality. We should not see intentionality as an opportunistic endeavour. Despite their transient character, no performance would have been totally unrestrained, and their use in such performances would have been regulated in some way. Besides the theoretical necessity of such rules, the specified articulation of the traits discussed bears witness to them. Nevertheless, on a first level, what matters is that a body that was materialized by drawing on these resources probably bears little resemblance to a body that is produced as either having or not having certain genitals, either having or not having a specific gender. If the sample on which the above picture is based is considered viable, then we can hardly argue that the representational landscape populated by these figures inflicts a categorization of bodies according to

their gender. Instead, it is possible that the invocation of genitals was relevant only for certain people, those who could have had a particular role to play within the community that used the figures. Perhaps the prerequisites for such a role were not confined to a certain body type outside the context of this specific performance; that is, the kind of body someone might have had in the rest of their life was not relevant. What mattered was the body that entered the specific scene, where figurines and/or vessels with phalli were used. It is interesting, and perhaps mandatory, to consider the ontological status of this body: part flesh and bone (and vessels, and organs *etc.*), part clay or stone – a true hybrid (*Latour 1993; Meskell 2004; 2008*) or cyborg (*Haraway 1991*). Even if, today, we can only comprehend this as a body with add-ons, it is still significant that, in order to perform in the particular context (or perhaps various contexts), it required these add-ons, which redrew the contours of the body, its very boundaries and, of course, its very ontological status.

We do not need to interpret the figures as depictions of a certain costume (although this is still a valid possibility; see *Alberti 2001* for a relevant example). The issue is that the figures (and all other objects) entered the scene as articulations that had an effect on people, giving them the opportunity and at the same time the obligation to address others in the presence of the figures, prompting a comparison among bodies that had to be understood against each other. In the scene(s) where these objects were used, there was a need for a body that could and would bring along a phallus, breasts and a ladle. It is not possible to say whether this body need have been of flesh, clay or another material, or perhaps of all of these. The bodies of the figurines were constituted largely in the absence of genitals, which had a role only in specific instances. Given the dearth of contextual evidence, it is difficult to speculate on what these instances were about. The use of a ladle could suggest the use of some kind of fluid, perhaps a bodily fluid (semen?), in an act of transaction between people that utilizes an object as a mediating agent and symbol of the transaction, once again negotiating the boundaries of the body (*Herd 1987; 1999* and papers in *Gregor and Tuzin 2001*; see also *Lingis 1994.Ch. 8; 2005.127–143; Meskell 1999. 46–50; Meskell and Joyce 2003*). The representation of breasts alongside phalli could suggest the parallel invocation of milk. The correspondence of milk with semen, and of breasts with penis in *Sambia*, come to mind here (*Herd 1982*). Could it be that the figure in question, collecting all these mediatory objects

and bodily fluids, synthesizes the various versions of the same substance? And could it be, to follow the reinterpretation offered by Strathern (1988.208–212), that it is not the penis or breasts that make someone male or female, but vice-versa? In Strathern's reading, one's performance activates the relevant aspects of each object, which are by definition both male and female: "*what distinguishes males from females is not their appendages and orifices as such, but the social relations in whose contexts they are activated*" (Strathern 1988.211). Taking this further, we could ask: what if what was activated had little or nothing to do with a pervasive categorization of bodies into male and female, but primarily related to other aspects of one's life, like age (as already suggested by Hamilton 2006; Voigt 2007 and especially Nakamura and Meskell 2008; 2009), or kin relations that marginally related to genitalia? This must remain speculation for the present. What is perhaps more important is to follow Strathern's proposal on another level and, instead of assuming that genitals, breasts or the form of the body, reveal one's identity, start to situate these objects in some kind of context that will enable us to see what kind of associations were possible and desirable in their users' world.

Conclusions

There are two brief points I would like to highlight as a conclusion. First, I hope this paper makes clear that the presence of genitals should not be taken to characterize a priori a 'person as a member of a subspecies of humanity' (Meskell 2000.255). Gender may not have been a primary axis of identification in the past (as was argued some time ago: Hodder 1997; Meskell 2000; Nordbladh and Yates 1990; Ha-

milton 2000; Whitehouse 1998), and so we should attune our analytical methods accordingly. Relevant assertions should be based on more detailed and rigorous work, which could well have surprising results (Mithen *et al.* 2005). The present paper aspires to be such a move forward, although I am fully aware of the weaknesses presented by such poor contextual evidence. The second point has to do with the materiality of the objects and the bodies that the paper is concerned with. We can see how an object can provide persons with what they need, so as to be considered appropriate for the role bestowed on them, yet the object is not transparent or self-explanatory. The case offered here concerns the entanglement of persons with objects, of bodies of different material that are perfectly capable of converging to become intelligible, acceptable and even desirable, albeit on certain occasions. It is a matter of a certain approach that gives precedence to the material world at hand, a world that is populated by certain people in certain historical conditions and therefore inhabited and experienced in particular ways that exceed aspirations for cross-cultural and trans-historical givens.

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Neolithic anthropocentrism: the principles of imagery and symbolic manifestation of corporeality in the Balkans

Goce Naumov

Institute for History of Art and Archaeology, University of Skopje, Republic of Macedonia
gocenaumov@gmail.com

ABSTRACT – *The body in the Neolithic was used as adequate symbolic medium which on the one hand strengthened the crucial features of individuals, while on the other was capable to explicate the essential function of particular objects and constructions. As result to this also the concept of imagery hybridism was deployed which incorporate human body within more complex segments of visual culture and symbolic communication. Considering the variety of human representations it can be deduced that anthropocentrism was one of the main visual principles in the Neolithic Balkans which established corporality as major cognitive reference in explication of human agency and its role in understanding the fundamental symbolic processes.*

IZVLEČEK – *Telo je bilo v neolitiku uporabljeno kot simbolni medij, ki je na eni strani krepil temeljne elemente individualnosti, na drugi pa pojasnjeval bistvene funkcije posameznih predmetov in struktur. Razvil se je koncept hibridnega imaginarija, ki je vgradil človeško telo v različne segmente vizualne kulture in simbolne komunikacije. Iz raznolikega upodabljanja človekovega telesa lahko sklepamo, da je bil antropocentrizem glavno vizualno vodilo, ki je v neolitik na Balkanu uvedlo telesnost kot glavni kognitivni napotek pri pojasnjevanju človekovega delovanja in razumevanja temeljnih simbolnih procesov.*

KEY WORDS – *Neolithic; visual hybridism; figurines; burials; anthropomorphic vessels and models*

The numerous archeological studies in the Balkans have provided a significant quantity of Neolithic ceramic objects modeled in the form of the human body. Some of these anthropomorphic artifacts were common to a particular region, or certain Neolithic phases, thus indicating their area of distribution, as well as chronological determination. Beside these elementary features, figurines and other types of anthropomorphic objects go much further than stratigraphical and regional classification, and signify a general Neolithic approach to the conceptualization of material culture *i.e.* anthropomorphism as a fundamental principle employed for the explication of humans themselves, as well as for their surroundings. The abundance of archaeological data enables detailed research and analysis of corporeality as implemented through these artifacts, thus allowing new

knowledge of the level of cognitive accomplishment, including characteristics of Neolithic visual perception or even religious behavior. Hence, corporeality as one of the most potent agents of complex visual informations might be used in attempts to decipher essential aspects of Neolithic communities.

The aim of this paper is to make a brief generalization of the concept of anthropomorphism, and seek to detect entire forms and media used for its manifestation in the Balkans. Since elements of the human body are not present only on figurines, on this occasion the significance of another visual principle will be accented, which is often applied within Neolithic material. Namely, this considers the implementation of imagery hybridism, which in the domain of anthropomorphism aims to link particular

parts of the human body with objects belonging to those that do not originally have corporeal features. In this way, numerous vessels, models, stamps and 'altars' were produced which include human elements, thus employing their decorated exterior to transpose the substances deposited in their interior into another symbolic category. By involving these artifacts, the concept of anthropomorphism is considerably extended to spheres which do not only exploit the body as a component of identification. On the contrary, within this context, the body obtains a more complex symbolic role with the designation of every detail's specific function in the domain of ideas and messages that should be transmitted through these objects. Therefore, it might be noticed that in the Balkans, anthropomorphism exploits several ceramic forms which are engaged as agents between the principles of Neolithic communities and the essence of substances deposited inside or in the vicinity of these embodied artifacts.

The body as medium

The conception of the human body and the material culture employed for its manifestation induced a developed capability among Neolithic populations for the explicit perception of their own corporeal features, and also for developing a specific approach towards an anthropomorphic definition of space. It should be noticed that Neolithic visual culture is one of the earliest human activities to involve the skillful production of abstract, anatomical and geometrical forms, thus allowing us a deep insight into the cognitive structure of embodied vessels, models, 'altars', figurines *etc.* The apparent approach towards how painted and sculptural media were envisaged offers a possibility of accessing the principles of decoration and modeling in Neolithic material culture. These principles indicate a crucial component for the explication of the most specific objects of the period. The geometric organisation of patterns incised, applied or painted on vessels, and anthropomorphic representations, as well as the symbolic engagement of corporeality, are fundamental categories which could be used in the clarification of figurines and other anthropomorphic objects which depict complete or parts of the human body (Naumov 2009a). In this context, analogous examples from the entire Balkan region are considered, thus enabling a more coherent determination of cognitive maps and the symbolic significance of anthropomorphic images.

Defining the character of the cognitive background lying behind anthropomorphic representations, we are able to comprehend the essential features of Neolithic corporeality and figurative art. This makes it possible to establish the elemental structures applied within media which most often emphasize the symbolic components of the human body, considering also the whole repertoire of stylized or actual patterns and details disposed on figurines and anthropomorphic objects. These artifacts expound the mental processes involved within the symbolic communication among communities inhabiting the whole of the Balkan Peninsula. Therefore, the body has been used as an agent which extrapolates common principles incorporated within corporal functions manifested in the domain of visual culture through various objects, accentuating specific elements of humanity.

Attempting to understand the human body and especially its employment in the imagery of diverse cultures, numerous researchers have contributed abundant on the complex character of the human anatomy and its exact role in social and symbolic relationships (Hamilakis *et al.* 2001; Chausidis 2005; Borić and Robb 2008). Hence, they resolve external body features and the manner of its implementation within visual communication and realm explication. Consequently, a diversity of these are deduced which profoundly elaborate an entire spectrum of possible variations and concepts manifested through the body, and which can be used in this endeavor to comprehend Neolithic corporeality.¹

Due to the vast number of artifacts with anthropomorphic representations, it is possible to define the forms of Neolithic corporeal engagement. On the one hand, there are miniature figurines where the tendency towards actual 'portrayal' of the human body is practiced; while on the other, there is a variety of vessels, models and 'altars' which also bears elements of anthropomorphism. The principles incorporated in the production and perception of these objects allows a determination of the heterogeneous components of Neolithic iconography. Thus, the presence of heads with unified stylized facial features, standardized representation of the male and female body, the distinct position of upper extremities, fragmentations of figurines, their coating with white colouring, as well as the manner of individuals' disposition in burials indicate the thorough treatment of the body as a medium in the Neolithic Balkans.

¹ Here should be accented the works of Benac 1990; Talalay 1993; Skeates 1994; Biehl 1996; Chapman 2000; Bailey 2005; Sanev 2006; Chausidis 2007; Hansen 2007; Fowler 2008.

Anthropomorphic figurines

This group comprises the most numerous category of anthropomorphic objects reflecting Neolithic corporeality (Fig. 1). The figurines represent the basic elements of the human body, thus establishing the principles which Neolithic communities in the Balkans imply as understanding, perception and depiction of their bodies (Bailey 2008; Nanoglou 2005; Naumov 2009a.47–58). Analysis of such objects indicates that there are several elemental forms of representing the human body, each specific to particular Neolithic phases. This includes the stylization and reduction of details in the Early Neolithic, despite the accentuation of physical features and incised decoration in the Late Neolithic (Benac 1990; Biehl 1996; Tasić 2009). Such observation confirms the diverse approach towards modeling bodies of different gender. Thus, female bodies are usually represented with emphasized genitalia, corpulent buttocks, breasts and upper extremities placed over breasts or genitalia, or onto hips; while those of males often bear only genitalia as a gender indicator and, are rarely depicted as a seated figure or with hand placed on head (Naumov 2009b.92). Regarding a case study of sexually determined miniatures, statistical data on published figurines unearthed in the Republic of Macedonia confirm that the production of female miniatures was predominant (Naumov 2009a.49). In contrast, the research on the complete figurine repertoire from Çatal Höyük demonstrates the abundance of asexual representations (Nakamura and Meskell 2009), which should also be tested with further case studies on each Neolithic settlement in the Balkans.

The affinity for female representations in the Balkans specify several social and symbolic aspects incorpo-

rated within the production, employment and significance of these artifacts. Their sculptural treatment (including modeling and decoration) points to data which explicate the social status of certain individuals within Neolithic communities, as well as their symbolic character in rites of passage (Talalay 1993). This is also confirmed by the deliberate fragmentation of figurines – especially female – which are most often excavated in a damaged state, usually broken into several pieces which are rarely found in their entirety. Although all these miniatures were previously considered as unintentionally broken by processes of decomposition, the latest research illustrates that some were deliberately fragmented. During modeling, certain body parts (head, and most often buttocks) were attached with wooden rods or simply attached to their equivalent or torso (Hansen 2004; Naumov 2009a.53). Later, when the figurines were used, this method of construction enabled easier breakage and the separation of particular parts from the torso. This deliberate fragmentation of miniatures was associated with the symbolic treatment of the human body, which in this case is observed as: (i) a process of intentional body ‘dismemberment’, confirmed by certain burial practices (Gheorghiu 2001); (ii) using such objects within various forms of mediation between individuals and communities (Chapman 2000); (iii) their use in rites of passage, when particular individuals change their social status and enter take on a new status (Talalay 1993; Naumov 2009a).

In addition to this aspect of the actual use of figurines, their decorated exteriors also induce a complex symbolic perception incorporated within the principles of corporeality. In Early Neolithic, only a few patterns are depicted on figurines, mainly resembling genitalia, while in Late Neolithic the incision of motifs is much more frequent. The abundance of definite patterns is often associated with their equivalents being present on various objects (vessels, stamps, ‘altars’), which gives rise to questions of their significance and possible mutual relations (Biehl 1996). Detailed analysis of patterns engraved or painted on particular anthropomorphic artefacts confirms that concrete motifs were disposed on exact parts of the represented body, thus accentua-



Fig. 1. Figurines from Veluška Tumba, Madjari and Grgur Tumba (Kolištrkoska-Nasteva 2005.Fig. 3, Fig. 5; Sanev 2006.Fig. 11). Dimensions: 1. 6.0cm high; 2. 6.8cm high; 3. 5.5cm high.

ting the symbolic character of the actual anatomical zone (Naumov 2009b.93–96).

Intramural burials and their relation to corporeal principles

The burials seem to have no essential associations with Neolithic visual culture, yet they are closely related to the symbolic treatment of the human body and its capacities as a social agent. Even in death, the body has been employed as a unit comprising several crucial components regarding both the deceased individual and community associated with them throughout the burial. The unified manner of treating the body during such ritual practices, manifested in the definite positions in which corpses were buried, indicates that particular ideas were to be implemented or transmitted on the basis of corporeal principles. The placing of corpses laterally, as well as the bending of hands and legs towards the torso, is related to perceptions of the body after life, and how it can further contribute to symbolic processes related to death.

In this context, burials within Neolithic dwellings and those practiced inside vessels and sacks or in the interior or vicinity of ovens are particularly significant (Bačvarov 2003; Naumov 2007). The actual position of deceased individuals and the predominance of the skeletal remains of infants and children in the Neolithic Balkans correlated with the anthropomorphic transformation of the space where these rituals were performed (Fig. 2). The rituals were mostly related to ideas of life after death and the symbolic regenerative aspects that such rituals should obtain. Consequently, not infrequently they were partly performed within objects associated with the interior of the female abdomen, thus initiating the production of artifacts which would moreover

support and explicate such cognitive principles. It should be noted that burial practices within houses, vessels and ovens were symbolically strengthened by the conception of anthropomorphic vessels or house and oven models, thus establishing a more potent hybrid relationship between the body and particular objects.

The implementation of visual hybridism in Neolithic anthropomorphic objects

Besides the 'actual' body representations, there are more complex forms of corporeality within Neolithic visual culture. Images of the body are involved in particular hybrid relations with utilitarian objects or constructions intended for preparing and storing food and substances, or in those used as miniature replicas of dwellings (Naumov 2009a). Thus, various types of anthropomorphic vessel, models (of houses and ovens), 'altars' and stamps were developed and employed to stress the symbolic function of these objects, as well as the broader semiotic aspects of human body. Consequently several components of visual hybridism were applied: (i) equalizing the human abdomen with the inner space of the embodied objects; (ii) personification or incarnation of particular individuals or mythical characters by these objects and (iii) objectifying the person being represented. All or some of these components can be incorporated throughout the use of an anthropomorphic object depending on the context and details displayed on the surface. Since such human elements are found on different types of object, the actual linkage between the represented character and concrete object (vessel, house, oven *etc.*) should be considered. The abundant repertoire of anthropomorphic items indicates the complexity of ideas and messages transposed throughout their exterior, use and cognitive potency.

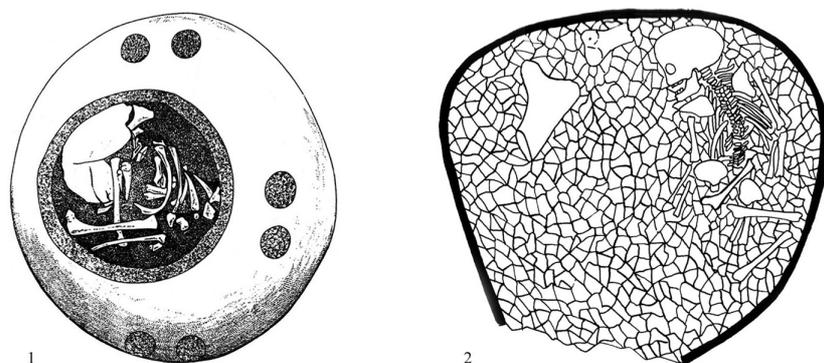


Fig. 2. Infant burials inside deliberately fragmented vessel and oven from Amzabegovo and Curmatura (Nemeskéri and Lengyel 1976.Fig. 242; Gimbutas 1989.Fig. 233).

Anthropomorphic vessels

The representation of the body is not confined only to solid figural objects; it is also applied throughout the modeling of other artifacts, which are seemingly not in anatomical correlation with the body. Among this group of objects, anthropomorphic vessels should be considered on which parts of the human face, breasts, pubis or upper extre-

mities are incised, painted or fastened to their exterior (Naumov 2006; 2008a). Although there are numerous anthropomorphic vessels without gender indication, the majority of those of confirmed gender depict elements of genitalia, breasts or other female features, thus providing further information of perception of female body in the Neolithic (Fig. 3). So far, no vessel has been found in the Balkans on which male genitalia are depicted, indicating the favoring of a certain gender within these forms of representation. The abundant ethnographic data suggests that the symbolic incorporation of female body into such media was reflected not only in how they were perceived, but also in how they were named, thus using terms related to women's social status or biological aspects of their abdomen (Gordon 1977. 224, 225; Elijade 1984. 342; Chausidis and Nikolov 2006; Naumov 2006; Haaland 2007.165; Fowler 2008.51).

Nevertheless, lacking further data on residue analysis, it is still uncertain in which contexts these vessels were used, although burials practiced in the interior of some anthropomorphic or utilitarian equivalents broaden their symbolic perception and use (Nemeskéri and Lengyel 1976.375–410; Hodder 1990.52; Bačvarov 2003.141–142; Naumov 2008a. 97). Despite questions regarding their use, the abundance of visual elements confirmed on these objects enable a thorough insight into spheres in which the human body is consistently or stylistically represented. Therefore, the variety of the repertoire of anthropomorphic vessels provides a new perspective for understanding corporeality and its complexity within Balkans. The presence of such objects throughout the Balkans and South-East Europe in general, substantiate the persistence of human body integration within media which reciprocally display the symbolic aspects of both body and object.

Anthropomorphic house models

The linking of the human body and the house is one of the most complex symbolic categories in Neolithic visual culture. It has been confirmed on various conceptual levels in Anatolia and South-East Europe (Hodder 1990), but its prominent manifestation was



Fig. 3. Anthropomorphic vessels from Tarinci, Orlavat and Drenovac (Kolištrkoska-Nasteva 2005.Fig. 27; Gimbutas 1989.Fig. 83; Stalio 1977.Fig. 203). Dimensions: 1. 7.5cm high; 2. 8.6cm high; 3. no scale.

realized through specific artefacts unearthed in the Republic of Macedonia. Namely, an abundance of anthropomorphic house models were produced from the Early to Late Neolithic in this area which encompass diverse components of corporeality and architecture. In general, these objects are house models atop which a long cylinder with a human face, breasts, pregnant belly or arms is applied, thus incorporating the house into the composite body of the depicted figure (Fig. 4). As with the anthropomorphic vessels, these artefacts mainly embody female characters, although the possibility that some asexual models might be related to male individuals or beings should not be dismissed, despite the fact that there has been no confirmed application of male features recently. Regarding the concentration of details on these artefacts, there were regional variations; thus, architectonic elements were mostly favored in south-western areas (Pelagonia), despite the anthropomorphic exaggeration which is much more common in the north (Naumov 2006).

Anthropomorphic house models have been under constant analysis, and various attempts have been made to define their significance, which mainly considered the predominance of female feature in their visual and religious conceptualization (Sanev 1988; 2006; Chausidis 1996; 2007; 2008; Naumov 2006; 2009a; 2009b; Temelkoski and Mitkoski 2001). Recently, their symbolic relationship with the practice of burial inside dwellings and settlements has been emphasized, broadening the spheres of their involvement in Neolithic cognitive processes (Naumov 2006; 2007; 2009b). This observation was mainly based on the crucial association of the corpse and the house, as well the quantitative abundance of anthropomorphic house model fragments within settlements. As a case study of these objects in Govrlevo confirmed, their frequency is higher than that

of miniature figurines.² Despite the previous interpretation on the exclusivity and rarity of anthropomorphic models, the latest research underlines that they were quite often present and used in settlements, suggesting that they represented deceased individuals or mythical beings.

Nevertheless, although these artefacts require further and much more profound analysis, there are elementary data which enable a general understanding of their visual appearance and significance. The hybrid relationship between house and human incorporated within these anthropomorphic models especially emphasizes that the body in the Neolithic was perceived in a more complex manner, and that the dwelling was not understood only as an object. Surely this could be a reflection of a much more common explication of the living space, which was clarified by means of an anatomical mechanism, or associated with a specific individual.

The embodiment of a significant community member (inhabiting actual or spiritual world) in the ceramic medium additionally strengthens their memory and respect within society, as well as implementing the symbolism of corporeality within the objects (constructions) associated with them and represented by anthropomorphic house models. The presence of several layers of clay coating on some of these artifacts indicates that they were used for long periods and underwent constant treatment and care. Further analysis will confirm whether they were used as lamps, incense burners or altars, although their character as containers for deposited miniature figurines is recently strengthened with new data (Naumov 2009a.56).

Anthropomorphic oven models

The implementation of anthropomorphism in the living space was not confined only to dwellings, but is also found on objects used for daily purposes. Besides anthropomorphic containers for cereals in Top-tepe, other actual constructions featuring human elements are not yet confirmed (Özdoğan and Dede 1998), but considering the ideas of anthropomorphism induced by miniature equivalents, it can be deduced that similar concepts were also applied to the actual constructions. In this context, models of ovens contribute greatly to understanding the components of corporeality involved in such construc-



Fig. 4. Anthropomorphic house models from Majari, Suvodol, Porodin and Govrlevo (Kolištrkoska-Nasteva 2005.Figs. 42, 45, 43; Chausidis 1995.Fig. 6). Dimensions: 1. 39.0cm high ; 2. 16.0cm high; 3. 25.5cm high; 4. 35.0cm high.

tions. Most of the models with anthropomorphic features have been found in Serbia, although indications of human aspects on ovens are present in other Balkan regions (Petrović 2001; Chausidis et al. 2008). On these models, hands and breasts are most often engraved around the opening, while the head was at the top (Fig. 5). As with the previous 'hybridized' objects, the female gender is accentuated among these models, which indicates that the functions of these constructions were explained throughout the female anatomy of certain individuals or beings identified with ovens.

Along the symbolic aspects of ovens, burials practiced in their vicinity or interior contribute furthermore in favor. Some child burials in ovens or in vessels next to ovens found in Romania and Bulgaria imply that this area was symbolically able to realize religious processes intended throughout burials (Bačvarov 2006; Naumov 2007). In this context, the female body was more adequate for the explication of such processes, so it was manifested through a hybrid relationship of body and oven. Surely, this symbolic association was not defined only during burials, but also in the basic use of ovens, *i.e.* bak-

² I would like to thank Miloš Bilbija (Museum of Skopje) for the understanding and supporting my research on anthropomorphic objects from Govrlevo.



Fig. 5. Anthropomorphic model ovens from Medvednjak, Progar and Vinča (Petrović 2001.Fig. 3.1; Vasić 1936.Pl. I.1). Dimensions: 1. 10.0cm high; 2. 6.5cm high ; 3. 10.1cm high.

ing. There is abundant ethnographic data indicating the identification of the female body with the oven, so this should be considered concerning Neolithic communities (Naumov 2006; Chausidis et al. 2008). It is still to be examined whether these models were associated with concrete individuals or were indicators for the humanization of actual objects and constructions used in everyday and ritual life.

Anthropomorphic ‘altars’

Although objects generally termed ‘altars’ are mostly familiar due to their unified table-like appearance and engraved surface patterns (Nikolov 2007), there are some which feature parts of the human body. These include artifacts on which the conventional form (table) is supplemented with head protomes, the torso in a particular activity, or simple applications of the human face to the exterior (Fig. 6). Considering that the ‘altars’ do not depict miniature models of any authentic object, they do not represent a direct lineage between a human and particular form, as is the case with other anthropomorphic models. Therefore, the primary function of ‘altars’ implies several ways in which anthropomorphism was used in these objects.

In particular, these ‘altars’ are not utilitarian items therefore were used for deposition of certain sub-

stances (liquid and vegetal) or miniature figurines which should be symbolically transposed into another realm (Naumov *in print/a*). Consequently, the application of human elements to such artifacts indicates that this symbolic transposition was done under the patronage of a definite character who observes or motivates such activity. This is further strengthened by the attachment of four protomes to the ‘altar’ corners, emphasizing that some of these objects were not associated with one, but with a number of individuals or mythical beings. Regarding the anthropomorphic altars from Donja Branjevina and Porodin, the range of imagery is much broader, so it is hard to define without any accurate archaeological observation.

Anthropomorphic rhyta

Only one rhyton with corporeal features has been found recently – in a Neolithic site at Smilčić; it represents a human in kneeling position, which essentially outlines the entire object (Perić 1996; Mlekuž 2007). Unlike other anthropomorphic objects, it has no depiction of the head or upper extremities; only the lower part of the body is modelled, with evident ‘cutting’ in the area of stomach in order to make a larger opening (Fig. 6.4). The interior of the receptacle is colored in red, particularly accentuating the symbolic significance of the area (Marijanović 2007; Chausidis *in print*).

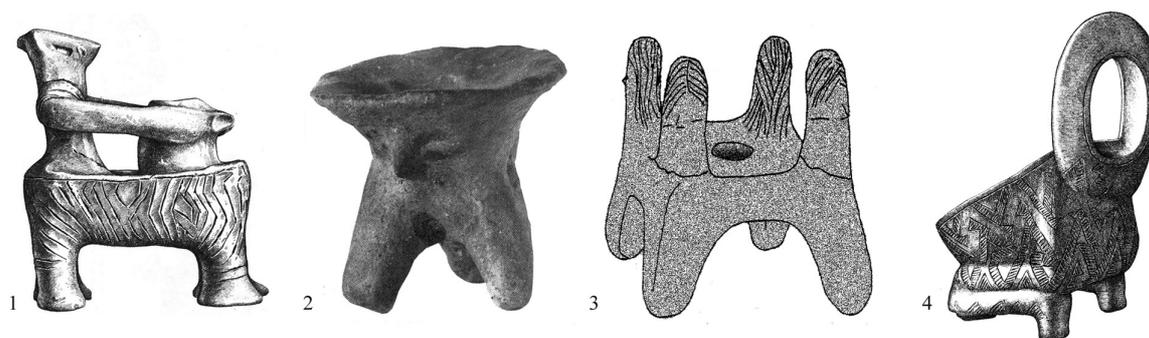


Fig. 6. Anthropomorphic altars from Fafos, Porodin, Donja Branjevina and Smilčić (Garašanin 1979.T. XXXIII: 4; Naumov 2009a.XXXVII: 4; Karmanski 2005.Pl. VIII; Batović 1979.T. XCII: 4).

Considering the primary non-utilitarian function of rhyta, as well as the position of the character represented, it can be induced that the purpose of the object and image was closely related to that of 'altars', and intended to 'offer' the substances in the rhyton (Naumov 2009b.116; *in print/a*). Concerning the area for the deposition of substances *i.e.* the stomach, such symbolic transpositions of material were supposed to occur within the abdomen, which further strengthens the hybrid relationship between the human body and particular rhyta.

Anthropomorphic stamps

These artefacts themselves unify the most elementary aspects of Neolithic miniature figurines and stamps. Their handles are modelled as the upper part of a figurine, while the base or top of some represent heads are decorated with precisely determined patterns (Fig. 7). They were used as stamps, thus the motif on the base or top being imprinted on a soft surface.

The context of their position within sites indicate that they were used during activities concerning bread production or were intended to transmit the semiotic features of represented characters onto material which had to be decorated and symbolically protected throughout by patterns (Naumov 2008b). Although small in dimensions, these anthropomorphic stamps embodied potent cognitive significance, which was spread by the repetition of certain patterns on different products or individuals. Moreover, the representation of human and sometimes animal beings (Türkcan 2007) contributed to the concrete ideas embodied by these artefacts.

The universality of Neolithic concepts of hybridism

Neolithic visual culture, besides anthropocentric forms of hybridism, often employs the animal body to establish particular hybrid relationships with vessels, 'altars', models, stamps *etc.* Although anthropological research has mostly concentrated on the treatment of the human body, zoomorphic hybridism should also be noted, due the suitability of the symbolic potential that some animals possess, which can be embodied by objects, as well used to define certain mythical aspects of these objects.

Although the appearance of hybridism as imagery in the domain of material culture (but not in painting) was primarily a Neolithic advantage, it continued to

be an appropriate visual conceptualization in Prehistory, and also in the later epochs of the Classical period and Middle Ages (Naumov *in print/b*). It can be considered that hybrid forms established in the Neolithic existed among other cultures and civilizations, mostly due to the functionality of such imagery, and the cognitive category and its universal features, which have been common in different periods and in various parts of the world. Consequently, as a result of historical sources and ethnographic data, the context of use of these artefacts has been determined, as well as the repertoire of characters represented by/on them.

Neolithic anthropocentrism

The concept of corporeality and its development in several categories indicate that the treatment of the body was accurately defined and closely related to ideas associated with it. No matter whether the use of a real (*i.e.* deceased) or modelled body is in question, it was included in several spheres of interaction which functioned throughout particular symbolic attributes: emphasizing, gesticulation, fragmentation, and disposition *i.e.* deposition in certain contexts. This metaphorical, but determined use of the body in visual and ritual communication was the result of distinct associations regarding the manner and details engaged in body representations. Therefore, they were commonly manifested through comprehensible components incorporated within the transposition of definite messages and sensual implications. In this domain, visual culture most consistently realized its function *i.e.* its purposes, by means of several imagery media to transmit ideas which should be perceived by individuals present in a particular place. In addition, clay artefacts were promoted as the most suitable objects which could be additionally affected through the application of details that supplement the visual and symbolic implication that they emanate.

Statistical data suggest that the majority of sexually confirmed figurines were female, not considering the numerous complete and fragmented miniatures with no gender features. This information alludes to the fact that the female body was more suitable for embodying particular ideas, which could either refer to portrayed individuals or mythical characters. The predominance of the female gender within Neolithic visual culture is also present in other media. Thus the modelling of anthropomorphic vessels and models of houses or ovens frequently feature elements of the female body. The affinity for representations



Fig. 7. Anthropomorphic stamps from Medvednjak, Govrlevo and Kurilo (Gimbutas 1989.Fig. 21; Naumov 2008b.Fig. 8: 9; Todorova and Vaisov 1993.Fig. 175.15). Dimensions: 1. 6.2cm high; 2. and 3. no scale.

of women provides information on the social relations that individuals established in a given community, and their associations with mythological characters and concepts closely linked with the most crucial cognitive spheres.

Although it is difficult to give conclusive explications of the semiotics of anthropomorphic representations, several considerations might be contributed. Most of the generally confirmed anthropomorphic artefacts are associated with symbolic features of female body, but depending on the object on which they are represented, they were employed in diverse contexts. Miniature figurines usually concern social relations between concrete individuals, rather than the objectification of some Neolithic pantheon. Consequently, particular visual attributes provide information on dynamic changes in status and rites of passage in which the women of a certain community were involved.

Anthropomorphic vessels and house or oven models were included in the sphere of more complex imagery, or even mythological definitions of the objects and the materials deposited in them. Thus, the entire repertoire of anthropomorphic vessels, models and 'altars' – due to their hybrid and exceptionally potent symbolic character – were conceived as 'beings' which were intended to preserve and stimulate the substances or 'inhabitants' deposited in them or in-

side the actual constructions they represent. In this context, it might be deduced that Neolithic communities, in order to explain themselves and the functioning of their surroundings, employed their own bodies as the most logical matrix for defining space and the processes developed through the objects and structures they produced.

Such anthropocentrism has played its role in a common world perception in which it was explicated with the inner space, functions, dimensions

and symmetry of human body. Considering the engagement of their own bodies, Neolithic populations, mainly throughout their corporeality, clarified the lineages between the members of one or several communities, or the complex relationship between them and their realm. They most often perceived and understood better their own bodies, which were manifested as an elementary reference for comprehending the world. Thus, Neolithic anthropomorphism is a logical response to those cognitive positions which humanity supports in the prehistoric phases of its existence. The variations of human body representations in the Neolithic Balkans indicate several principles employed for the clarification of the crucial ontological state of the period. Therefore, it can be considered that the elucidation of such principles manifested throughout corporeality and developed hybrid relationships might contribute towards understanding the complex symbolic processes and essential ideas which were engaged in the explication of Neolithic individuals, communities and their surrounding.

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Göbekli Tepe – the Stone Age Sanctuaries. New results of ongoing excavations with a special focus on sculptures and high reliefs

Klaus Schmidt

Deutsches Archäologisches Institut, Orient-Abteilung, Berlin, DE
kls@orient.dainst.de

ABSTRACT – *The transition from non-food producing to farming societies first took place during the Pre-Pottery Neolithic (PPN) of the Near East. It happened immediately after the end of the Pleistocene, between the 10th to the 8th millennium BC. One of the main questions that have exercised the minds of generations of archaeologists is why people first gave up a hunting and gathering way of life and start to domesticate plants and animals. In other words, why did the Neolithic Revolution take place? The new discoveries at Göbekli Tepe have turned up evidence for explanations that differ from the generally accepted wisdom on this issue.*

IZVLEČEK – *Prehod od skupnosti, ki hrane niso pridelovale, do skupnosti kmetovalcev se je najprej zgodil v predkeramičnem neolitiku na Bližnjem Vzhodu. Zgodil se je takoj po koncu pleistocena, med 10. in 8. tisočletjem BC. Osnovno vprašanje, s katerim so se ukvarjale generacije arheologov je, zakaj so ljudje opustili lov in nabiralništvo in pričeli domesticirati rastline in živali. Z drugimi besedami, zakaj se je zgodila neolitska revolucija? Nova odkritja na Göbekli Tepe so prinesla dokaze, ki spreminjajo sedanje splošno sprejete pojasnitve.*

KEY WORDS – *Pre-pottery Neolithic; Upper Mesopotamia; monumental sanctuaries; anthropomorphic pillars; deities*

Göbekli Tepe: the site and its significance

Göbekli Tepe is one of the most fascinating Neolithic sites in the world. It is a tell, an artificial mound dating to the Pre-Pottery Neolithic. It was not used for habitation; it consists of several sanctuaries in the form of round megalithic enclosures. The site lies about 15km north-east of the Turkish city of Şanlıurfa, at the highest point of an extended mountain range that can be seen for many kilometres around. It is a landmark visible from far away (Fig. 1). Its enormous deposition of layers, up to fifteen metres high, have accumulated over several millennia over an area of about nine hectares. Even today, the place has lost nothing of its magic appeal. For example, a wishing tree which stands on top of the ridge is still sought out by the residents of the surrounding area.

Archaeologists found an important piece of the puzzle in the early history of humanity at the site, which contributes to a completely new understanding of the process of sedentism and the beginning of agriculture. The hill, which is strewn with countless stone implements and large-format, regular-shaped ashlar, revealed its secret as a result of the excavations carried out since 1995 by the German Archaeological Institute in cooperation with the Archaeological Museum in Şanlıurfa (*Schmidt 1995*).

Remarkably, no residential buildings have been discovered. However, at least two phases of monumental religious architecture have been uncovered. Of these, the older layer is the most impressive. The

main features are T-shaped monolithic pillars, each weighing several tons. They were erected to form large circular enclosures, at the centre of which a pair of these pillars towers over all (Fig. 2). The diameters of the circles are between 10 and 20 metres, and the ten to twelve pillars of the circle are connected by walls of quarry stone (Fig. 3). The enclosures have been designated A, B, C and D in a range according to the date of their discovery in the first years of the excavations. Later, enclosures E, F and G were added, but they do not show the monumentality of the other four, and these later enclosures are not discussed fully in this paper.



Fig. 1. The site of Göbekli Tepe seen from the southeast in 2009 (foto Klaus Schmidt, DAI).

The age of layer III and the monumental enclosures is impressive: they can be dated to the 10th millennium calBC, a time when people all over the world were still living as hunter-gatherers, except in the region of the Fertile Crescent of the Near East, where people had started to settle in permanent villages and begin activities which led to the domestication of plants and animals. And there is no question that the site of Göbekli Tepe was not a mundane settlement of the period, but a site belonging to the religious sphere, a sacred area, since the excavation has revealed no residential buildings. Göbekli Tepe seems to have been a regional centre where communities met to engage in complex rites.

The younger layer of Göbekli Tepe has been dated to the 9th millennium calBC. It has been demonstrated that some domesticated plants and animals were already in use during this millennium, and that elaborate settlements had been built, such as Nevalı Çori, which lies 50 kilometres to the north, a site now submerged by the flooding of the Atatürk Dam Lake in 1992 (Hauptmann 1991/1992; 1993). The excavation caused a sensation in the 1980s, as it opened for the first time a new window on a previously unexpected world of Stone Age culture. The type of dwelling excavated at Nevalı Çori, with a living space in front and a rectangular area behind for storing provisions may be considered the proto-

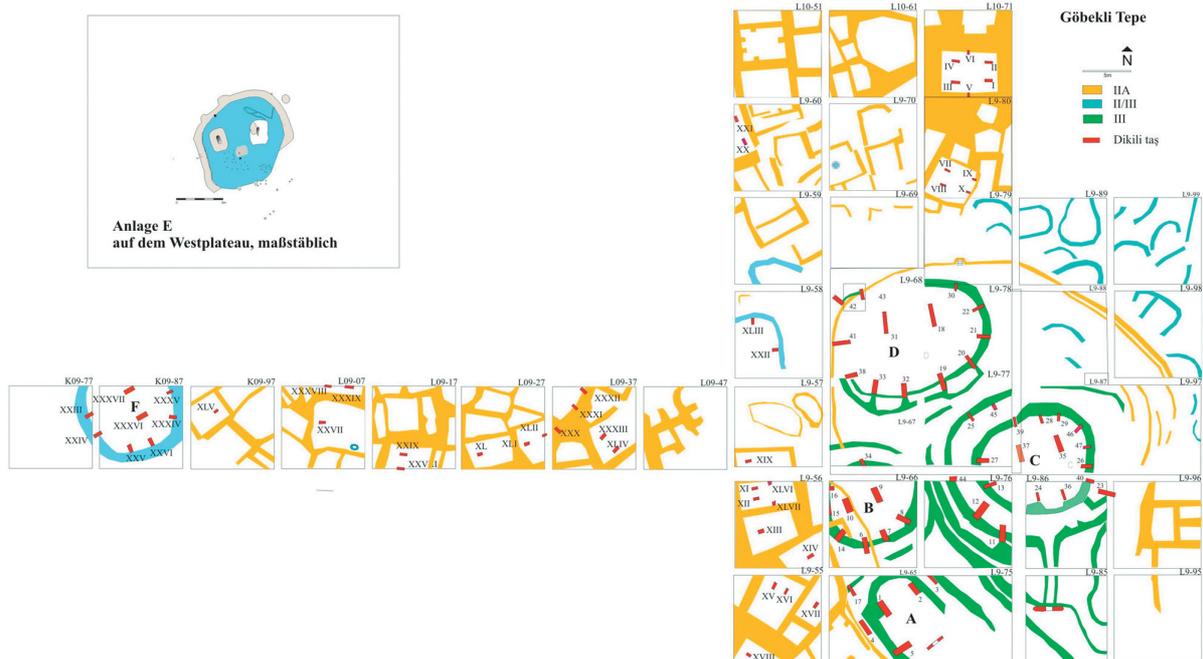


Fig. 2. Göbekli Tepe, schematic map of the main excavation area at the southern slope and the western hilltop, the stratigraphic position of the structures mapped in blue (“layer II/III”) is not determined finally.



Fig. 3. *The main excavation area at the southern slope, spring 2010; in the foreground, enclosure D, followed by enclosures C, B and A (foto Nico Becker, DAI).*

type of the Anatolian farm house that can still be found today. Even then, the houses were up to 6 metres wide and 18 metres long.

But Göbekli Tepe differs from Nevalı Çori; layer II is not a settlement, but it contains a series of sanctuaries. However, the large circular structures of layer III disappeared, to be replaced by small rectangular rooms (Fig. 2). But the main feature of the monumental enclosures, the T-shaped pillars, survived. Therefore, most of the buildings of layer II again can be identified as sanctuaries. But it was not only the scale of the architecture that was reduced – the numbers and size of the pillars are much smaller now. The average height of the pillars in layer III is 3.5m, while in layer II, it is only about 1.5m.

The pillars are made from a very hard and quite crystalline limestone. They are the most durable objects at the site. To produce monoliths with a length of 4 to 5, sometimes even 7m, Neolithic people needed limestone of supreme quality, which can not be

found everywhere. This is one reason the sanctuaries were erected on the Göbekli Tepe plateau, as it consists of limestone of such quality.¹ The pillars are usually connected by the walls which define the inner and outer spaces of the enclosures. The walls are built mainly from ashlar stones, sometimes including *spoliae* – fragments of pillars and other shaped stones common at the site – in secondary use as wall stones. There is a 2cm thick layer of clay mortar between the stones. The mortar causes a serious problem for the conservation of the site. Rainwater is disastrous for it, as the soft clay is easily washed out by water. The same problem exists with aeolian forces, wind erosion again is a big problem. And there is a third danger: insects like to build nests in the spaces between the stones, as the clay mortar is very soft and holes are dug easily. The mortar may originally have been tempered, but the preservation conditions for any organic remains are very bad, with the exception of bones, which exist in huge amounts. But there are almost no other organic remains, as the use of fire at the site has not been

¹ Some years ago, when the construction of the new highway from Gaziantep to Mardin (the highway runs not far from Göbekli Tepe in the valleys west and south of the site) was planned, the engineers wanted to use the limestone of the Göbekli Tepe plateau to produce gravel, as such a hard limestone does not exist elsewhere in the region. The company started coring activity, but it was possible to stop it soon, fortunately.



Fig. 4. Enclosure D seen from the west in autumn 2009 during preparation work for the consolidation of the upright stand of the central pillars (foto Klaus Schmidt, DAI).

noted (contact with fire would help to preserve some of the organic materials by carbonisation, but almost no carbonised material has been found).

It has been a great advantage to archaeology that, after a period of unknown duration, the sanctuaries of the older layer at Göbekli Tepe were intentionally and rapidly buried, a process which seems to have been a certain part of their use from the beginning. The old surfaces that can be observed in the excavations and the processes that occurred in the sediment have been subjected to pedological analyses, allowing the filling to be dated. Moreover, the circumstances in which the structure was filled are a matter for speculation: was the act of filling part of some ritual? Was this ritual carried out repeatedly?

The origin of the filling material is unknown. The provenance of the material is not unimportant, as some 500 cubic metres of debris would be required to backfill enclosure D alone. Moreover, the material is not sterile soil. It consists mainly of chips and pieces of limestone – usually smaller than fist-size – and many artefacts, mainly of flint, but also fragments of stone vessels, grind stones and other ground stone

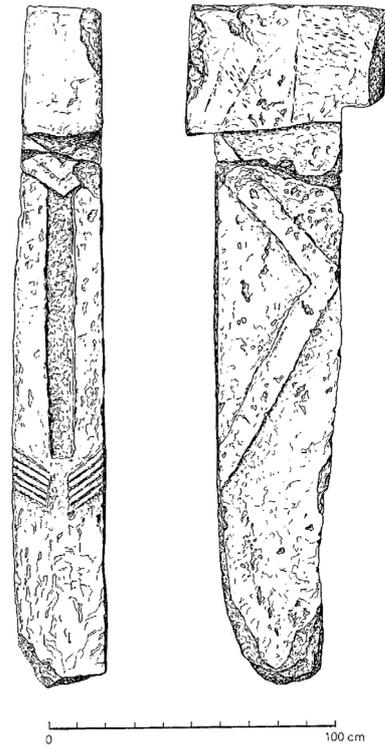


Fig. 5. T-shaped pillar from Nevalı Çori (after Hauptmann, Schmidt 2007.80).

tools. Beside the stone artefacts, there are many animal bones, mostly broken into small pieces as is usual for waste. The bones are primarily of gazelle, but in terms of weight of meat, wild cattle is the most important species. Other species of importance are red deer, onager, wild pig, and wild caprovids (Peters, Schmidt 2004).

There are no domesticated animals or plants. The enclosures date to the period of transition from hun-



Fig. 6. Göbekli Tepe 2006, pillar 18 in enclosure D (foto Berthold Steinhilber).



Fig. 7. Pillar 31, the western central pillar of enclosure D, after being raised into an upright position in spring 2010, height 5.3m (foto Klaus Schmidt, DAI).

ter-gatherer to farmer societies during the 10th and 9th millennia in the Near East.

It should be mentioned that the bone material from the backfilling includes some human bones. Their appearance is similar to the animal bones – they were broken into small pieces; several have cut marks; and it appears that they were treated in a similar way to the animal bones. As the study of these finds (by Julia Gresky, DAI Berlin) is in progress, no final results can be given here. While cannibalism as an explanation of the appearance of the bones within the remains of hunted animals can be not excluded, it seems most probable that these bones attest to the special treatment of the human body after death, a custom known from many PPN sites in the Near East. And it seems probable that the presence of human bones in the filling material should strengthen the hypothesis that there are primary burials somewhere at Göbekli Tepe, burials which were opened after some time for a continuation of very specific rituals performed with the dead.

In recent excavation seasons, surprisingly new discoveries were made in layer III. The floor level was re-

ached in enclosure C and D, which has been under excavation for over ten years. A terrazzo floor was predicted, as such a floor had been excavated in enclosure B. But in both enclosures the floor was natural bedrock, carefully smoothed. As in enclosure E – the so-called ‘Felsentempel’ located outside the mound at the western plateau – two pedestals, where a central pair of T-shaped pillars were erected, were cut out of the bedrock in the centre of both enclosures C and D. But unlike enclosure E, where no pillars or walls survived the millennia, or enclosure C, where the central pillars were destroyed in antiquity, both central pillars in enclosure D survived with no damage, and with a breathtaking height of 5.5m, having stood *in situ* for more than 11 000 years. There is only a small problem regarding their stability, as slope pressure has caused the pillars to shift into a slightly oblique position. Without support or – much better, without the re-erection of both pillars into a vertical and stable position – both would fall down after the removal of the surrounding sediment which covered the enclosure completely before excavation, being the result of the backfilling process during the PPN period. The stabilisation of both pillars – work began in 2009 – was one



Fig. 8. Pillar 18, the eastern central pillar of enclosure D, after being raised into an upright position in spring 2010, height 5.4m (foto Nico Becker, DAI).

of the main goals of the 2010 spring season, a task which has been completed successfully in splendid fashion (Fig. 4). At this point, it must be mentioned that the general goal of the excavations is not to reconstruct Neolithic architecture, but to expose several of the important monuments, to understand their meaning, to keep them in their original find spots, and to protect them from weather and other destructive forces. Only in some exceptions can pillars or other parts of the architecture not remain in their original positions, e.g. the pillars in enclosure D, which had to be re-erected to enable excavations to continue there.

The T-shaped pillars

The T-form of the pillars can easily be interpreted as anthropomorphic, as some of the pillars appear to have arms and hands, undoubtedly human; they are, in other words, stone statues of human-like beings (Schmidt 2006.Fig. 43a). The head is represented by the cross on the pillars, an interpretation supported by a pillar from Nevalı Çori, where a longer face section and a shorter back of the head are observable, corresponding to the natural proportions of the

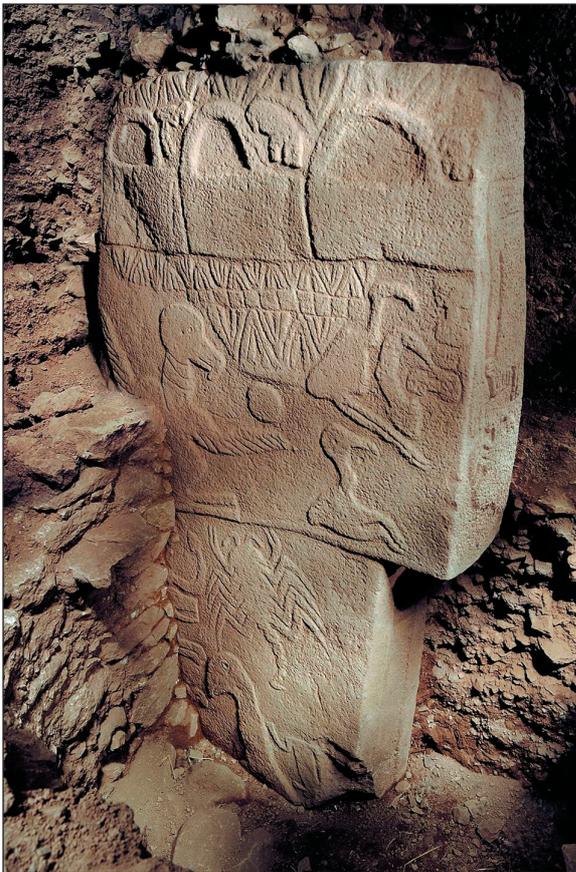


Fig. 10. Pillar 43 in enclosure D (foto Berthold Steinhilber).



Fig. 9. The decorated belt of pillar 18 seen from the southwest in spring 2010 (foto Nico Becker, DAI).

human head (Hauptmann, Schmidt 2007.80) (Fig. 5). Differentiation of the sexes was evidently not intended. It is also clear that the minimalist form of representation was intentional, because other statues and reliefs found at the site offer sufficient proof of the artists' ability to produce naturalist works.

Very often, a specific attribute is depicted on the pillars: two bands in flat relief are visible on the front of the shafts, somewhat resembling a stole and it is highly probable that this motif actually refers to a specific garment. It is possible that only certain persons were permitted to wear the stole, being an important element of a ritual robe. Perhaps the stone buttons, which occur in large numbers only at Göbekli Tepe (Schmidt 2005.Fig. 6), are from a robe of this type.

An important role must also have been ascribed to the pairs of pillars at the centre of each space which tower over the other pillars. It seems probable that they depict twins, because twins, or at least pairs of brothers or sisters, are a common theme in mythology (Lévi-Strauss 1991; Meixner 1995). The explanation that they may simply represent the classic duality of man and woman can be excluded after a recent discovery in enclosure D. The central pair of pillars (pillars 18 and 31) and their flat reliefs depicting arms have been visible for several years (Schmidt 2006.Figs. 73–75, 79–81). The western pillar is wearing a necklace in the form of a bucranium, the eastern one a necklace in the shape of a crescent, a disc and a motif of two antithetical elements whose meaning is not understood. This eastern pillar also holds a fox in the crook of its elbow (Fig. 6).

In the 2009 season, the previously hidden lower parts of the pillars' shafts were excavated (Fig. 7).



Fig. 11. Fragment of a decorated pillar found in the debris of enclosure D, north of pillar 18 (foto Klaus Schmidt, DAI).

It was no surprise when hands and fingers soon became visible, but a few hours later a sensational discovery was made: both pillars were wearing belts depicted in flat relief just below the hands. A belt buckle is visible in both cases, and on the eastern pillar, there are decorations on the belt in the form of H- and C-shaped figures (Fig. 9). However, there is an even more interesting feature: a loincloth covering the genital region hangs from each of the belts (Fig. 8) – the hind legs and tail of what appear to be fox pelts are visible. The loincloth covers the genital region, so the sex of the two individuals is unclear, but since the several clay figurines with belts found at the Pre-Pottery Neolithic site at Nevalı Çori are all male (Morsch 2002.148, Pl. 3, 3–4.6), it seems highly probable that the pair of statues in enclosure D are also male.

The flat reliefs on the T-shaped pillars

Often, the pillars are elusively decorated with reliefs. The motifs often depict animals, but there are some abstract symbols, mainly in the form of the letter H, both in its original position or rotated through 90°. Other symbols are crescents, discs and anti-thetic motifs, and there are two depictions of humans. The first was found on a pillar in enclosure D is presumed to be an ithyphallic, headless man. The second is on a pil-

lar in enclosure F. A standing person with a long neck and head is depicted. Above the person, there is a small dog, recognizable by its tail bent over the back.

However, the reliefs adorning many of the monumental pillars depict a wide range of wild animals such as predatory cats, bulls, wild boar, foxes, ducks, cranes, gazelles, wild asses, snakes, spiders and scorpions (Fig. 10). In the spring season of 2010, north of pillar 18, in the back fill material of enclosure D, a decorated pillar fragment was discovered. The object was probably part of the missing twelfth pillar of the enclosure, as there is a gap between pillars 43 and 30 in the northern section of the enclosure (comp. Fig. 2). The depiction shows a vulture and a species as yet unknown among the images at Göbekli Tepe – the long, coarse ridge of mane along the length of the back of the animal indicates that it is a hyena (Fig. 11).

These reliefs open a view of a new and unique pictorial language not known before whose interpretation is a matter of important scientific debate. So far as can be seen, the mammals depicted are male. It remains a mystery whether the relief images were attributes of the pillars, or whether they were part of a mythological cycle. They may have had a protective aspect, serving as guards, or – perhaps more

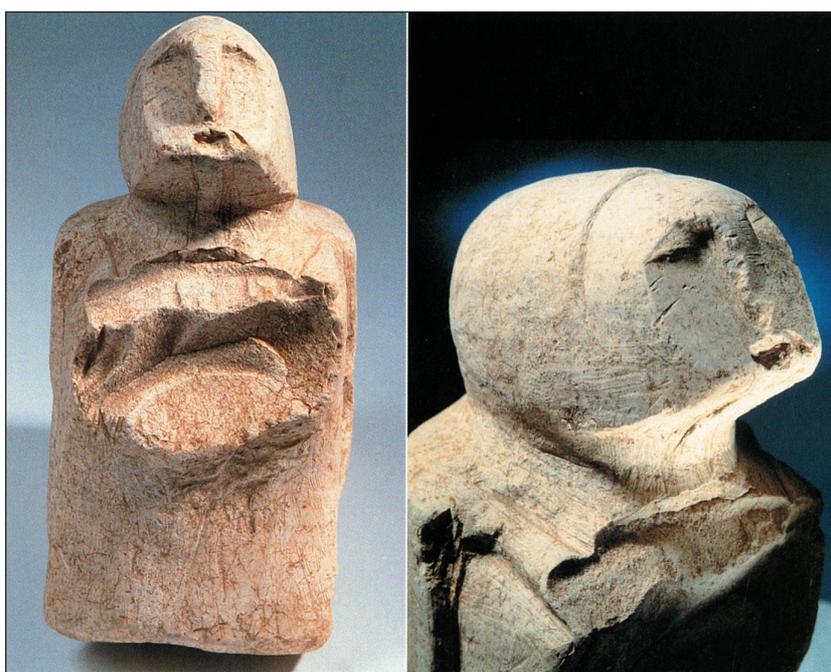


Fig. 12. Nevalı Çori, sculpture of a bird with a human face (after Hauptmann, Schmidt 2007.Kat.-Nr. 98).

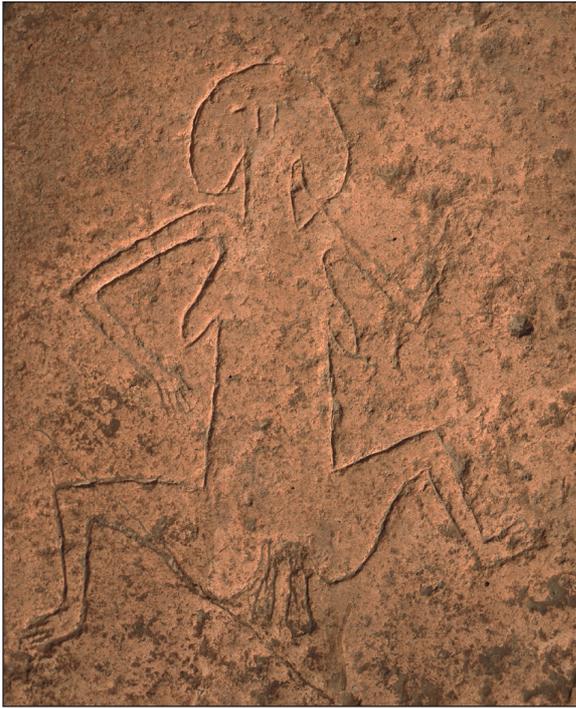


Fig. 13. Göbekli Tepe, engraving of a female person from layer II (foto Dieter Johannes, DAI).

probably – are part of a horrific scenario somewhat like Dante's 'Inferno'.

The animal reliefs are quite naturalistic and correspond to the fauna of the period. However, the animals depicted need not necessarily have played a special role in peoples' everyday lives – as game, for example. They were rather part of a mythological world which we have already encountered in cave painting. The important thing is that fabulous or mythical creatures, such as centaurs or the sphinx, winged bulls or horses, do not yet occur in the iconography and therefore in the mythology of pre-historic times. These creatures must be recognised as creations of higher cultures which arose later. In this context, it has to be mentioned that there is the exception of anthropomorphic beings with animal heads, a group which can be summarised under the term 'goat-demon', creatures already known from Upper Palaeolithic art (Schmidt 2001), but so far not seen at Göbekli Tepe. Another exception is the so-called 'bird-man', a sculpture excavated in Nevalı Çori whose meaning is unclear (Hauptmann, Schmidt 2007.70 Kat.-Nr. 98) (Fig. 12).

At Göbekli Tepe, distinctly feminine motifs are lacking from both the animal and human images. There is a single exception – a naked woman engraved on a stone slab placed between the so-called lions' pillars (Schmidt 2006.235–237, Fig. 104) (Fig. 13). But

it seems clear that this depiction is not part of the original decoration, but more probably belongs to a group of engravings which can be classified as graffiti (comp. pillar 10: Schmidt 2000.23, Fig. 10b). In Nevalı Çori, in contrast, of the clay figurines that have been found nowhere else in such abundance – 700 in number – over 90% are anthropomorphic objects, and male and female figures occur in equal numbers (Morsch 2002). The complete absence of clay figurines at Göbekli Tepe is most remarkable. This surely reflects the different functions of the ritual buildings at each location: while the buildings of Göbekli Tepe have a possible connection with burial customs, at Nevalı Çori, it is possible to examine a village settlement and everyday life. The use of clay as the material for the male and female figures found here is not insignificant. The smaller stone figures that were also discovered exhibit a completely different and much richer iconographic repertoire which repeats the stock of motifs associated with the large stone sculptures and reliefs at Göbekli Tepe.

Non-stylized life-size human heads and statues – guardians of the T-shapes?

It is now clear that the T-shaped pillars have an anthropomorphic identity. But who are they? As their faces were never depicted, they seem to be imperso-



Fig. 14. The Urfa statue (foto Irmgard Wagner, DAI).

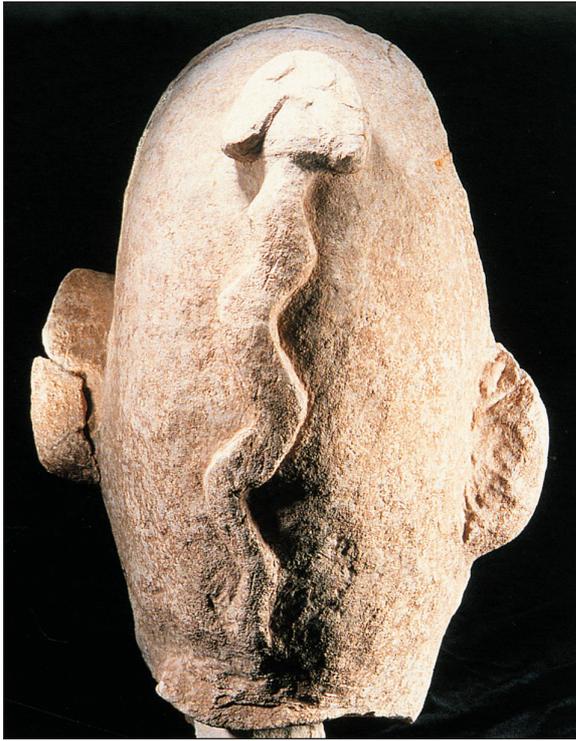


Fig. 15. The 'skin head' from Nevalı Çori (after Hauptmann, Schmidt 2007.Kat.-Nr. 96).

nal supernatural beings from another world, beings gathered at Göbekli Tepe for certain, so far unknown, purposes. Their identity is obviously different from that of the several life-size and more or less naturalistically depicted human heads found at Göbekli Tepe. On the basis of the one completely preserved limestone statue found at Urfa, not Göbekli Tepe, which is male and dates to the Early Neolithic, it seems that the limestone heads are most probably statues of male personages (Bucak, Schmidt 2003; Schmidt 2006.Fig. 93) (Fig. 14). This completely preserved, 1.80m tall limestone sculpture was discovered in the 1990s in the old town north of the Balıklıgöl, where an important Islamic sanctuary is located. According to a local tradition, the prophet Abraham was born in a cave near the springs and lakes nearby. Several observations attest to a PPNA site north of the springs (Çelik 2000) which was destroyed by immense construction works in the 1990s or sealed by the old town of Urfa in medieval times. Fortunately, at least the statue survived; it is a find whose provenance from the PPNA site of Balıklıgöl mentioned above has a very high probability.

The statue has a face: the eyes are deep holes and black obsidian blade segments struck from bidirectional cores. It may be noteworthy that no mouth was depicted. The statue seems to be naked, with the exception of a V-shaped necklace. It is not enti-

rely clear, but it seems that the hands are holding the phallus. Legs are not depicted. Below the body is a conical tap, which easily allows the setting of the statue in the ground, in a way quite similar to that of the Early Dynastic Foundation figurines of ancient Mesopotamia deposited in the corners of sacred buildings (Rashid 1983).

The so-called 'skinhead' discovered at Nevalı Çori (Hauptmann 1991/1992.Fig. 23) (Fig. 15), a life-size human head with a snake atop recalling the Egyptian Uraeus snake which protects the pharaoh, seems to belong to a similar statue. Unfortunately, the face was deliberately destroyed some time in the Neolithic. The remaining part of the head was used as spolia in the northern wall of the terrazzo building, where T-shaped pillars were discovered in the 1980s (for the first time in the world). The snake clearly underlines the importance of the person, but as the skinhead was found in the wall of the terrazzo building, with its T-shaped pillars, it seems most probable that the status of the person depicted by the sculpture is much below that of the T-shaped pillar-statues.



Fig. 16. The 'totem pole' from Nevalı Çori (after Hauptmann, Schmidt 2007.Kat.-Nr. 101).

An answer to the question ‘Who are the T-Shapes?’ may be a little easier when these non-stylized statues are taken into account. The more or less naturalistically depicted statues seem to represent members of our world, powerful and important, but inferior to the T-Shapes, who remain in mysterious, faceless anonymity. The T-Shapes seem to belong to the other world; the non-stylized statues seem to have the role of guardians of the sacred sphere.

There are two other, nearly life-size limestone sculptures of human heads at Nevalı Çori. They belong to composite motifs reminiscent of the totem-poles of the Native Americans of the northwest coast. One head is placed in front of a large bird, probably a vulture (*Hauptmann, Schmidt 2007.68 Kat.-Nr. 95*), which seems to be holding the head in its claws. Unfortunately, the lower and upper parts of this sculpture are not preserved. Therefore, the preserved part of the sculpture could be only the ‘medial’ part of a possibly much larger composite statue which – stressing comparisons with totem poles again – originally included many other motifs.

A similar situation is visible on a second object: another large bird (again, probably a vulture, but the



Fig. 18. A ‘totem pole’ from Göbekli Tepe, excavated in October 2010 (foto Nico Becker, DAI).

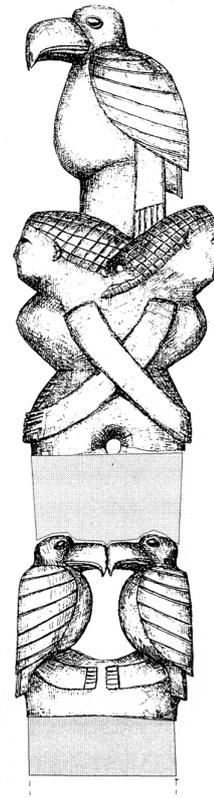


Fig. 17. Tentative reconstruction of the ‘totem pole’ from Nevalı Çori (drawing Klaus Schmidt).

head is missing) is clasping in its claws two human heads (*Hauptmann, Schmidt 2007.67 Kat.-Nr. 101*) (Figs. 16 and 17). Unfortunately, this fascinating sculpture was destroyed some time in the PPN, and only some pieces survived, buried in the north-eastern bench of the terrazzo building, where they were discovered when the bench was removed at the end of the excavations. But the overwhelming majority of the elements of the sculpture – which again was originally a little similar to a totem pole made of limestone – are lost. A recently discovered sculpture from Göbekli Tepe (Fig. 18), which has to be analysed in detail in the near future, may help us to understand better the meaning of these object.

These sculptures are mentioned here to demonstrate that, clearly, not all life-size human heads belong to statues of guardians. There are more variants of art objects where three-dimensional sculptured human heads would have been used. From Göbekli Tepe, one example fits into the group bird/ animal and human head (*Schmidt 1997/98.Fig. 9, Nr. A10*). This motif is probably related to the well-attested skull cult of PPN cultures.

Four human heads are known from Göbekli Tepe; they probably belong to sculptures similar to the

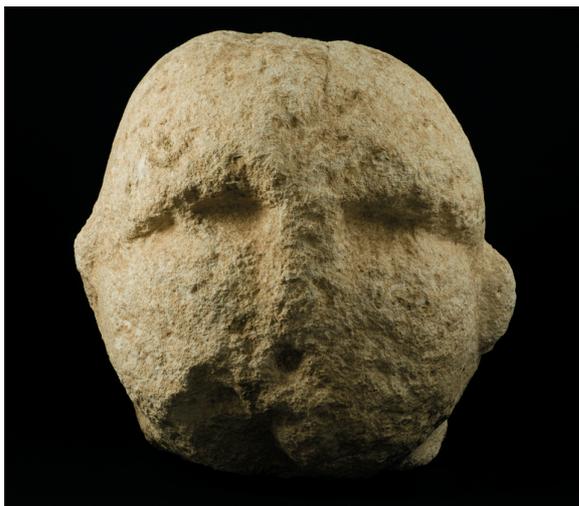


Fig. 19. Göbekli Tepe, life-size human head, limestone, height 23cm (foto Nico Becker, DAI).

Urfa statue. The first was discovered in 1998 in the filling debris of a building complex which was erected in superposition to enclosure A (Schmidt 1999. Pl. 2,1-2, Kat.-Nr. A5). Again, the mouth is not depicted. There are two other pieces, which are not well preserved (Kat.-Nr. A32, 50). The fourth life-size human head was discovered at Göbekli Tepe in spring 2010 in the filling debris directly east of pillar 31, the western central pillar of enclosure D (Fig. 19). It is broken at the neck, and there is damage around the mouth, but the rest of the head is preserved quite well. Its find spot can be understood as an offering of the head during the filling process of enclosure D. The life-size human heads from sites in the Urfa region are listed in Table 1.

A medium-size statue found in 2008 at Göbekli Tepe could represent a further category of statues (Fig. 20), particularly with regard to its less than life-size dimensions and the body being reminiscent of the 'Beterstatuetten' of the New Sumerian period in Lower Mesopotamia (Braun-Holzinger 1977). We are far from a final assignment of these objects, but the appearance of this statue – the face looking slightly upwards at someone much more powerful, the hands in front of the body, but without presenting the male genitals, which remain invisible – all these elements seem to corroborate that this statue shares its main characteristics with the New Sumerian 'Beterstatuetten'.

The north-western hilltop

In the 2009 campaign, a second excavation field was opened on the north-western hilltop of the mound. As expected, architecture typical of layer II, with

small rectangular rooms and small T-shaped pillars appeared in most of the trenches. A flat relief is visible on the surface of one of these monoliths, easily identified as the upper arm of the 'pillar', as the depiction of arms is a very common attribute in layer II, underlining the anthropomorphic meaning of these objects.

But the layer II structures did not cover the eastern row of the new trenches. Under surface layer I – a layer characterized by dark humous sediments produced by farming on the site – a brownish-grey sediment appeared. It included a lot of limestone gravel, but almost no stones larger than fist size. Such sediment is typical of the filling debris of the enclosures of layer III. Expectations that a structure of Layer III lay below the filling were soon justified, as the upper part of a megalithic pillar was found, to all appearances in situ. There is no question that this pillar is part of a so far unknown enclosure that had not been detected by geophysical investigations in previous seasons (Schmidt 2009b). What is not clear is the extent and orientation of the new structure.



Fig. 20. Göbekli Tepe, sculpture of a man with beard, limestone, height 66cm (foto Dieter Johannes, DAI).

The discovery of a so far unknown megalithic enclosure in the new excavation areas on the north-western hilltop was in fact not really a surprise, as it is known that geophysical methods do not map structures buried deep below the surface. The single monumental pillar found in this area was nearly 1m below the surface. Other pillars which can be expected to belong to the structure have not been discovered, which obviously can be explained by the suggestion that the missing pillars and walls are buried quite deeply. Therefore, they remained invisible in the geophysical record.



Fig. 21. Porthole stone from enclosure B (foto Irmgard Wagner, DAI).

But another find from these areas is unique so far and very exciting. It belongs to the group of so-called porthole-stones. All the objects in this category share general characteristics. One face of the stones, the face we may call the lower face, is always completely plain, while on the upper face there is a high and broad collar around a central, usually rectangular hole. In appearance, these objects somewhat resemble an oversized hat with a broad brim; the difference to real hats being that in the centre of the object there is a large rectangular hole, which could originally have been used to crawl through the stone (Fig. 21).

Similar objects are well known *e.g.* from megalithic barrows of Atlantic Europe. Stone slabs with a central hole were placed in several barrows vertically so that the stones defined the entrance leading into the darkness of the grave (*e.g. Reden 1978.215, Fig. 85'Los Millares'*). At Göbekli Tepe, quite similar

stones exist in monumental dimensions; one lying on the northern slope of the southeast plateau is over 3m in length (*Schmidt 2009a. 216*). But most are of medium size, and some are *en miniature*, which can only be understood as their being models of the larger ones that actually allow a person to crawl through the porthole.

The porthole stones of Göbekli Tepe were known from the beginning of the investigations. A quite large example was observed during the author's first visit to the site in 1994. The stone, broken in several pieces, but nearly complete, was visible in a stone heap in the depression between the north-western and south-western hilltop. Unfortunately, however, the object disappeared during the ensuing years, as the site was affected by stone robbery (for house foundations) until the excavations of the site were fully established in 1996. Smaller fragments of port-

Probably guardians	
"Urfa statue" (<i>Bucak, Schmidt 2003; Fig. 14</i>)	broken, but completely preserved life-size statue
Nevalı Çori, "skinhead" (<i>Hauptmann, Schmidt 2007.70 Kat.-Nr. 96; Fig. 15</i>)	only head, no face preserved
Göbekli Tepe, head no. A5 (<i>Schmidt 1999.Pl. 2,1-2</i>)	face completely preserved
Göbekli Tepe, head no. A32 (unpublished)	no face preserved
Göbekli Tepe, head no. A50 (unpublished)	bad preservation
Göbekli Tepe, head no. A69 (unpublished)	bad preservation
Göbekli Tepe, head no. A75 (<i>Fig. 19</i>)	nearly completely preserved
Probably related to skull cult	
Nevalı Çori, bird and one human head (<i>Hauptmann, Schmidt 2007.68 Kat.-Nr. 95</i>)	only head, lower part of face destroyed
Nevalı Çori, bird and two human heads (<i>Hauptmann, Schmidt 2007.67 Kat.-Nr. 101, Figs. 16 and 17</i>)	Head 1, nearly completely preserved Head 2, no face preserved
Göbekli Tepe, animal and human head, no. A10 (<i>Schmidt 1997/98.Fig. 9</i>)	lower part of face destroyed

Tab. 1. Life-size human limestone heads and statues from PPN sites in the Urfa region



Fig. 22. Enclosure C with the two central pillars set on pedestals cut out of bedrock, autumn 2008 (foto Klaus Schmidt, DAI).

hole stones were found scattered all over the mound during the survey of 1995 (Beile-Bohn et al. 1998. 45–47, Fig. 19 'Pfeilerbasis'). These objects were called 'portable pillar base' at that time because of the similarity observed between these objects and the two pedestals of the so-called 'rock temple', a structure cut out of the natural bedrock, now numbered as enclosure E (Schmidt 2006. Fig. 35). The pedestals have an oval tub-shaped hole in the middle of the object. Already in the first year of investigations, 1995, an explanation was given for them, which has now been confirmed: they were identified as the bases of the (now lost) central pillars of the rock temple. The function of the holes was reconstructed such that the lower part of the pillars was set in and fixed there. During the excavations of enclosure C in 2008 and enclosure D in 2009, both pairs of central pillars were found still in situ. Their bases are placed exactly in the way as the rock pedestals, as supposed in 1995 in the case of enclosure E (Fig. 22).

The more or less close similarity between the rock pedestals and the objects now called porthole stones was the reason for the original designation 'portable pillar bases', but during the sixteen years of excavations many fragments of such stones have been

discovered in both layers II and III, although no situation was ever found confirming the suggestion that the feet of the pillars were fixed by such portable stone frames. A medium-size stone of this group, for example, was found in the centre of enclosure B, immediately in front of the central pillars (Schmidt 2006. Fig. 34) (Figs. 20 and 22). Its function was obviously that of a porthole stone; it is only unclear if the stone was placed vertically in the enclosure wall or horizontally in the middle of the roof – if a roof existed, this being an unanswered question.

Returning to the new trenches on the north-western hilltop: a megalithic porthole stone was discovered south of the single monumental pillar in the new trenches (Fig. 24). The stone appeared in an oblique position on top of debris which should belong to layer III, given its composition of mainly stones smaller than fist size, with quantities of earth or clay between. The object is of similar monumental dimensions to the porthole-stone on the southeast plateau mentioned above. The excavated stone has lost some parts of its rim, but the remaining piece, nearly 3 x 3m, is unbroken. What never was observable on the (more or less complete or fragmented) porthole stones excavated so far at Göbekli Tepe can now be seen: the stone has two portholes, two adjacent re-



Fig. 23. Enclosure B and its portholestone in centre (foto Irmgard Wagner, DAI).

ctangular openings. But this so far unique double porthole is not the only astonishing feature. On the southern rim is a flat relief of a very large snake. On the western rim there are high reliefs of three animals. In a direction from south to north, a bull, a billy-goat and a predator showing its teeth are positioned. A high relief with a very similar animal was found in the same season in the northern profile of a trench in the west of enclosure D (Fig. 25). Again, the tail of the beast is curved at its back. The repetition of the motif underlines the observation that there was a fixed canon of depictions which was unveiled step by step and year by year.

At present, it is not possible to present an interpretation of the shape, with its two entrances and the decoration of the porthole stone. It is not clear if the porthole stone is just lying in the debris, separate from other structures, or if it belongs to an architectural context, like the porthole stone found in enclosure B ten years ago. But we can recognize that pillars were not the only objects to which high reliefs were added, as seen in the case of the predator sitting on the stomach of pillar 27, a masterpiece of stonemasonry (Schmidt 2008c, Fig. 2g). Several high reliefs on limestone slabs of unknown size and shape now seem to have

originally been parts of porthole-stones, e.g. the predator found atop the wall east of pillar 36 in enclosure C (Schmidt 2006, 151–156, Figs. 63–64 No. A35).

It is not the first time that animals have been found depicted on the rim of a porthole stone at Göbekli Tepe. There are several fragments with reliefs, but the motifs are quite small, or the preservation of the surfaces was so poor that there remained doubts as to whether a relief was present; it is possible that the form in question was not an image, but an irregularity in the stone.



Fig. 24. Huge porthole-stone in situ in new excavation area on the north-western hilltop of the mound, depicted scale 0.5m (foto Oliver Dietrich, DAI).

At the so-called ‘lions gate’ at the entrance of the ‘Dromos’, a structure south of enclosure C which has not been completely excavated (Schmidt 2006.153–157, Fig. 66–67), a second type of porthole stone without a collar around the hole has been discovered. Placed vertically at the entrance was a limestone slab with a flat relief of a wild boar below the porthole. The animal is depicted upside down, lying on its back, legs stretched away from the body (Fig. 26). While there remain some doubts as to whether the stone was originally made just for this purpose – or used in its current position in a secondary function – it seems most probable that the port stone and its depiction symbolizing the broader sphere of death, which is entered by crawling through the hole. However, the further investigations and new finds will clarify this question.

Recent discoveries provide overwhelming evidence that a porthole stone could be decorated not only in flat relief, but also with three-dimensional sculpture. Several types of worked stone were used for art, T-shaped pillars, both variants of porthole stone, with and without collars, kidney-shaped stone slabs – usually covering stone benches – and large stone rings of unknown function (Schmidt 2006.Fig. 23) reminiscent of the heavy stone rings used by ancient Meso-Americans in ball games (e.g. Alegria 1994). The megalithic objects and types of decoration are listed in Table 2.

Conclusion

The transitional period of the late Pleistocene to the early Holocene in south-western Asia saw the emergence of the first large, permanently settled communities. Permanent settlements dating to 12 000–10 000 BP currently under excavation are producing unexpected monumentality and extraordinarily rich symbolism that challenges our ability to interpret. Especially in Upper Mesopotamia, in the centre of the so-called Fertile Crescent, large sites with exciting finds have been unearthed in recent years. The results of these recent and ongoing excavations have not turned our picture of world history upside down, but they are adding a splendid and colourful new chapter between the period of the hunters and



Fig. 25. High relief of a predator on a stone slab, probably part of the rim of a porthole-stone, from the bulk west of enclosure D, length 53cm (foto Nico Becker, DAI).

gatherers of the Ice Age and the new world of the food producing cultures of the Neolithic period – the extent of which had not been predicted some years ago – a chapter which is enlarged year by year by the ongoing excavations at PPN sites in the Levant and Upper Mesopotamia.

The evolution of modern humanity involved a fundamental change from small-scale, mobile hunter-gatherer bands to large, permanently co-resident communities. Following the ideas of Trevor Watkins, to whom I am grateful for long discussions and much inspiration on this subject, we observe that Jacques Cauvin’s suggestions were correct (Cauvin 1997): the factor that allowed the formation of large, permanent communities was the facility to use symbolic culture, a kind of pre-literate capacity for produ-

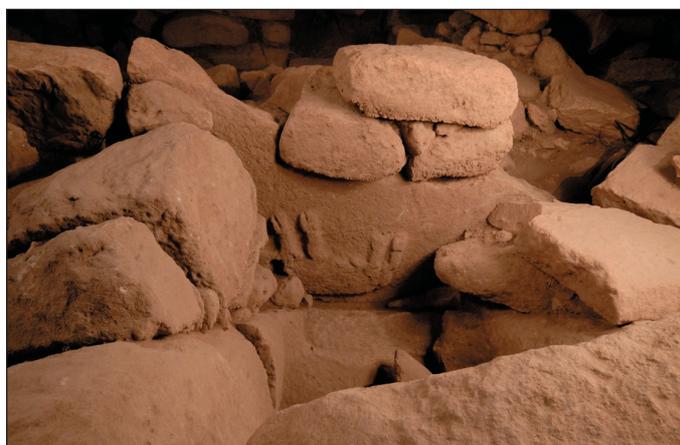


Fig. 26. Fragmented portholestone with the relief of a boar depicted side down; the stone slab is defining the entrance into the “Dromos” south of enclosure C.

cing and ‘reading’ symbolic material culture, that enabled communities to formulate their shared identities, and their cosmos (Watkins 2010a–b). There has been much progress in the investigation of the earliest signs of symbolic behaviours (from 100 000 years ago), followed by the earliest figural representations in European Upper Palaeolithic art from 30 000 years ago (Bosinski 1987). Now, the 12 000 year old sites in Upper Mesopotamia make us believe that something new and very important was happening. We are finding our way back to a quite diffusionistic point of view, when we observe the success of people in possession of the ‘Neolithic package’, which first occurred in its complete form in the Northern Levant and Upper Mesopotamia, between the Upper Euphrates and the Upper Tigris. From these regions, the new way of life was disseminated across the Old World from the 9th millennium calBC onwards, reaching Europe and Africa in the late 7th millennium (for north-western Africa, especially Egypt, comp. Shirai 2010).

Göbekli Tepe opens a new perspective on the Early Neolithic: specialisation on particular tasks must have been possible in order for members of the community to be able to erect these monuments and decorate them so elaborately. We can assume that much older traces and constructions have yet to be found at Göbekli Tepe, and it can be guessed that the place has a history stretching back over several thousand of years to the Old Stone Age. The people must also have had a highly complicated mythology, including a capacity for abstraction (Morenz, Schmidt 2009). The question of who is being represented by the highly stylized T-shaped pillars remains open, as we can not say with certitude if concepts of god existed at this time. So the general function of the enclosures remains mysterious; but it is clear that the pillar statues in the centre of these enclosures represented very powerful beings. If gods existed in the

	engraving	flat relief	high relief
T-shaped pillars	X	XXX	X
Porthole-stones with collar on face	X	X	XX
Porthole-stone without collar		X	
Large, often kidney-shaped stone slabs covering stone-benches	X	X	
Large stone rings of unknown function		X	

Tab. 2. Megalithic objects decorated with engravings, flat relief and high relief.

minds of Early Neolithic people, there is an overwhelming probability that the T-shape is the first know monumental depiction of gods.

Further investigations will certainly provide us with more detailed information. But to understand the new finds, archaeologists need to work closely with specialists in comparative religion, architectural and art theory, cognitive and evolutionary psychology, sociologists using social network theory, and others. It is the complex story of the earliest large, settled communities, their extensive networking, and their communal understanding of their world, perhaps even the first organized religions and their symbolic representations of the cosmos.

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Hamzan Tepe in the light of new finds

Bahattin Çelik

Department of Archaeology, University of Harran, Şanlıurfa, TR
bcelik@harran.edu.tr

ABSTRACT – *In this study, findings from the site at Hamzan Tepe will be evaluated, and the similarities and dissimilarities emphasized by a comparison with the nearby PPN sites. In particular, the focus is on the unearthing of two round planned buildings by treasure hunters as a new discovery and the presence of these two buildings as the first round planned civic architecture elements in the Urfa region.*

IZVLEČEK – *V razpravi predstavljamo in analiziramo podobnosti med najdbami s Hamzan Tepe in sosednjih najdišč predkeramičnega neolitika (PPN). Posebno pozornost namenjamo odkritju dveh zgradb z okroglimi tlorisi. Odkrili so jih lovci na zaklade in predstavljata prve profane arhitekturne elemente v regiji Urfa.*

KEY WORDS – *Pre-Pottery Neolithic; round plan; Acheulian; Urfa; Göbekli Tepe*

Introduction

The site at Hamzan Tepe – which was first discovered in 2000 during the Şanlıurfa Culture Inventory – lies within the city boundaries of Şanlıurfa (formerly Urfa and in ancient times, Edessa) in south-eastern Turkey as the cornerstone of the Fertile Crescent. Hamzan Tepe is now located 10km south of modern Şanlıurfa city center. Like Göbekli Tepe, Karahan Tepe and Şanlıurfa-Yeni Mahalle PPN sites, Hamzan Tepe also lies in the high plateaus on the edge of Harran Plain (Map 1).

During surveys of Hamzan Tepe in 2000, pools cut into the bed rock and plenty of flint stone tools were determined. By means of these findings it is understood that this site was used as a settlement both in the Lower Palaeolithic and Pre-Pottery Neolithic Periods. Also, a T-shaped pillar which is also familiar through Nevalı Çori and Göbekli Tepe was found. As a result of a new survey in 2010, new round plan architectural remains excavated by treasure hunters found out.

Location

The settlement at Hamzan Tepe is located approximately 600 meters above sea level at 0 482 41 50 North-South (X), 0 410 42 41 East-West (Y).

The settlement was constructed on bed-rock, in a mountainous region called the Fatik Mountains (Fig. 1). In this region, without water sources, there is a high number of calcerous rocks formed as a consequence of erosion. The preserved part of the settlement covers an area of approximately 5000m². On the northern edge is the large city dump of Şanlıurfa. Harran Plain, the most important plain of the region lies about 1km east of the settlement. There are plenty of flint-stone faces on the southeastern edges of Hamzan Tepe. About 400m west of the settlement, there are basalt blocks.

Considering the flint finds from the survey, it is estimated that Hamzan Tepe was used as a temporary open air site in the Lower Palaeolithic and as a minor settlement in the Pre-Pottery Neolithic (Çelik 2004).

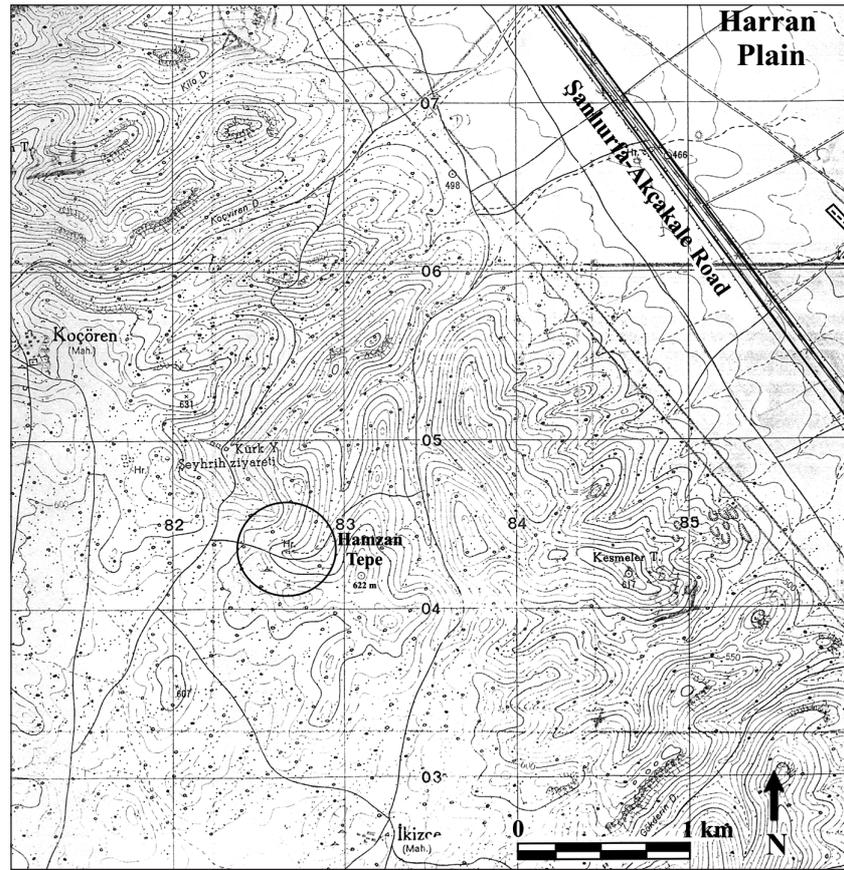
3-4). The reason for using this site in both periods is probably due to the proximity of the settlement to Harran Plain and the flint bulks covering around an area of 300m² next to it. The flint stone finds were plentiful all around the site, some 250 per 1m². As a result, the site where Hamzan Tepe was settled offers an ideal environment for satisfying the need for flint and basalt.

Finds

Hamzan Tepe seems to have been inhabited in two different periods. Thus, we prefer to separate the small finds according to their period. Accordingly, we will interpret the material in two different groups as Neolithic and Palaeolithic. The Palaeolithic is represented by 29 (17.2%), and the Neolithic by 140 (82.8%) small finds. The total finds having the features of tools from both periods is 169.

Pre-Pottery Neolithic assemblage

The architectural remains from the settlement are quite poor. The ground level begins from the bed rock changes between 20 and 80cm. This gave occasion to moving away the architectural units in an area with very little soil. Supporting this idea are the holes on the surface with the diameters changing between 40 and 50cm and with the depth of 8 and 10cm. It is assumed that these holes were made in recent times, because the binder dust quarries are located 2km east of the settlement, where the production of gravel used for the construction of motorways takes place. In these quarries, calcareous rocks are taken from the region as raw material crushed in gravel making machines. This is also why there is very little removable calcareous rock in the Fatik Mountains where the settlement is located.



Map 1. The site at Hamzan Tepe.

Next to a wall constituted of a few stone rows on the surface, an in-situ T-shaped pillar which was partly excavated by the treasure hunters was found (Fig. 2). We know of similar T-shaped pillars from Nevali Çori, Göbekli Tepe, Adıyaman-Kilisik (*Hauptmann 2000.Abb. 8-10; Verhoeven 2001.9, Fig. 1a-d*) Sefer Tepe (*Çelik 2006.23-25*) and Karahan Tepe. The Hamzan Tepe pillar, with a width of 50cm and thickness of 20cm, mostly resembles ante T-shaped pillars

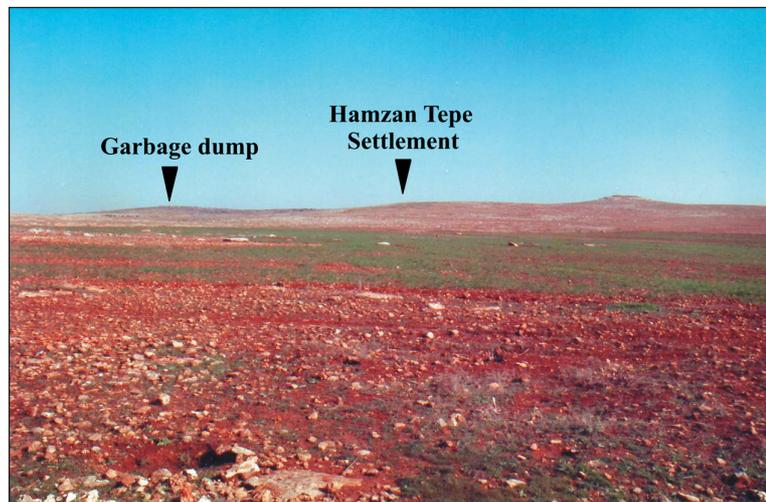


Fig. 1. Hamzan Tepe settlement and garbage dump.



Fig. 2. An in-situ T-shaped pillar.

on the walls of Nevalı Çori temple (*Hauptmann 1993.Abb. 7*) and to the pillars in the phase II of Göbekli Tepe (*Schmidt 2002.24–25, Fig.1*). Furthermore, it shares similar features with numerous pillars at Karahan Tepe (*Çelik 2000.7*). The presence this pillar in the settlement indicates that the custom of building with T-shaped pillars – which can be observed at settlements like Göbekli Tepe, Nevalı Çori, Karahan Tepe, Sefer Tepe and Adıyaman-Kilisik – was resumed here.

As a result of a second visit to Hamzan Tepe in 2010, two new round plan architectural remains were unearthed by illicit excavations. One of these buildings is destroyed and its presence can only be understood from the wall blocks (*Fig. 3*). The other building was found in a stable condition, with only its interior part approaching bed rock being destroyed (*Fig. 4*). The diameter of the stable one is about 4.5m. The wall stones constitute a single row, each of them being about 1m high and 30–40cm thick. There are no similar buildings constructed with this building technique, but the round plan is an architectural tradition that can be seen in settlements of the Early Pre-Pottery Neolithic (*Sicker-Akman 2001.389–394*). If we set aside the round plan communal buildings in Göbekli Tepe, this building in Hamzan Tepe settlement is the first round plan civic building in the Urfa region.

In the part of the area again unearthed by illicit excavations, where the ground level has been uncovered (*Fig. 5*), there are small holes constructed with the pool building technique on the bed rock, placed side by side to form a circle (*Fig. 6*). The diameter of these holes is about 10 cm, and the depths vary between 5 and 8cm. Immediately adjacent to these holes are three circle-like pools cut into the bedrock (*Figs. 7 and 8*). There are similar examples with a diameter of 1.5–3m and a depth of 40–60cm in pools found in the northern and southwestern parts of Göbekli Tepe (*Beile-Bohn et al. 1998.47–50, Abb.20; Hauptmann 1999.Fig. 32*) and eastern and northern parts of Karahan Tepe (*Çelik 2003.44–45*).

Technology and typology

Hamzan Tepe was abundant in flint stone finds dated to the Early Pre-Pottery Neolithic, and a few obsidian finds were also found. Most of these flint and obsidian finds relate to the blade industry. There were 140 small finds from this period – Byblos and Nemrik points, bifacial cores, stone bowl fragments, flat axes made from river pebbles, and pestle fragments of basalt and obsidian.

There were 134 lithic artefact finds flint and obsidians, of which 132 (94.4%) are flint, while 2 (1.4%)



Fig. 3. One of the building is destroyed and its presence can only be understood from the wall blocks.

are obsidian. Sorting by their handlings, the biggest proportion of flint cut stone tools are blades. The length of these blades varies between 14.5 and 4.5cm, the width between 5.7 and 1.4cm and the thickness between 2.2 and 0.4cm. On the other hand, the length of flakes varies between 6.8 and 5cm, while width ranges between 5 and 2.5cm, and thickness between 1.4 and 0.7cm.

There are twenty-two flint stone tools (16.6%) in the whole group of flint finds. The flint stone tools comprised fifteen arrowheads (68.2%), two perforators (9%), one end scraper (4.6%), one spearhead (4.6%) and three hammers (13.6%). The proportion of arrowheads in the well-qualified finds is greater than the others. Other than the lithic tools made of flint, there are no obsidian tools. The obsidian finds consist of two blade fragments (see Tabs. 1 and 2).

The proportion of obsidian in lithic finding group is about 6.1% with respect to flint stone. As raw material well qualified flint stones were used. Surveys have revealed some flint deposits immediately adjacent to the site, with both bipolar and unipolar cores being found.

Regarding the range of colours of the flint finds, forty-five are grey (34.1%); thirty are dark grey (22.7%); twelve are brown (9.1%), forty (30.3%) are light brown, and five (3.8%) cream/beige.

About 71% of tools that have blades as blanks have bipolar technology and their cross-sections are tra-



Fig. 4. Building was found in a stable condition, with only its interior part approaching bed rock being destroyed.

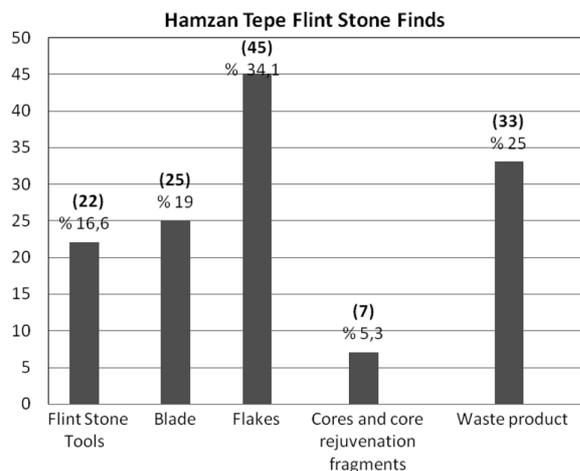
peze. Some 29% were taken from a unipolar core, and are triangular in cross-section.

Two of the cores are bipolar, and two are unipolar; all are of light brown. Cores of similar colour were at Göbekli Tepe (*Beile-Bohn et. al. 1998.54*) and Nevalı Çori (*Schmidt 1988.162*).

While the blade debitage of the bipolar technology cores are 1.6 and 1.2cm wide, the blade debitage of the unipolar technology cores are 2.4 and 1.3cm wide (Fig. 9.1-2). The proportions of trapezoid cross-section blades in the tools with blade blanks is 58%, while the proportion of triangular cross-section blades is 42%. In Hamzan Tepe, with the sum of seven (21.2 %) cores and core rejuvenation fragments are very rare in the whole group of flint stone findings. Only four of them (57.2%) are cores. Apart from these, three (% 42.8) strap blade fragments the one of which is concave (Fig. 9.3-4).

The group of flint and obsidian finds consisted of fifteen arrowheads, one spearhead, two perforators, one end scraper, three hammers, twenty-five blades, forty-five flakes, thirty-three waste products, and seven cores and core rejuvenation fragments.

Examining the flint tools in terms of typology, it is clear that there are tool types from the Pre-Pottery Neolithic, with arrowheads being most abundant. The most significant of these are the Byblos and Nemrik types. The tools other than these comprise spearheads, perforators, end scrapers and a hammer. Of these sixteen heads, one is a spearhead, eight are Byblos arrowheads, two are Nemrik type (Fig. 9.17-18) and five are unidentified arrowhead

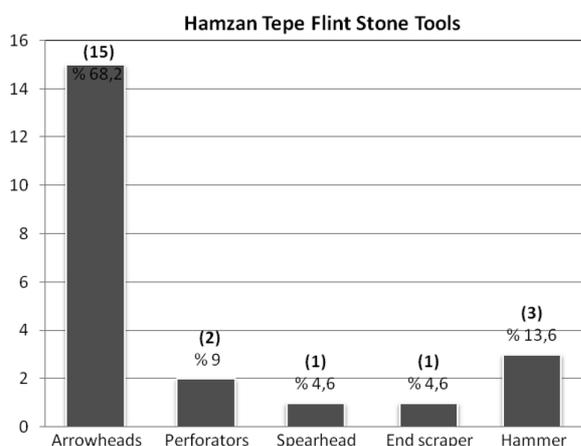


Tab. 1. Hamzan Tepe flint stone finds (n = 132).



Fig. 5. In the part of the area again unearthed by illicit excavations, where the ground level has been uncovered.

fragments (Fig. 9.13–16). There were eight examples of Byblos type arrowheads (Fig. 9.5–12). Their lengths vary between 8.6 and 4.5cm, with widths between 2.1 and 2cm, and thickness between 0.6 and 0.7cm. The dorsal and ventral surfaces of the haft of one of these samples were retouched alternately. On one side of another sample's haft, one side was dorsally flattened, while the other sides were ventrally retouched alternately. There were six fragmented arrowheads (Fig. 9.7–12). Of these, three hafts and three haft and body parts were found. Three were retouched ventrally. Retouches on two examples can be seen dorsally and ventrally on haft. The haft of one of them was retouched inverse alternately. One of these arrow heads was formed on a blade which had been taken from a unipolar core and seven on a blade from a bipolar core. Five light brown, two light grey, and one grey flint stone were used as raw material. Four of these have trapezoid and four have triangular cross-sections. Similar arrowheads were found at Çayönü (Coşkunsu 1999.



Tab. 2. Hamzan Tepe flint stone tools ($n = 22$).

41a), Nevalı Çori (Schmidt 1988. Abb. 11.5, 12.3, 14.2) and Göbekli Tepe (Beile-Bohn et. al. 1998. Abb. 23.2). The heads with ventrally retouched hafts and points have partly and dorsally retouched haft and point. The handling of this trapezoid cross-sectioned blade head was from a bipolar blade core. A light grey flint was used for the other arrowhead; part of the point is missing. This arrowhead with all sides dorsally retouched, is trapezoid in cross-section. Generally, this type of arrow heads dated to the Early Phase B of Pre-Pottery Neolithic, 8500–7500 BC (Kozłowski 1999.40–42, Fig. 1).

Unidentified points are represented by five samples (Fig. 9.13–16). Considering their blade width and thickness, they are the upper parts of either arrowheads or spearheads. Nothing is known about their forms. On their retouches, it is observed that two are ventrally, two are dorsally alternately retouched, and on the other hand one of them is reverse alternately retouched. If we consider the colour of the material, for three light brown flint was used, while two are grey. Two are trapezoidal, three triangular in cross-section. Four were formed on blades taken from the unipolar core. One of these points is a partly broken spearhead. As its direction shows at one side, this point with a blank formed as a massive blade was taken from the unipolar core. This light brown flint stone point's dorsal surface has small retouches, while its ventral surface has retouches only on the haft. The length is 14–5cm, width is 5–7cm and thickness is 2–3cm.

The finds include two (9%) perforators (Fig. 9.19–20). The borer parts are missing; the lower part of one is also missing. The perforator with the original lower part has a flat butt. One of these sample's auger part is formed from lateral retouches on the dorsal surface; the other's auger is formed with reverse alternate retouches. Light brown flint stone was used for both. Their auger parts are long. The perforators were formed on blades. Considering their blade taking directions, it can be understood that they were from both bipolar and unipolar cores. Both are trapezoid in cross-section. While perforators from Hamzan Tepe constituted 9% of finds, there were 7.4% in Sefer Tepe, 17.8% in Şanlıurfa-Yeni Mahalle, 6.82% in Karahan Tepe, and about 10% in tools from Göbekli Tepe Phase II (Schmidt 2001.51, Fig.9; Beile-

Bohn et. al. 1998:59; Çelik 2007. 172).

End scrapers are represented with example (4.6%), in fragmentary condition. End scrapers with blades as blanks are bipolar. Dark grey flint was used as material. It is 6.8cm long, 2.5cm wide, and 0.7cm thick. While the end scrapers at Hamzan Tepe constituted 4.6% of finds, this ratio is 7.4% in Sefer Tepe, 13.66% in Karahan Tepe, 6% in Şanlıurfa-Yeni Mahalle and 11.2% in Göbekli Tepe (*Schmidt 2001:51, Fig. 9*).

There were three hammers (13.6%) in the flint stone tool group. The sides of these flint stone crushers were dull from use. One is dark brown and two are light brown flint knobs. Their dimensions are 10.2-7.1cm by 6.7-5.5cm by 5.4-4.6cm respectively.

There were two obsidian finds (1.4%) (Fig. 9.21-22). There are no tools in this group, which consists only of blade fragments. Both are of transparent black obsidian; the dimensions are 2.2-1.7cm by 1.2 and 1.1cm by 0.3cm respectively. A technological and typological analysis of two fragments shows that both of their handles are formed as blades and as their double directions show they are blades from a bipolar core. Furthermore, similar translucent black obsidian blades from bipolar cores were found at Karahan Tepe, Sefer Tepe, Şanlıurfa-Yeni Mahalle.

There were three samples of stone bowl fragments (Fig. 10.2-4) - all of chlorite - in the form of two rims and one bowl. One is 1.8cm high, 4.9cm wide, 0.7cm thick and with a radius of 3cm. It is not possible to establish the radius of the other sample because only a small part of the rim was found; it is 1.9cm high, 2.5cm wide and 0.7cm thick. The bowl fragment is 3.8cm high, 2.3cm wide, with a thickness of 0.7cm. There are two parallel grooves on the outer surface. On account of the fact that all of them were carved out, there are some traces on fragments. Similar examples of chlorite stone



Fig. 6. *There are small holes constructed with the pool building technique on the bed rock, placed side by side to form a circle.*

bowls were found at Hallan Çemi, Demirköy, Göbekli Tepe, Çayönü, Karahan Tepe and Diyarbakır-Körtik Tepe (*Çambel 1974:Fig. 14; Özdoğan et. al. 1999. Fig. 61; Rosenberg 1994:126; Rosenberg et. al. 1999. Fig. 3*). It is assumed that Körtik Tepe, where these types of stone bowls were found in enormous numbers, was a trading centers for these articles (*Özkaaya and San 2003:425*).

Another item among the stone finds is a limestone object (Fig. 10.1), 7.1cm in height, with appearance of a phallus. From this aspect it resembles a Blanchard phallus¹. The head is oval, with a circle delineated with a groove. There is a vertical groove beginning from its shoulder and runs through its base. Its rectangular base is 3.8 x 2.7cm, and it sits squa-



Fig. 7. *Immediately adjacent to these holes are three circle-like pools cut into the bedrock.*

¹ <http://www.nature.com/news/2009/090513/multimedia/news.2009.473.html>



Fig. 8. Immediately adjacent to these holes are three circle-like pools cut into the bedrock.

rely on a level surface. There is a circular hole in a metop formed with two vertical grooves in the base. The hole is 0.2cm deep, and the radius is 0.5cm.

Palaeolithic assemblage

The survey at Hamzan Tepe yielded bifacials from the Upper and Middle Acheulian Phases of the Lower Paleolithic (*Taşkıran 2002.53*), triedral picks, Levallois cores and Levallois flakes, massive end scrapers and end scrapers.

The Middle or Upper Acheulian Phase is marked by the presence of triedral picks (Figs. 11.1–9; 13.2) and bifacials (Fig. 13.1). In this phase, triedral picks are extremely abundant. These kinds of tool were used mainly for digging up roots (*Taşkıran 2003.248*). The first phase of Hamzan Tepe settlement should be dated to the Middle or Upper Acheulian Phase of the Lower Palaeolithic, when the settlement was used as an open-air camp (*Taşkıran 2003.248*). Similar finds from this period have been made in Northern Syria and Southeastern Anatolia (*Taşkıran 2003.247, Drawing 4; Hours 1981.Fig. 4.3*).

The Palaeolithic finds at Hamzan Tepe comprised 29 (17.2%) of the samples collected. One of these is chalcedon flint, while the remainder are of regular flint. These finds, which in terms of technology or typology date to the Palaeolithic, also share a common feature in having a patina. In this assemblage, eleven (38%) are triedral picks; six end scrapers (20.7%); four Clactonien flakes; three flake fragments (10.4%); two bifacials (6.9%) – one being partly bifacial; one (3.4%) shapeless core; one (3.4%) Levallois core, and one tool with a Clactonien flake retouched surface.

The most common tool among the Paleolithic lithic assemblage was the triedral pick (Figs. 11.1–9; 13.2). We may assume the picks were used for digging flint stone knobs in the quarries at Hamzan Tepe.

Eleven (38%) triedral picks were found. Five are complete, while the upper parts of three are partly missing. The cross-sections of the points of all the triedral pics are triangular. All are formed on flakes, except for one (Fig. 13.2). The point of the one made from a knob is fragmentary and missing.

The partial points of the triedral picks vary in length between 8.1 and 5cm, in width between 3.9 and 2.4cm, and in thickness between 2.2 and 1.2cm. One is dark grey and two are grey flint; one has an encrusted surface. The retouches of these three were formed by alternate bifacial flaking on the dorsal surface. The handles of the five complete picks are flakes; the points are triangular in cross section. Four are grey flint; one is light brown. The surfaces of four of them are partly crusted. Three have flat butts, while the other butts have been removed. Retouches of all the samples was generally done with big flak-

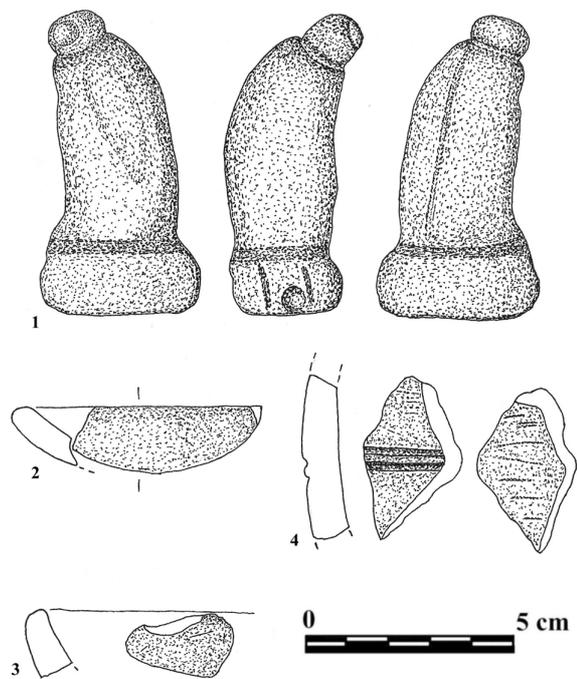


Fig. 10. Limestone phallus (?) object (1), stone bowl fragments (2–4).

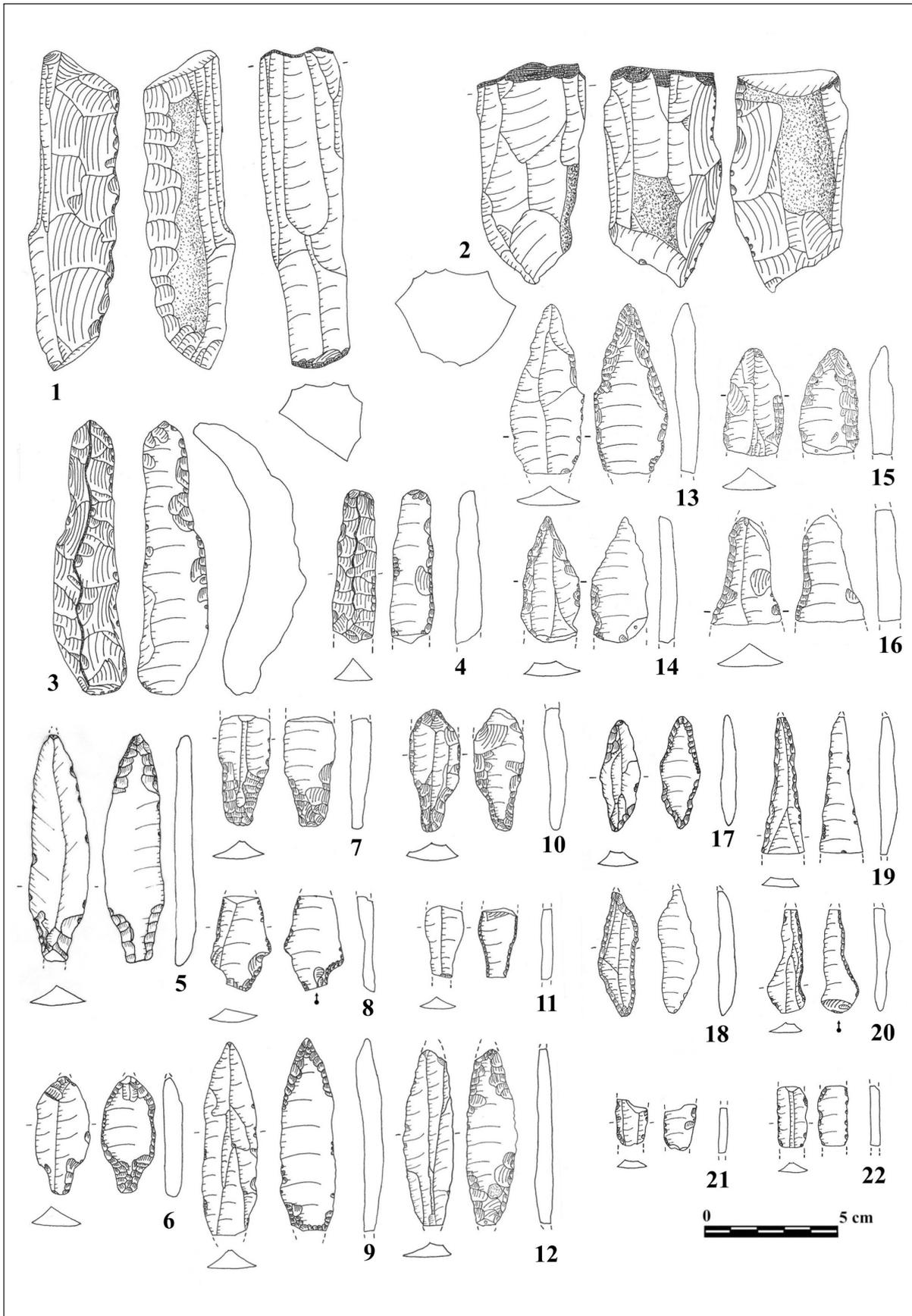


Fig. 9. Cores (1,2), Strap blade fragments (3, 4), Byblos points (5-12), unidentified arrowhead fragments (13-16), Nemrik points (17, 18), perforators (19, 20), obsidian blade fragments (21, 22).

ing from the ventral surface or dorsal surface. In some case, only the body and point were partly retouched on them ventral surface. The lengths vary between 11.7 and 9.6cm, widths between 7.2 and 4.3cm, and thickness between 3.5 and 2.1cm. Two of three triedral picks which were found incomplete are of grey, one of beige (cream) flint. The point of one of the picks is missing, while the points of the two are partly missing. The handles of both are flakes. Their points are triangular in cross-sections and the lengths range from 13 to 8.7cm, the widths from 8.3 to 5.5cm, and thickness from 4.7 to 2.4cm. Two have partly encrusted dorsal surfaces (Fig. 11.5-6). The retouches on one pick with a missing point were formed with big flaking on two surfaces; and on another, the surface has been totally removed with flaking. The others have been retouched on only two surfaces. There were six tools in this group (Fig. 11.1-4). Four were found complete, but two with parts absent. Three have blade handles, three have flake handles. Three are crested end scrapers, two are end scrapers, and one of them is a rounded end scraper.

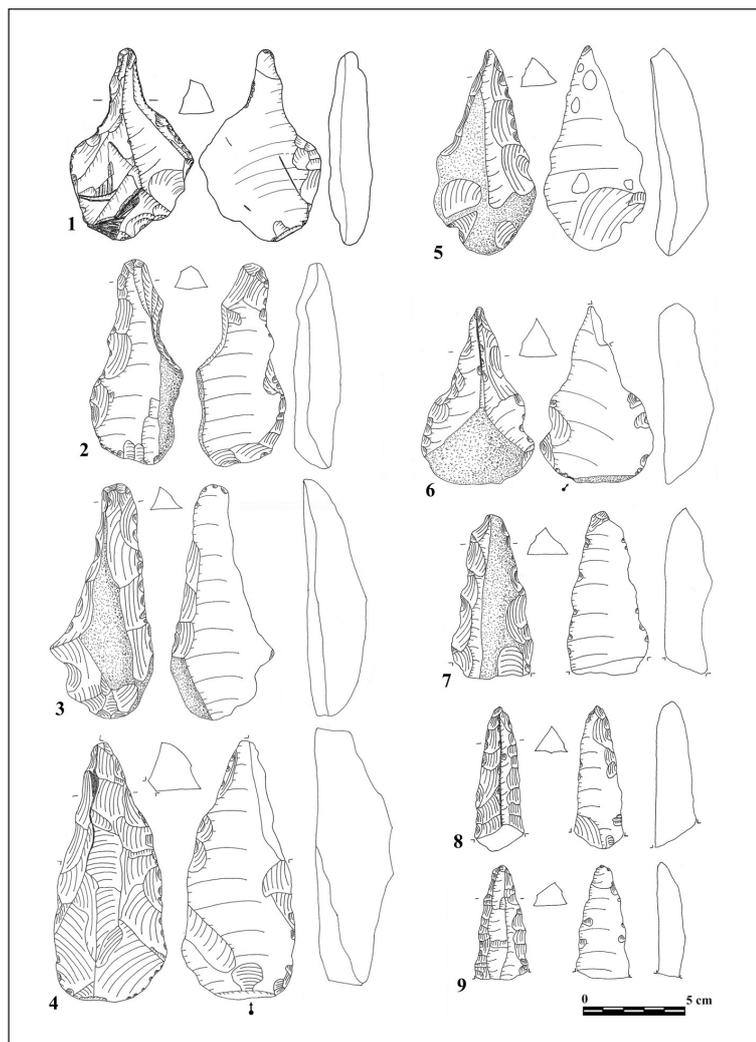


Fig. 11. Triedral picks.

There are three carinated end scrapers, the lower part of two being absent. The butt of the complete sample is flat. One is from a flake, the other two from blades. Two of these carinated end scrapers are grey and one is beige (cream) flint, the length of the complete sample is 10.6cm the width 5.4cm, and the thickness 2.3cm (Fig.12.1-3).

The butts of the two convex end scrapers have blade handles removed by flaking, and are trapezoidal in cross-section. Both have partly encrusted surfaces. The grey flint end scrapers have only one side dorsally retouched. Their lengths are 12.3 and 10.2cm, their widths 3.6 and 3cm, their thickness 1.1 and 0.9cm respectively.

Only a single disc-shaped scraper with a flake handle was found; its butt was removed by flaking (Fig. 12.3). This scraper, which is retouched on the dorsal surface with large and small flaking, is grey flint; it is 9cm long, 6.6cm wide and 3.5cm thick.

Only two bifacials were found at Hamzan Tepe. One is complete; the point of the other is absent. One is bifacial; the other is a usual (almond shaped) bifacial (Fig. 13.1). The lower parts of both surfaces of this almond shaped bifacial are encrusted. The sides of this bifacial – the whole surface of which was shaped with big flaking – are dull. It is brown flint; the length is 10.9cm, the width 5.8cm, and the thickness 4.3cm. The form dates this example to the Acheulian Period (*Taşkıran 2002.53*).

One of them, which is of brown flint, with a flat butt, is formed on a Clactonien flake; this partly bifacial is encrusted on one dorsal side. On both sides of the dorsal surface there are retouches formed with large flaking. On the other hand, on its ventral surface there is flaking only on the lower part. It is 8.7cm long 6.3cm wide and 2.5cm thick.

A shapeless core was made of grey flint stone, one side of which is missing. Preparation technique can

be seen on its striking platform. The dimensions of this partly encrusted core are 12.2 cm long, 8.4cm wide and 5.4cm thick. There is a considerable amount of flaking on the encrusted surface.

The recurrent Levallois core of grey flint (Fig. 14.1) is bipolar and well prepared. Its dimensions are 10.4cm long, 9.7cm wide and 2.9cm thick. There are traces of encrustation on it. It has closer similarities with the Levallois cores of Tigris region than with the usual Levallois cores of the Upper Euphrates.

There are four flakes in the assemblage made by Clactonien flaking technique. All have flat butts; three have partly encrusted surfaces. On the surface of one, there are traces of dehydration (Fig. 14.2). The striking platforms and angle of the flaking side on all are wide. One of them the preparation has been made so that it converts into an end scraper (Fig. 14.3). Two are grey, one beige (cream) and one of light brown flint. Their lengths are between 10.1 and 7cm, widths between 8.6 and 4.7cm, and thickness between 3.5 and 1.9cm.

The flaked handle was identified in the Clactonien flakes assemblage. Its dorsal (upper) surface was cor-

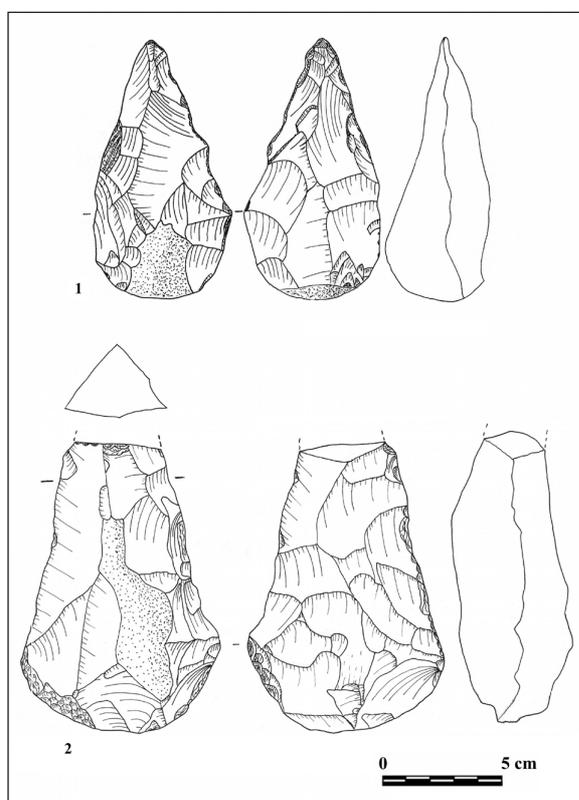


Fig. 13. Bifacial axe (1) and triedral pick (2).

2 Personal Communication with Prof. Dr. Harun Taşkıran.

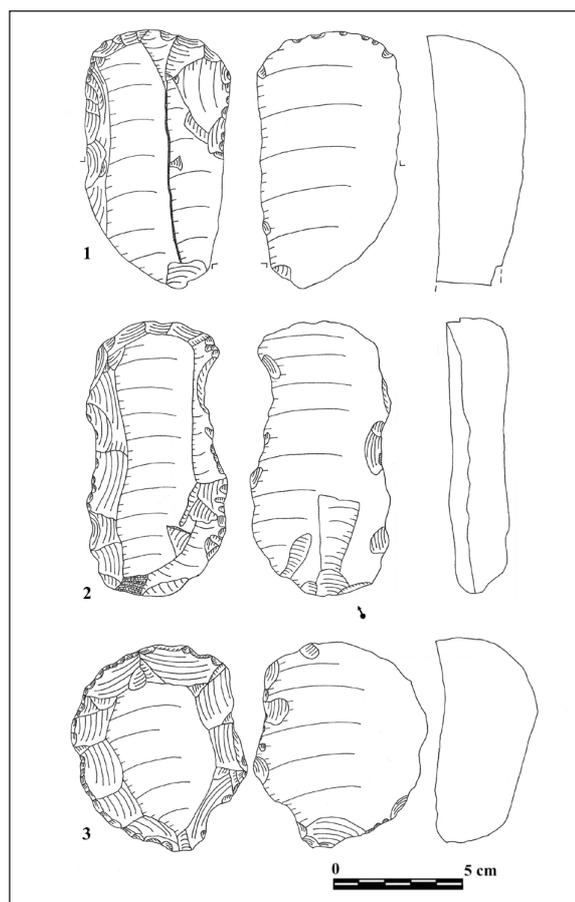


Fig. 12. End scrapers.

rected by flaking. The upper part of the ventral surface was corrected as well. The lower side of the upper surface is encrusted. The tool is 4.3cm length, 6.8cm wide and 2.8cm thick. Parallels were recovered at Ilisu, Karkamış and from the Birecik region².

Concluding remarks

The most interesting aspect of Hamzan Tepe is the co-presence of two periods separated by a long period of time, the first being the Acheulian phase of the Palaeolithic, while the second one is Phase B of the Pre-Pottery Neolithic. The closest settlements contemporary with Hamzan Tepe from the Pre-Pottery Neolithic are Şanlıurfa-Yeni Mahalle, located about 10km north (Çelik 2000.6), and Göbekli Tepe, about 25km east (Schmidt 2002.24). The small finds are similar to those from the Şanlıurfa-Yeni Mahalle and Göbekli Tepe settlements (Çelik 2003.37, 53; Schmidt 1998.Abb. 5.4, 6.4). The pools cut into the bed rock and the holes used for those pools are similar to pools and holes at Göbekli Tepe and Karahan Tepe (Çelik 2000.7; Beile-Bohn et al. 1998.Abb. 20).

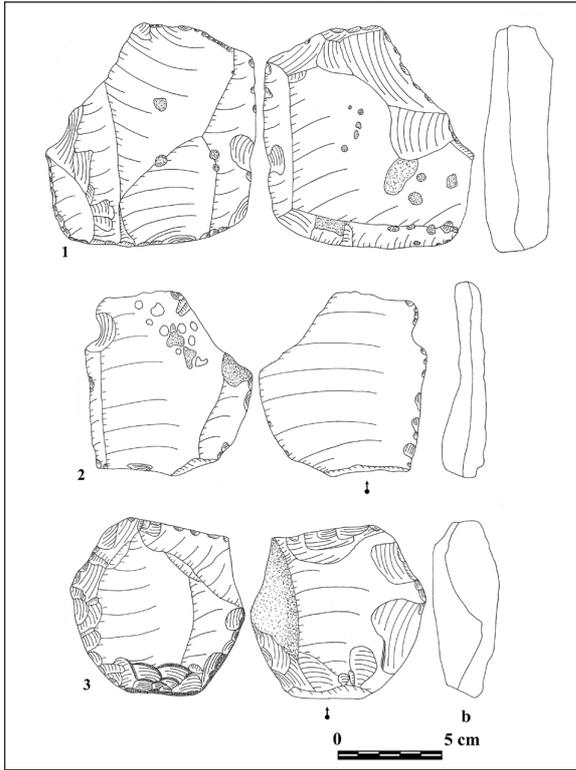


Fig. 14. Clactonien flakes (1-3).

The current section of the Hamzan Tepe settlement resembles the south-western section of Göbekli Tepe. Two different areas have been excavated there, and the ground level ranges from 10 to 40cm from bed rock. In the first area a stele and the base of a kind of game animal stand in situ (Beile-Bohn et al. 1998.

66, Abb. 30). The second was the base for two central piers cut into bed rock, and next to which are pools and adjacent holes cut in the shape of a complete circle and thought to be used in the pool cutting technique (L.c. Abb.20). Moreover, in both the areas excavated flint waste has been found. This amount of waste, as well as the numbers of pools and holes cut into bed rock on the surface at Göbekli Tepe is similar to Hamzan Tepe. All these similarities strengthen the possibility that these areas were used as workshops or marked the boundaries of the settlement.

In a new survey carried out at the settlement in 2010, two round plan spaces, one of which is stable, were found. The dimensions of the rocks used for this building are the most prominent features differentiating it from round plan structures found elsewhere. It would not be wrong to argue that this building is the one and the only example of a civic building in the Urfa region. Furthermore, prospective excavations in Hamzan Tepe area in areas as yet unexplored could date this settlement to Phase A of the Pre-Pottery Neolithic.

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The Neolithic–Chalcolithic sequence in the SW Anatolian Lakes Region

Laurens Thissen

Thissen Archaeological Ceramics Bureau-TACB, Amsterdam, NL

l.thissen@tiscali.nl

ABSTRACT – *This paper reviews the radiocarbon, stratigraphic and pottery evidence from five early pottery sites in SW Turkey. A comparison of the results with data from Ulucak in West Turkey indicates no significant time lag between these areas. The onset of Neolithic sites early in the 7th millennium calBC makes it difficult to link their emergence to the collapse theories applied to SE Anatolian societies at the end of the PPNB period. The chronology proposed is not compatible with allegedly contemporary developments in SE Europe.*

IZVLEČEK – *V članku predstavljamo radiokarbonske datume, stratigrafske podatke in keramiko iz petih zgodnje keramičnih najdišč v severozahodni Turčiji. Primerjava s podatki iz Ulucaka v zahodni Turčiji kaže, da ni bistvenega časovnega zamika med regijama. Pojav neolitskih najdišč v zgodnjem 7. tisočletju calBC je težko navezati na teorijo kolapsa pri južno Anatolskih skupnostih na koncu PPNB obdobja. Predlagana kronologija ni kompatibilna z domnevno sočasnim razvojem v jugovzhodni Evropi.*

KEY WORDS – *Neolithic; Anatolia; SE Europe; dating; pottery*

Introduction

The Neolithic sites in the Anatolian Lakes Region (Göller Bölgesi) in SW Turkey have played a major role in hypotheses concerning diffusion and/or migration processes from the Near East into Europe (Fig. 1). Apart from the geographic distance easily conflated in such models, a disregard of exact time is a recurrent theme, specifically in Balkan prehistories. The long-time absence of pertinent data from the intervening region of West (Aegean) Turkey made this conflation perhaps understandable, but at the same time more questionable. There was, and there still is, a tendency in Balkan prehistory to invoke a black box-like 'Anatolia' as a donor area for repeated waves of migration into SE Europe. In Romanian prehistory, for example, the 'monochrome', the Dudești, the Vădastra and the Boian stages have all been explained as caused by demic diffusion from 'Anatolia' (e.g., Lazarovici 1998.7; Lazarovici and Lazarovici 2006.391; Neagu 2000.53). Fully harmonising with this black box idea is that the connec-

tions are never precise, neither geographically, contextually, nor chronologically. The sites of Hacilar, Çatalhöyük and Canhasan are among the favoured locations. More recently, the Marmara area is beginning to be used as another potential source for explaining the 'monochrome' stage of the earliest pottery sites in Bulgaria (Elenski 2004). The painted pottery from Hacilar V–II and its correspondences with West Bulgarian sites have been used by Nikolov as the explaining factor in favour of a migration from Anatolia across the Aegean and up the Struma and Mesta rivers (Nikolov 1989.194; cf. also Lichardus and Lichardus 2003.66).

Dedicated work in the Aegean (Takaoglu 2005; Çilingiroglu and Çilingiroglu 2007; Derin 2007; Sağlamtimur 2007; Horejs 2008; Herling et al. 2008; Çilingiroglu 2009) is now beginning to complicate and refine the cultural connections between SE Europe and the alleged donor region in SW Anatolia,

suggesting the need to emphasize the importance of regional patterns of development and the non-systemic character of material culture correspondences. Recently, alleged hiatuses in the Lakes Region's site sequences (Schoop 2005) have been used to serve as evidence for climatic anomalies around 6200 calBC (better known as the 8.2ka climate event) which led to site abandonment, warfare and general turbulence in the area (Weninger et al. 2005; Clare et al. 2008.65).

Another issue related to the importance of the Lakes Region for neolithisation processes is the general thesis that after a PPNC collapse in SE Turkey (Özdoğan 2008.173), a period of turbulence involving repeated demic movements from the east to the west is reflected in an increase of sites in SW and W Anatolia, where "every component of the assemblage of the Neolithic sites in the west can be traced back to the core area of primary neolithisation in the east" (Özdoğan 2007.21; cf. Perlès 2005.280). Europe's quasi-total dependence on Turkey, the Near East and the Levant (Perlès 2005) can, consequently, be summarised as follows: "Thus, immediately after the expansion of the Neolithic way of life into the western parts of the peninsula, almost all components of the Neolithic culture seem to have gone through a stage of transformation, which provided the means for its survival in Temperate Europe." (Özdoğan 2007.21). The most famous site in the Anatolian Southwest, Hacilar, has served as model through which developments in SE Europe have been interpreted and evaluated, whereby its earlier 'monochrome' pottery and its subsequent painted pottery are still argued to have determined, mirror-like, concepts of material culture (notably pottery appearance) during the neolithisation of the Balkans (Weninger et al. 2005.100). It must have been Mellaart's two pages of cautious remarks concerning parallels between Hacilar V-II and Thessaly (Mellaart 1958.154-6) that have inspired Rodden's 'Neolithic package' list (Rodden 1965), and that was later adopted by Renfrew (1987.170, Fig. 7.9) and Perlès (2005.277, Tab. 1).

In order to critique these points of view (*i.e.* concerning dating, settlement continuity and demic move-

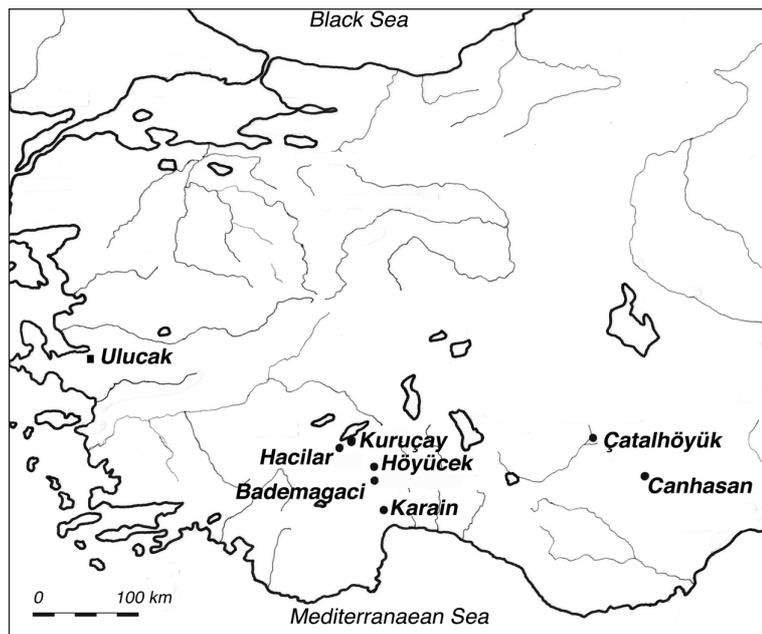


Fig. 1. Map of key sites discussed in the text.

ment across Turkey westwards), I try to get as close as possible to the lapse of time and the date of the Southwest Anatolian key area. Through this exercise, I imply that the breakdown of time, like a precise study of material culture, tends to problematise mechanistic solutions, and favours more regionalised interpretations of culture change and adaptation on a local scale to external pressures, whether from climate or 'newcomers'. I will be targeting the five excavated sites in the Lakes Region, viz. Hacilar, Kuruçay, Höyücek, Bademağacı and Karain, and comparing them briefly to the radiocarbon evidence from Western Turkey, specifically the site of Ulucak. I focus on the stratigraphic sequences and the absolute dates, and where necessary use relative dating foremost based on the pottery evidence.

Hacilar

Time at Hacilar is hard to assess, due to the small set of radiocarbon dates available (seven usable dates). Modelling the data (see below for discussion) results in a time span of between 300 to 730 years for Levels IX-IA, covering three substantial settlement stages, each of which fell victim to a great fire (*cf.* Mellaart 1975.111). Mellaart estimated the total duration of the site at approximately 750 years (Mellaart 1970.10, 23, 24, 76, 85, 87), stretching from a 'Late Neolithic' (Levels IX-VI) through an 'Early Chalcolithic' period (Levels V-I).¹ Restructuring and conflating Hacilar's stratigraphic sequence, as I will pro-

¹ In his 1998 memoir, Mellaart contemplates the existence of a "Hacilar 0" stage recognisable in some of the illicitly excavated material from tombs in the neighbourhood, and distinct from the Hacilar I material as excavated (Mellaart 1998.58-59).

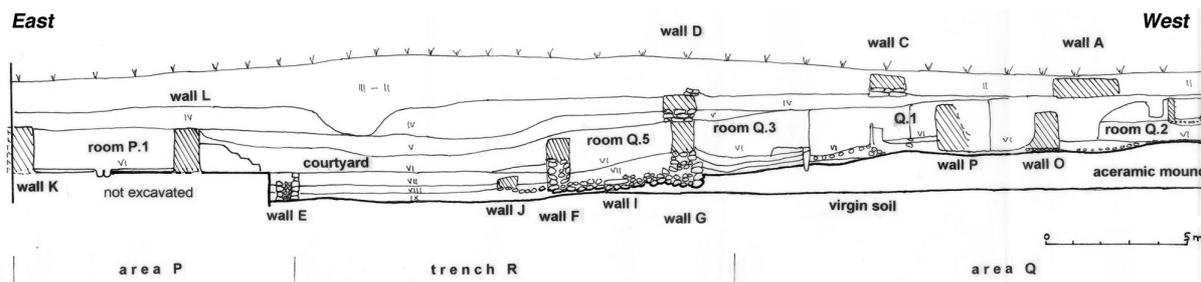


Fig. 2. Hacilar's main section (after Mellaart 1970.Fig. 38).

pose, enables a shorter duration more in line with the ^{14}C evidence.

About 10m East of the small elevation formed by the Aceramic mound, Building P.VI.1-3 (Mellaart 1970. Fig. 7) was built in a N-S orientation and probably founded on virgin soil, representing the first occupation during the Pottery Neolithic at Hacilar (Fig. 2. Walls K, L, E). Although only the remains of Level VI are excavated, I believe this building to be the latest stage of renewals of an original building created in Level IX. The buildings extending westwards confirm this sequence of events. Room Q.VI.5 having stone substructures is cut into the brim of the Aceramic mound (Wall G), the West wall foundations seemingly showing reinforcement against the pressure of the early mound. Also, the north wall of House Q.VI.5 has stone foundations cutting into the Aceramic mound, and was built during Level IX (Wall I, and Mellaart 1970.Fig. 39). This room, Q.VI.5, connects to the eastern stone wall (Wall E), which like many of the other walls in Hacilar is probably a foundation for a mud-brick wall later erased during Level VI (or missed, as seems suggested by a post slot fitted into wall E's west face, Mellaart 1970.Pls. Vb, VIIa; for full argument see Thissen 2000a.138). As the section drawing shows, Room Q.VI.5 connects via walking surfaces starting in Level IX to Rooms Q.1-4 in the West, which are built directly on top of the Aceramic mound without stone substructures, evidently deemed unnecessary here, but possibly so as not to create too big a difference in elevation between the western and eastern houses. I suggest that Hacilar Levels IX-VI are a single stratigraphic unit where all the major buildings were founded directly on virgin soil or over the Aceramic mound during what may be called Level IX, to see only refurbishings in the subsequent Levels VIII, VII and VI.² Following this reinterpretation, the finds from the combined stratigraphic unit IX-VI should

be demonstrating little development internally, and Mellaart's and subsequent writers' stress on development in the pottery should perhaps be revised (Mellaart 1970; but see Mellaart 1998.56 for a more restrained view; Schoop 2005.155-156; Reingruber 2008.430-431). The group of more or less freestanding buildings IX-VI separated by courtyards may have served several generations of families before

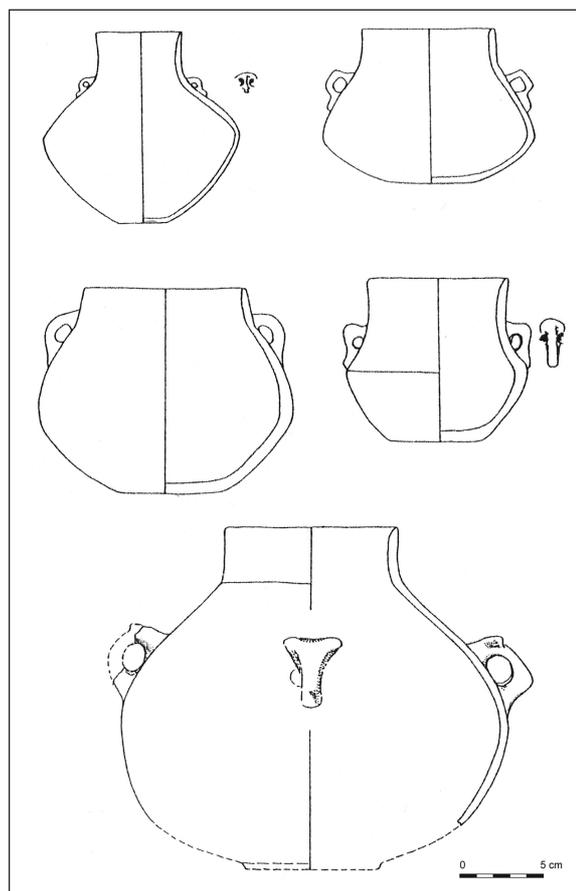


Fig. 3. Hacilar V-IIA typical pots and jars with two vertically placed strap handles, often with downward 'tongues' reinforcing attachment on the body (after Mellaart 1970.Figs. 60:23; 70:28; 75:16, 19, 22).

² Refloorings and replasterings must have been frequent (cf. Mellaart 1961.40: "Level VII is no more than an early floor of Level VI", and "Levels VIII and IX were two floors of one building level"), and room divisions, screens and storage bins may have shifted place during this period.

the settlement fell victim to a devastating fire.

Likewise, it is tenable to treat Hacilar Levels V–IIA/B as another stratigraphic unit, largely built directly over the destruction level of Level VI. Level IIA walls are sitting directly on top of Level VI ones and can be connected to Level V walls stratigraphically (Fig. 2, walls A, D). Moreover, the overall orientation and layout of houses between Levels IX–VI and IIA were maintained. Levels V–III are not found in the western excavation area, and seem to represent minor adjustment stages restricted in scope and location within an original IIA settlement (*cf. Thissen 2000a. 140–141* for full argument). Conceptually, the pottery is changing from a dominance of holemouth vessels with small or tubular suspension lugs often set in fours in the Level IX–VI unit (*Mellaart 1970.Fig. 46*), to a ceramic assemblage where manipulation, tactility and ways of carrying are guided (or perhaps defined) by vertical strap handles set in twos on necked pots and jars in Levels V–IIA/B (Fig. 3).³ This handling system was already in use during the earlier unit (*Mellaart 1970.Figs. 48. 25, 26; 53.9; 59.7, 13*), but not yet popular. Its full adoption in the Level V–IIA/B unit and the concomitant change in vessel forms suggest new ways of vessel use and possibly changing cooking habits. Emerging attitudes vis-à-vis material culture in terms of the pottery decoration first occurring in Levels IX–VI are also becoming more pronounced in this second stage, suggesting a rethinking of visibility and symbolism through specific ceramic categories including carinated bowls and (water?) jars (*Mellaart 1970.Fig. 65*). Profound shifts are even stronger in Hacilar I, where a restructuring of the settlement, involving a denial of previous building history, a different pottery which makes use of new clay sources, and changing concepts of pottery form have led Mellaart to claim ‘newcomers’ (*Mellaart 1975.118; 1998. 55*) to have been responsible for the reoccupation of

the site. However, water-jar manipulation concepts may have continued the tradition matured in the previous occupation (*Mellaart 1970.Figs. 110.4, 7; 111.18, 19*), and this may also have been the case for cooking pots (*Mellaart 1970.Fig. 110.1–3, 5–6, 8*). This would strengthen the idea that the gap between the destruction of Level IIA/B and the building of the large new settlement of Level I was not very wide, as is also suggested by the ¹⁴C data.

Applying a phase-boundary model to the Hacilar sequence, and conceiving the main stratigraphic units as defined above as contiguous (including Level IA), this results in a good fit of the data with an overall agreement of 117% (Fig. 4).⁴ The early start of IX–VI is generated primarily by, and might be distorted by, the three AA samples all taken from a single tree

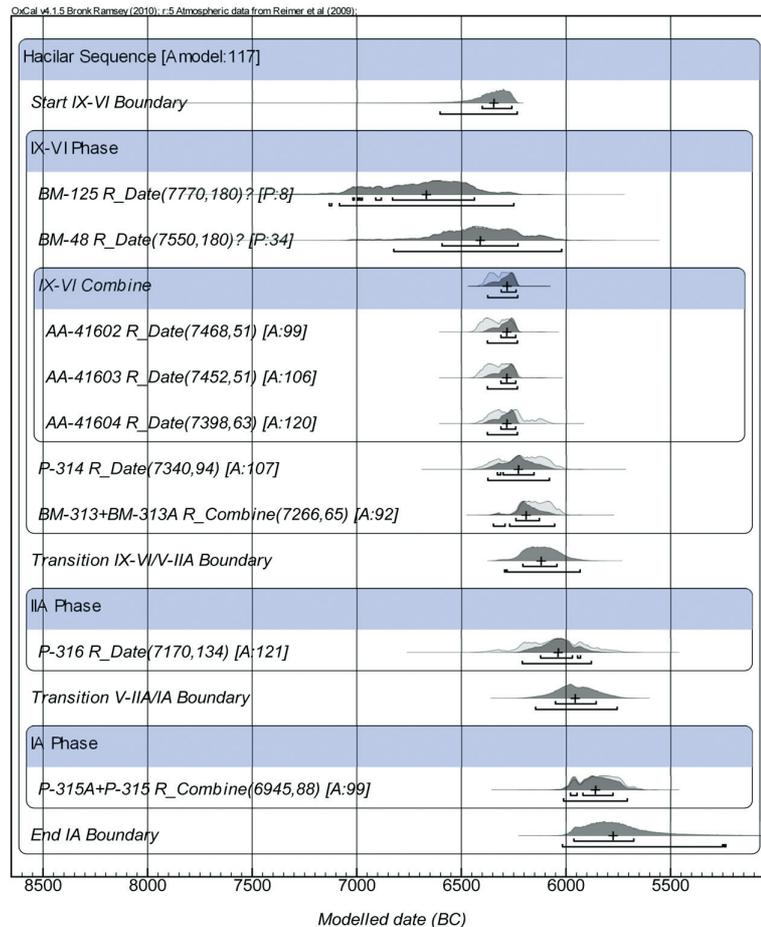


Fig. 4. Hacilar ¹⁴C dates contiguous boundary model. BM-125 and BM-48 treated as outliers due to large stdev; AA-samples combined stemming from a single tree. Dark grey distributions show modelled dates, the light grey areas signify the original, individually calibrated distributions. Median indicated by + sign.

³ Mellaart has gone so far as to label such vertical lugs as ‘Hacilar handles’ (*Mellaart 1958.143*).

⁴ All calculations in this paper are based on the IntCal09 calibration curve (*Reimer et al. 2009*), and carried out with OxCal v.4.1.5 (*Bronk Ramsey 2009*). In this article, ¹⁴C measurements are standardly rounded by 10, ranges are quoted with 1σ confidence intervals.

(from which, incidentally, also BM-48 was taken). (These three dates have their probability distributions combined, yielding 6380–6250, Acomb 115,8%.)⁵ It must be remembered that after IIA was burnt, the settlement was reused during Level IIB; likewise, after the IA destruction, the site was reoccupied (Levels IB–ID) – for which no dates are available. If we may trust these dates, few as they are, they establish three things: firstly, 'Late Neolithic' Hacilar Levels IX–VI date to the 3rd–4th quarters of the 7th millennium calBC; secondly, 'Early Chalcolithic' Levels V–IIA still largely fall in the late 7th millennium as well; and thirdly, only Level I is definitely datable to the conventional 'Chalcolithic' (read: 6th millennium calBC) (its first two, or else three centuries, if we want to account for a post-IA occupation) (Tab. 1).

Even though the conventional labels used in Anatolian prehistory as Late Neolithic and Early Chalcolithic are rather arbitrary, taken together they denote a highly dynamic time frame seeing the destruction, rebuilding and relocation of settlements, as well as changing concepts towards pottery use and function, and investing in symbolic detail. These patterns in material culture will have reflected changing food habits and varying concepts of presentation and status. How is the situation at the neighbouring site of Kuruçay Höyük, of which recently Çilingiroğlu rather aptly stated – arguing against its excavator's claims – that it would be rather "perverse" not to see some contemporaneity between both settlements (Çilingiroğlu 2009:285)?

Kuruçay Höyük

Also for Kuruçay, a case can be made to combine/conflate building remains – and hence material cul-

Phase Boundaries	calBC (1 σ)	Median
Start Levels IX–VI	6410–6250	6350
Transition IX–VI / V–IIA	6210–6040	6120
Transition V–IIA / IA	6060–5850	5960
End Level IA	5970–5670	5780

Tab. 1. Hacilar: grouping of dates into bounded phases using the median as point estimator for the start and end of the phases.

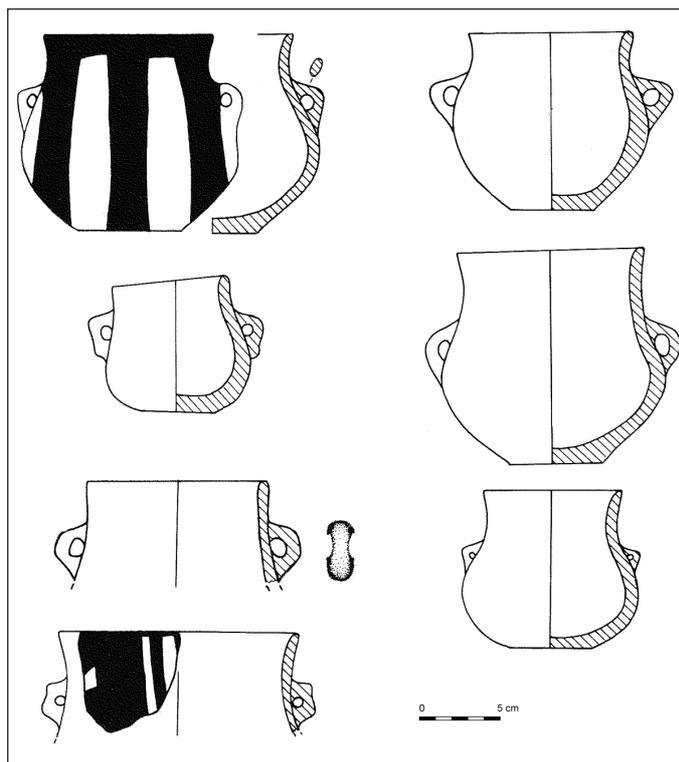


Fig. 5. Kuruçay Level 11 üst, two-handled pots (after Duru 1994.Pls. 73. 7–11; 74.1, 3).

ture. From basal Levels 12 up to and including Level 10, similar elevations averaging at about 6m in the main excavation area (E-G/4–7), taken on the (single) stone foundation walls, suggest just a single, major building horizon, obviously with adjustments and rearrangements. If accepted, it follows that Kuruçay was also occupied south of, that is outside of, the alleged fortification of Levels 12–11 (cf. Duru 1994.Pl. 30).⁶ Even the SW rectangular structure from Level 8 (no. 2) has similar elevations, and some walls from Level 9 have elevations only slightly higher than these. Consequently, it is conceivable that large tracts of the pre-Level 7 walls from Kuruçay are associated with one another. The stratigraphic complexity of the site and the absence of mud-brick superstructures are not aided by excavation methods. There is a general absence of systematic profile sections (but cf. Duru 1994.Pls. 8.1; 17.1), and stone foundations from higher levels remain standing during the dig (e.g., Duru 1994.Pl. 20.1), prohibiting a clear overview. In terms of orientation and use of space, Kuruçay Level 7 breaks with the previous tradition, radically overlaying the older settlement(s) in a N–S orientation. The monocellular, isolated or chained rectangular units are exchanged

⁵ Full details on all data used in this paper can be found in Table 6 and on the CANeW website: <http://www.canew.org/data.html>.

⁶ Also speaking against the idea of a fortification are the openings in the so-called towers, interpreted as doors, and facing the area extra muros (Duru 1994.12, Fig. 1).

for sturdier square units having inner buttresses, without obvious floor-level entrances (*Duru 1994.Pl. 24*). Elevations of the stone foundations are generally higher than the earlier levels, assuring that the stratigraphic sequence of Level 7 is definitely later than the 12–8 assembly. The difficult stratigraphic record of Kuruçay is one of the main reasons the pottery as presented (*Duru 1994*) shows a strong mix of what at the neighbouring site of Hacilar is separated between Hacilar V–IIA and I. At Kuruçay, pottery with Hacilar I characteristics turns up massively in Level 7, but it occurs consistently from the basal levels upwards as well (e.g., *Duru 1994.Pl. 58.2; 65.10–14; 92, etc.*). Simultaneously, painted pottery in the Hacilar V–II style is found in Kuruçay 7 (*Duru 1994.Pl. 165–166*), which Duru regards as intrusions (e.g., *Duru 1982.22; 1983.42*). Schoop has interpreted this circumstance by inserting the whole Kuruçay sequence in an alleged gap between Hacilar V–II and I (*2005.190, Fig. 4.9; also Clare et al. 2008.71–72*); however, this is not supported by the ¹⁴C dates (below).

Regarding pottery, from Level 13 onwards at Kuruçay, the typical vertical strap handles known from Hacilar since Level VIII, but dominant there during the V–IIA/B unit, occur up to Level 7 (horn handles or down-turned ones) (Fig. 5). Together with a decrease in tubular lugs and the presence of the Hacilar V–II painted style, the pronounced presence of vertical handled pots suggests that the whole sequence of Kuruçay parallels perhaps the tail-end of Hacilar VI, as well as the V–IIA/B period. The predominance of vertical handled pots even in Kuruçay 7 would place that occupation at the very end of Hacilar II or the beginning of Hacilar I.

The Kuruçay ¹⁴C data are very ambiguous and do not fit into a phase model, where the Level 7 date is earlier than the two dates from Levels 12 and 11, which, themselves, are nearly mutually exclusive on the 1σ level (Fig. 6). There is also a Level 13/12 date from a wash-down deposit, even earlier. The samples do not have an exact provenance and context. Within conventional wisdom, where Kuruçay 7 would be about contemporary to Hacilar I given the pottery and architecture, the Level 11 date may have an original provenance as from Level 7, whereas the Level 7 date may stem from the earlier unit (12 or

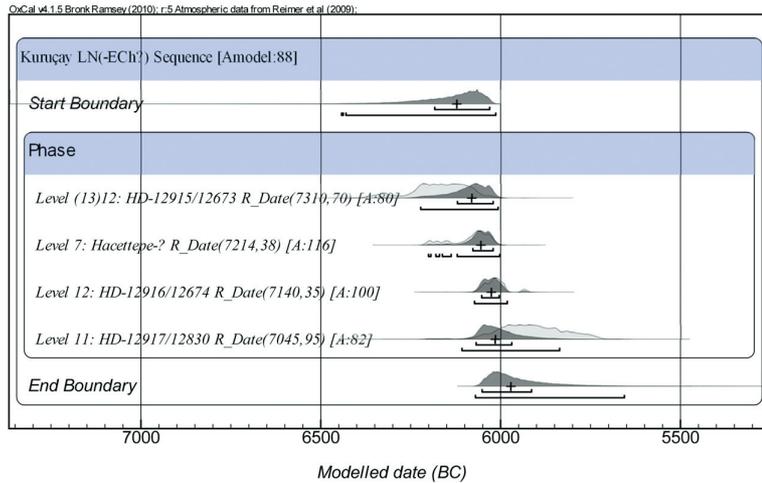


Fig. 6. Kuruçay ¹⁴C dates boundary model, where all dates are treated as deriving from a single phase.

later). Alternatively, the Level 7 date is from ‘old wood’ (*Reingruber 2008.447*), or is intrusive from older levels, as Duru thinks (*Duru 1994.114*). The latter is indeed plausible in view of the mixing of the pottery in all levels. The only secure procedure is to regard all dates (including the Level 7 one) as resulting from a short series of events following my conflation of the pre-Level 7 deposit, and thus providing a terminus post quem for Level 7. Conceived thus, all of ‘Late Neolithic–Early Chalcolithic’ Kuruçay dates to a time frame mostly filling the 61st century calBC, and agrees rather well with the span reached for the Hacilar V–IIA stratigraphic unit when considering the median estimators (Tab. 2).

The earlier extreme of the modelled start boundary of 6190 calBC would suggest that Kuruçay was founded somewhere during the final years of Hacilar IX–VI, subsequently continuing life contemporary to Hacilar V–IIA/B. The Kuruçay dates would confirm the final 7th millennium date for the ‘Early Chalcolithic’ painted pottery style in the Lakes Region.

Höyücek

Of the four ¹⁴C dates available from this site, only two can be used, where dates HD-14219 and 14218 do not fit the boundary model and are treated as outliers (Fig. 7). On the basis of the radiocarbon dates,

Phase Boundaries	calBC (1σ)	Median
Start	6190–6030	6120
End	6060–5910	5970

Tab. 2. Kuruçay: grouping of dates into bounded phases using the median as point estimator for the start and end of the phases.

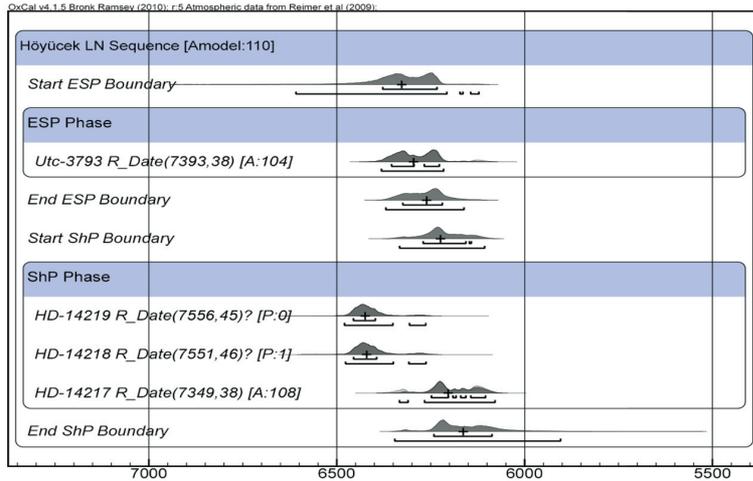


Fig. 7. Höyücek ¹⁴C dates sequential boundary model. (HD-14219, room 4; HD-14218, room 3; HD-14217, room 2 – p.c. Gül-sün Umurtak, April 2010.)

one could defend the view that Höyücek’s Shrine Phase (‘ShP’) as well as the allegedly wattle-and-daub deposit underlying it (Early Settlements Phase, ‘ESP’) parallel the Hacilar IX–VI stratigraphic unit, but pre-date the occupation at Kuruçay. Höyücek’s subsequent village (Sanctuary Phase, ‘SP’) has not been radiocarbon dated, but will have followed immediately, given the continuation of material culture, except for the introduction of painted pottery in the Hacilar V–II style. Such an estimate would confirm the still mainly 7th millennium cal BC association of this material reached when dating Hacilar V–IIA and Kuruçay 12–8. However, also the younger ShP date (HD-14127) was taken from a wooden post, and the date result may also have suffered from the old wood effect. The pottery from both the Shrine and the Sanctuary Phases has important aspects in common, notably the vertical strap handles on pots and jars (Fig. 8), as well as the typical feature of fenestrated ring bases. I argue that the handle sets suggest an important shift in tactility and manipulation patterns that reflect changing vessel-use concepts, probably involving cooking methods. I assume that within the SW Anatolian Lakes Region, these changing concepts from a previous assemblage of food processing vessels dominated by tubular or knoblike suspension lugs must have been more or less contemporary. If so, this would provide us with a tool with which to date the sites more precisely.

Since vessels with two vertical strap handles are conspicuously present in both main phases of Höyücek, this could suggest two things: first, that the Shrine Phase and the Sanctuary Phase are very close in

time; and secondly, that the single ¹⁴C date for the Shrine Phase is possibly too old, and the actual date of the phase is more probably contemporary with the Kuruçay pre-Level 7 deposit, as well as the final years of Hacilar VI and the beginning of the Hacilar V–IIA unit. Perfect parallels exist between the Shrine Phase and Hacilar VI in terms of the pottery, but most of these can also be found in Hacilar V–II.7 Consequently, Höyücek’s boundary model and its median estimators possibly give a misleading picture, and it is probably the tail-ends of both start and end boundaries for the Shrine Phase – viz. 6140 calBC and 6080 calBC

resp. – that make a better fit considering the pottery parallels (Tab. 3). Höyücek’s Early Settlements Phase will have run largely contemporary with the Hacilar IX–VI stratigraphic unit. The undated Sanctuary Phase, finally, would – immediately ensuing – fall into the 61st millennium calBC.

Bademağacı

Importantly, vertically placed strap handles set in twos on pots and jars are largely absent from the Bademağacı assemblages as published up to now (the site is still being excavated). Instead, manipulation and tactility are resolved by tubular lugs, which are often large, with vessels often having only two (Fig. 9). Parallel vessels are also part of the repertoire of Hacilar IX–VI (Mellaart 1970.Figs. 46.5; 49.12–13; 54.10; 55.8), and are yet another solution to the manipulation of what are most obviously cooking pots (flat bases, easily accessible orifices, sturdy lugs high up near the rims). Pots with vertical strap handles occur only very rarely at Bademağacı (Duru 2002.Pl. 17.5; 2004.Pl. 24.1). The ¹⁴C dates largely confirm the parallelism with early Hacilar, at

Phase Boundaries	calBC (1σ)	Median
Start ‘ESP’	6380–6230	6330
End ‘ESP’	6330–6210	6260
Start ‘ShP’	6280–6140	6220
End ‘ShP’	6250–6080	6160

Tab. 3. Höyücek: grouping of dates into bounded phases using the median as point estimator for the start and end of the phases. See text for validity of estimations.

7 The fenestrated ring/disk bases from the ShP and SP stages (Duru 1995.Pl. 19.8–9), compare with Hacilar IIB (Mellaart 1970. Fig. 90.32–33). Also in Kuruçay (Levels 10–9, Duru 1994.Pl. 108.21–25).

least as far as Bademağacı Levels 4A-1 are concerned (Fig. 10). The basal Level 9 date is on a long wiggle section of the IntCal 2009 calibration curve, between 7000–6700 calBC. With a start in the early 64th C calBC for Level 4A, a beginning of Bademağacı at about the tail end of that wiggle (6700 calBC) seems more likely (Tab. 4).

Karain

The cave site at Karain is very close to Bademağacı, and partly contemporary, judging from the ¹⁴C evidence, and therefore likely to yield a similar cultural assemblage. This is difficult to ascertain, since the pottery presented by Seeher (1989) is mixed, as is often the case at cave sites (Reingruber 2008:452). Three dates suggest intermittent use of the site between the mid 7th and the beginning of the 6th millennium calBC (Fig. 11). Among the pottery, the tongue-shaped handles (Seeher 1989: Figs. 1.4; 2.7–8) suggest a final 7th millennium date contemporary with the Hacilar V-II unit, and some of the painted material would correspond to Hacilar I (Seeher 1989: Fig. 3.9–17). Other red slipped profiles of dishes, holemouth and S-shaped pots with vertically pierced knobs high up on the vessel shoulders parallel Bademağacı Levels 4B-2 and basal Hacilar (Seeher 1989: Figs. 1.12, 18; 2.1).

Ulucak

The Ulucak ¹⁴C data are rather difficult to interpret, since many seem too old or too young for their context in relation to the stratigraphy (cf. Çilingiroğlu 2009:44–48). Therefore, sequencing the dates is virtually impossible and the result presented in Fig. 12

Phase Boundaries	calBC (1σ)	Median
Start 4A	6420 – 6280	6370
Transition 4A / 4	6390 – 6260	6330
Transition 4 / 4-3A	6350 – 6240	6290
End 4-3A	6290 – 6210	6250
Start 1	6260 – 6160	6210
End 1	6230 – 6110	6170

Tab. 4. Bademağacı: grouping of dates into bounded phases using the median as point estimator for the start and end of the phases, starting with Level 4A.

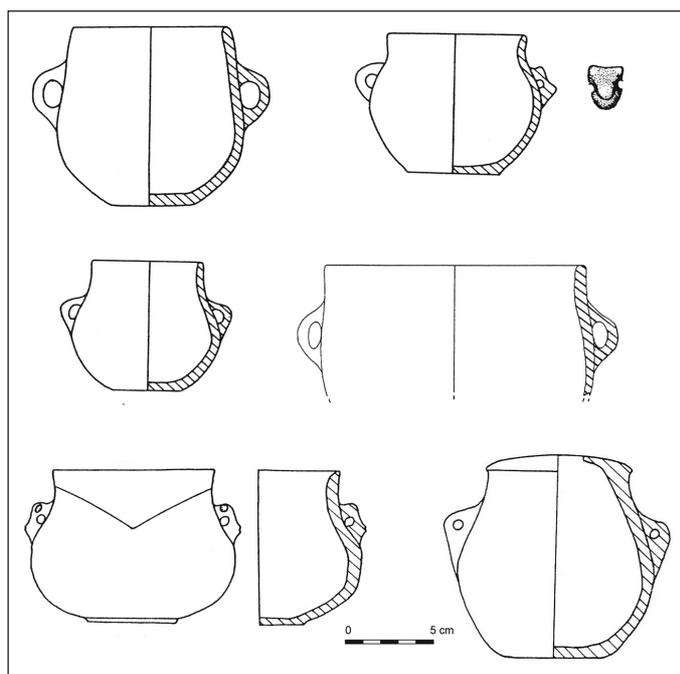


Fig. 8. Höyücek selected vessels with two vertically placed strap handles from the Shrine Phase and Sanctuary Phase (after Duru and Umurtak 2005).

has an Agreement of 0%, and must therefore be treated with the utmost caution. Be that as it may, barring the two earliest dates from Level VI which take the site back into the first half of the 7th millennium calBC⁸, Ulucak Vf may have started about halfway through the 65th century calBC, and the village may have existed down to 5800 calBC (Tab. 5). Within the poor radiocarbon sequence, some stable points exist, allowing for *termini post* and *ante quem*. Level Vb, for example, was burnt and can be securely

Phase Boundaries	calBC (1σ)	Median
Start VIa	6810–6650	6740
Transition VIa / Vf	6460–6430	6450
Transition Vf / Ve	6450–6430	6440
Transition Ve / Vd	6450–6390	6420
Transition Vd / Vc	6340–6290	6320
Transition Vc / Vb	6330–6270	6290
Transition Vb / Va	6230–6100	6180
End Va	6080–5970	6030
Start IVi	6040–5930	6000
End IVi	6010–5890	5940
Start IVb	5930–5810	5870
End IVb	5880–5740	5800

Tab. 5. Ulucak: grouping of dates into bounded phases using the median as point estimator for the start and end of the phases (full data in Çilingiroğlu 2009).

8 An age currently confirmed by more dates from Level VI (Çiler Çilingiroğlu, p.c. April 2010).

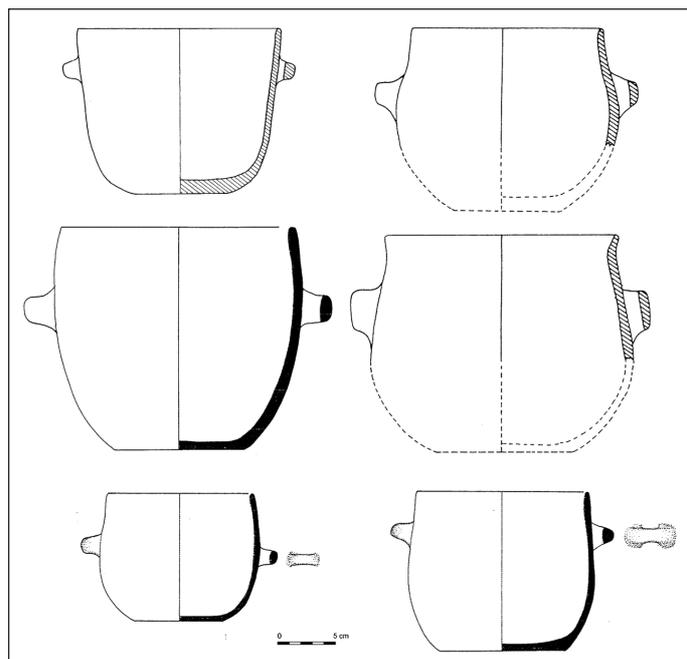


Fig. 9. Bademağacı selected pottery with two opposing horizontal (tubular) lugs (after Duru 1997.Pls. 12.1–2; 15.7; 2000.Pl. 6.1; 2004.Pl. 23.4–5).

dated on a four times combined date as having ended anywhere between 6230–6100 calBC. This would make the Vb village contemporary with Hacilar’s early unit IX–VI and Bademağacı Level 1.

Regarding pottery, there are clear links between Ulucak and the Lakes Region primarily in the earlier part of the sequences (*i.e.*, the Hacilar IX–VI and Bademağacı units), but whereas in the Lakes area new concepts concerning vessel use and manipulation emerge towards the end of the 7th millennium, together with a fashion for painted bowls and jars, development in the West was much more gradual. Tubular lugs and vertically pierced knobs determine ideas about the handling of vessels and vessel use as much in the later stages of Ulucak as they did in the early levels. Vertically placed strap handles are very rare in Ulucak, where they occur during Levels Va–IVb (Çilingiroğlu 2009.Pls. 16.4; 20.23; 28.16; 37.14, 16, 17), a range confirming contemporaneity with Kuruçay 12–8 and Hacilar V–IIa/IA. Also, Ulucak’s impresso pottery (Çilingiroğlu 2009.85, Fig. 4.1) fits this date, making it contemporary also with Ilıpınar phases IX–VIII having similar impresso pottery (Thissen 2001.Figs.

33–43). Ceramic traditions may have been stronger and more stable in the West than they were in the Lakes area. Importantly, painted pottery, like the brilliant material from Hacilar V–II and I, is conspicuously absent in Ulucak, as it is at all Turkish Aegean sites explored until now (Lichter 2005.64; 2006.34–36; Herling *et al.* 2008.21).

Conclusions

The data presented lead me to several preliminary observations. Both in the Lakes Region and in Western Turkey, pottery Neolithic sites are at least as early as 6400 calBC (Fig. 13). The deep deposits at Höyücek, Bademağacı and possibly an occupation level at the Karain cave, all in the Southwest, and those present in Ulucak in the West, still seem to carry pottery, although there may be less and less at succeeding levels (*cf.* the Bademağacı evidence – Duru 2002.583). The dating evidence for these basal levels at Bademağacı and Ulucak is still ra-

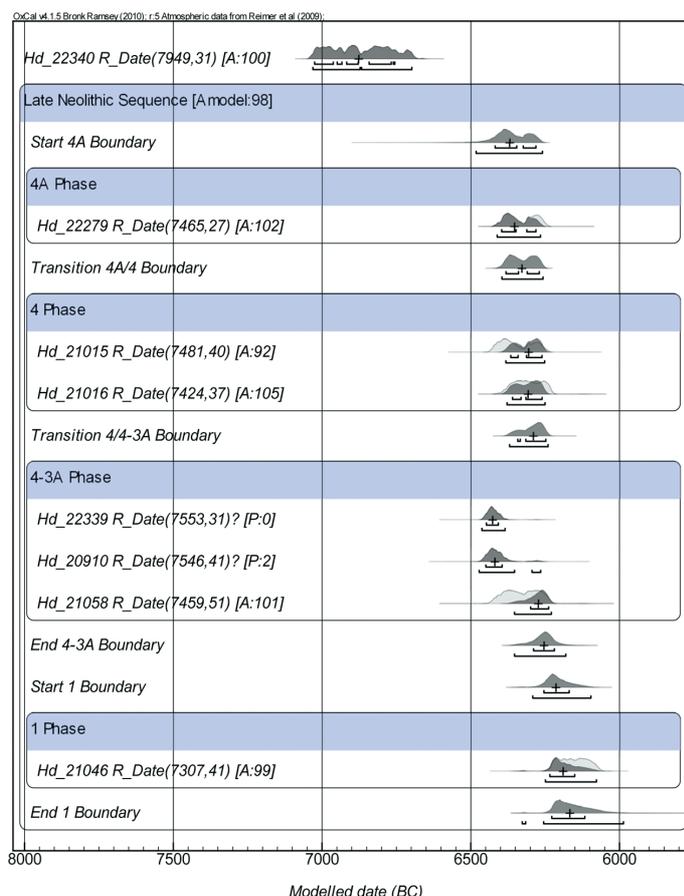


Fig. 10. Bademağacı ¹⁴C dates sequential boundary model, phase 4–3A to phase 1 contiguous. Phase 4–3A dates Hd–22339 and Hd–20910 treated as outliers.

ther poor, but suggests that technologically sophisticated pottery may have been in use as early as 6700 calBC.

Judging from the conceptual similarities between the early potteries of Bademağacı 4A-1, Hacılar IX-VI and Ulucak V – mainly evident from shapes, handle sets and surface treatments – technological knowledge and shared ideas concerning manipulation and vessel use were widespread at the beginning of the 2nd half of the 7th millennium calBC, encompassing an area stretching from (parts of) Aegean Turkey to the Lakes Region, including the Antalya area (Karain). They may well have gone back earlier. It is only at about the later part of the 6^{2nd} century calBC that West and SW begin to diverge, as best seen in changes in the handle sets applied to pots and jars in the SW; meanwhile, in the West, traditions are being maintained and continued into the 6th millennium calBC.

Given the parallel development both in time and material culture in both areas, starting during the first half of the 7th millennium calBC, there is little support for migration or diffusion models claiming a general East-West direction across Anatolia and finding their origin in a collapse at the end of the PPNB period. If a demic movement is not at the base

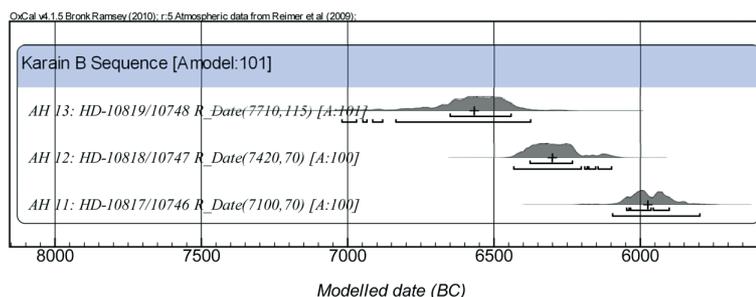


Fig. 11. Karain ¹⁴C dates, calibrated individually.

of the Neolithic in SW and Aegean Anatolia, this necessarily discredits any additional movement into Europe (read: Greece) from the western parts of Turkey as merely yet another step in such a process. I do not oppose the idea of migration into Greece, but I think this to have been a small-scale, local, even peripheral event isolated from the grand sweep of collapse models. The neolithisation of Thessaly and the Peloponnesus were, most likely, separate and unconnected events (*Thissen 2000b*), and these events took place several centuries later than the first occupations bearing pottery in the Turkish Aegean (*Reingruber and Thissen 2008*).

The dating evidence gathered in this paper does not straightforwardly confirm (or deny) the 8.2ka climate event to have been a direct influence on the occupation histories either of sites in Aegean Turkey or the Lakes Region. The sequences at Hacılar and Höyücek probably continue across the 6200 calBC

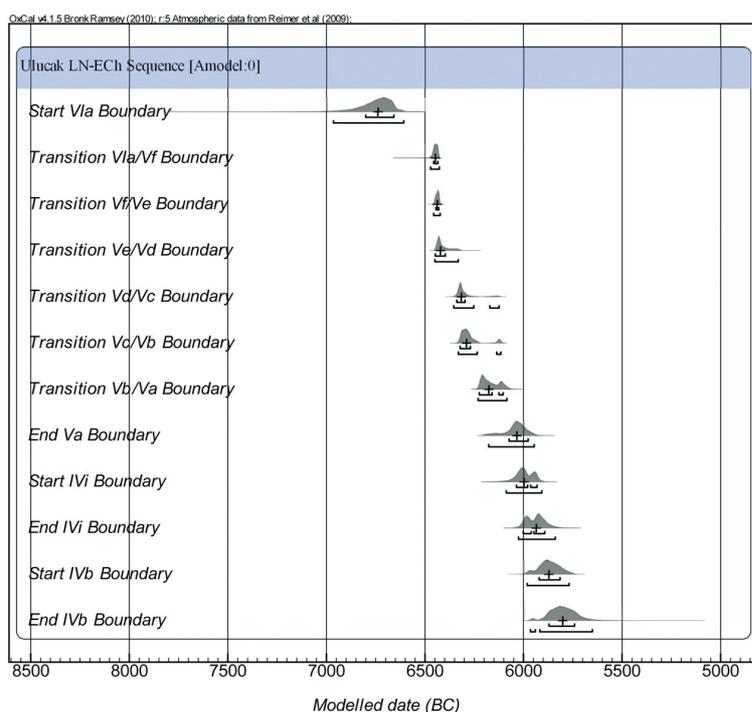


Fig. 12. Ulucak ¹⁴C dates boundary model (for full dates refer to Çilingiroğlu 2009:536–537).

point, despite the burning of individual villages (Hacılar IX-VI, Höyücek's Shrine and Sanctuary Phases). Villages appear to have been rebuilt and reused. It is equally difficult to prove that the definitely major shift in concepts of dealing with pottery and in cooking methods, and the emerging predilection for 'fantastic' painted bowls and jars, were also linked to 8.2ka, since the germs of this methodological shift and the idea of enhancing visibility and symbolic language by means of ceramics were already present in the preceding occupations. Nor is such a shift demonstrable in Ulucak, where tradition is more stable or conservative, and painted pottery very rare.

In the Balkans, pottery starts being used, in massive quantities immediately, in the 61st century calBC at the earliest (*Thissen 2009*), at a time that

in SW Anatolia painted pottery began to appear in some quantity (Hacılar V-IIA/B, Kuruçay 12-8, Höyücek Sanctuary Phase). This so-called Monochrome

stage in SE Europe thus postdates the SW Anatolian 'monochrome' stage by a few centuries. Additionally, the painted decoration motifs in Bulgarian contexts

Lab. no.	Date BP	calBC (1σ)	Material	Level	Provenance (ref.)
Bademağacı (1. Duru 2002.588; 2. Duru 2004.558)					
Hd-22340	7949±31	7030-6760	C	Early Neolithic I/8	Deep sounding C5/III.5, limestone plaster floor (2)
Hd-22279	7465±27	6400-6260	C	Early Neolithic II/4A	nd (2)
Hd-21015	7481±40	6420-6260	C	Early Neolithic II/4	nd (1)
Hd-21016	7424±37	6370-6240	C	Early Neolithic II/4	nd (1)
Hd-22339	7553±31	6450-6400	C	Early Neolithic II/4-3A	nd (2)
Hd-20910	7546±41	6450-6390	C	Early Neolithic II/3	nd (1)
Hd-21058	7459±51	6400-6250	C	Early Neolithic II/3	nd (1)
Hd-21046	7307±41	6230-6100	C	Early Neolithic II/1	nd (1)
Hacılar (1. Barker and Mackey 1960.29-30; 2. Ralph and Stuckenrath 1962.145-6; 3. Barker and Mackey 1963.107-8; 4. Mellaart 1970.92-5)					
P-314	7340±94	6350-6070	C	IX	Area E, hearth throwout (2, 4)
BM-125	7770±180	7010-6440	C	VII	Area P, corner post of a room (3, 4)
BM-48	7550±180	6600-6230	C	VI	Area P, burnt post or beam (1, 4)
P-313A	7350±85	6350-6080	C	VI	Area E, ashes from hearth (additional NaOH pretreatment) (2, 4)
P-313	7150±98	6210-5900	C	VI	Area E, ashes from hearth (acid pretreatment) (2, 4)
P-313 and P-313A from same sample. R_Combine: 7266±64 BP (6220-6060 calBC at 1σ)					
P-316	7170±134	6220-5910	C	IIA	Area N, room 4, roof beam (2, 4)
P-315A	7047±221	6210-5710	C	IA	Roof beam, room 5 (additional NaOH pretreatment) (2, 4)
P-315	6926±95	5960-5720	C	IA	Roof beam, room 5 (acid pretreatment) (2, 4)
P-315A and P-315 from same sample. R_Combine: 6945±87 BP (5970-5730 calBC at 1σ)					
Hacılar . Decadal samples from a single tree sequence (same as BM-48) (Maryanne Newton/Peter Kuniholm, p.c. 12 November 2001)					
AA-41602	7468±51	6410-6250 C (juniper)	VI		Area P (C-TU-HAC-1A)
AA-41603	7452±51	6390-6250 C (juniper)	VI		Area P (C-TU-HAC-1B)
AA-41604	7398±63	6380-6220 C (juniper)	VI		Area P (C-TU-HAC-2)
Höyücek (Duru and Umurtak 2005.226; p.c. Gülsün Umurtak, April 2010)					
Utc-3793	7393±38	6360-6220	AB	Early Settlement Phase 2	nd
HD-14219/14007	7556±45	6460-6390	C	Shrine Phase	Post (1990 season) Room 4
HD-14218/14002	7551±46	6460-6390	C	Shrine Phase	Post (1990 season) Room 3
HD-14217/13822	7349±38	6260-6100	C	Shrine Phase	Post (1990 season) Room 2, Square J/5
Karain (Albrecht et al. 1992.131)					
HD-10819/10748	7710±115	6660-6440	C	AH 13	Cave B
HD-10818/10747	7420±70	6380-6230	C	AH 12	Cave B
HD-10817/10746	7100±70	6050-5900	C	AH 11	Cave B
Kuruçay Höyük (1. Duru 1983.47; 2. Duru 1994.89)					
HD-12915/12673	7310±70	6240-6080	AB	13	Test trench A, B or C (2)
HD-12916/12674	7140±35	6050-5990	AB	12	nd (2)
HD-12917/12830	7045±95	6020-5830	AB	11	nd (2)
Hacettepe-?	7214±38	6200-6010	C	7	nd (1)

Tab. 6. Radiocarbon dates used in the text, sites in alphabetic order. Abbreviations used: C = charcoal, AB = animal bone; nd = no information available.

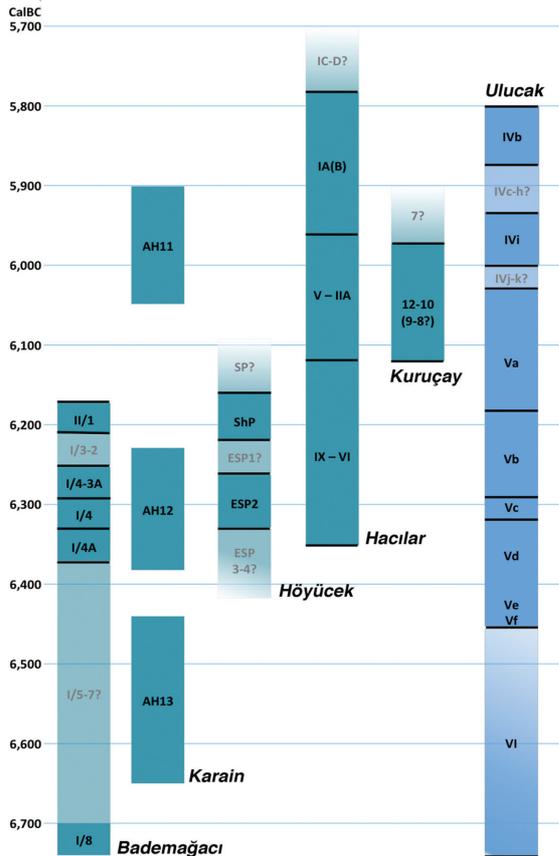


Fig. 13. Absolute chronological chart based on median estimators (black demarcators) of phase boundaries (see text). Transparent shades and fading represent absence of dates. NOTE: Höyücek ShP and SP are probably contemporary with final Hacilar VI/V-IIA and Kuruçay 12-10(9-8?) rather than the earlier range as provided by the boundary model (cf. Höyücek discussion).

that are supposedly a matter of ‘imports’, or indeed a sign of demic diffusion, are likewise incompatible

in date with their Anatolian counterparts, where the Balkan examples date to the 59th/58th centuries calBC at the earliest. Kovačevo’s handful of sherds with motif similarities to painted bowls from Hacilar V-IIA (Lichardus-Itten *et al.* 2006.87, 94, Pl. 2) are labeled as ‘rare’ and deviating from the rest of the painted ceramics (Lichardus-Itten 2009.17; following the ‘import’ idea also Chohadzhiev 2007.96). Similar motifs occur on a few sherds from Rakitovo (Macanova 2000.Pl. III.5). All sites clearly postdate the 7th/6th millennium calBC transition, and the sherds discussed are embedded in pottery assemblages very different from those of the Lakes Region. The idea of imports is tenable, and perhaps it is better to see such vessels as having played a role in exchange systems involving status products. Many other items of an elusive (truly a “liste à la Prévert” – Perlès 2005.277; cf. Çilingiroğlu 2005) ‘Neolithic package’ (cf. the subsumed objects in Özdoğan 2008.Figs. 1-9) by their very exclusivity do fit a Balkan-Aegean-Anatolian exchange system better than migration models.

I believe that the Lakes Region and West Turkey developed along lines largely independent from Central and SE Anatolia. From what was at first a conceptually coherent material culture based on shared know-how and categorisation patterns, as exemplified by attitudes to pottery, trajectories vis-à-vis vessel manipulation diverged towards the end of the 7th millennium calBC – as more regionally determined patterns of pottery use testify; I believe this divergence reflected changing patterns in cooking and food processing. These changes were both dynamic and structural in the Anatolian Southwest, but can be hardly observed in contemporary West Turkish site contexts.

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Social and biophysical vulnerability of prehistoric societies to Rapid Climate Change

Lee Clare, Bernhard Weninger

University of Cologne, Institute of Prehistoric Archaeology, Radiocarbon Laboratory, Cologne, DE

l.clare@uni-koeln.de

b.weninger@uni-koeln.de

ABSTRACT – *Previous studies of the impact of Rapid Climate Change (RCC) on prehistoric communities have often been restricted in their explanatory power due to the lack of an appropriate analytical tool capable of combining palaeoclimate data with archaeological culture. In this paper, we seek to remedy this shortfall by introducing theoretical-methodological concepts adapted from modern vulnerability and risk studies. Using this approach, our focus shifts from climate proxies to prehistoric cultures themselves.*

IZVLEČEK – *Prejšnje študije vpliva hitrih klimatskih sprememb (HKS) na prazgodovinske skupnosti so bile pogosto nepopolne zaradi neprimernih analitskih orodij pri povezovanju paleoklimatskih podatkov z arheološkimi kulturami. V članku želimo to pomanjkljivost odpraviti s pomočjo prevzete teoretsko-metodološkega koncepta v modernih študijah o ranljivosti in tveganju. Pozornost usmerjamo od klimatskih dejavnikov k prazgodovinskim kulturam.*

KEY WORDS – *Rapid Climate Change (RCC); biophysical vulnerability; social vulnerability; coping strategies; Anatolia; Neolithic*

Introduction

An understanding of complex cultural and social behaviour not only requires consideration of a plethora of extrasomatic systems, e.g. technology, social relations, symbolism, religion, and language, but also calls for studies which seek to comprehend inherent mechanisms devoted to the long-term maintenance of cultural traditions, which, should the need arise, switch to some entirely new mode of existence, often within an astonishingly brief time span. Such complex and at first apparently stable and continuous cultural development interrupted by an often remarkably rapid system response is what makes the study of all human societies so challenging, and this is nowhere more apparent than when dealing with prehistoric communities. At present, however, we have only minimal empirical data to evaluate the sensitivity of prehistoric communities to natural hazards. Neither do we dispose of any useful (generally applicable) theoretical tools to predict how these

communities might have reacted in hazardous situations. In fact, our understanding of societal vulnerability in the prehistoric periods is so limited that – to begin – we must simply state that we have no (generalisable) theory at all (worthy of the name) by which insights can be gained into whether prehistoric communities were sensitive (or not) to natural hazard events. In particular, we understand very little of the societal impact of abrupt climate change. This general lack of theory has its background in the historical development of modern archaeology.

Domestication of Natural Disasters

Traditionally, modern archaeological theory views the evolution of social complexity as an internally generated and linear process that has unfolded progressively through time. This trait can be traced back as far as Childe, who noted that progress has consi-

sted essentially in the improvement and adjustment of the social tradition (*Childe 1936:30*). Indeed, among the most drastic shortcomings of related approaches are their predominantly descriptive character. To begin with, this leads to the failure of contemporary archaeological theory to place serious focus on the societal impact of natural disasters, including the often important role played by climate variability, but also to an underestimation of the role of factors such as chaos, chance and the unexpected (*e.g. Terrell 1988*). Indeed, the influence of adverse climate, as well as other forms of environmental crisis, catastrophe and disaster, has long been eyed with scepticism. As a result, such factors are seldom taken seriously as triggers of cultural change. Often, the societal impacts of volcanic eruptions, earthquakes, tsunamis, or of a repeated series of severe winters or prolonged droughts, even warfare, are simply taken as one-off events, which are consequently assumed to have little lasting societal impact (*i.e.* ‘storms in teacups’). The more general view is that the specific societal transformation would have occurred anyway – although perhaps somewhat later. The basic assumption here is that the effects of most natural hazards will be automatically absorbed by societal mechanisms in the course of the prevailing cultural cycle. Consequently, very little thought has been given to the lasting impact of environmental disasters on prehistoric cultures.

Climatic vulnerability of prehistoric societies

In the past few years, major advances in palaeoclimatology have provided a range of new perspectives for archaeologists, both for the Pleistocene and the Holocene. In recent contributions (*Weninger et al. 2006; 2009; Clare et al. 2008; Weninger and Clare 2010; Clare in press*) we have indicated temporal coincidences of some major cultural transitions in the eastern Mediterranean and specific meteorological mechanisms underlying Rapid Climate Change (*sensu Mayewski et al. 2004; Rohling et al. 2002*) which could be causally related. In the present paper, we take these previous studies one step further by introducing a set of theoretical-methodological concepts adapted from contemporary vulnerability and risk studies. In so doing, we move on from the initial task of simply identifying geographic regions and archaeological settlement phases which might have been prone to impacts of RCC to a more detailed analysis of underlying societal vulnerability in these regions. However, before continuing, we briefly review the RCC mechanism, aspects of which will be referred to further below.

Rapid Climate Change (RCC)

The existence of rapid fluctuations in Northern Hemispheric Glacial and Holocene atmospheric circulation patterns was first recognised some twelve years ago in a detailed analysis of the GISP2 (Greenland) ice-core glaciochemical record (*Mayewski et al. 1997*). These studies showed that during the Little Ice Age (LIA) in the Northern Hemisphere, and especially during winter months (December/January/February), the Siberian High, the Icelandic Low and the Azores High were all more intense than during the Medieval Warm Period (MWP). In brief, one of the main causes of the LIA, in addition to solar intensity variation, appears to have been a strengthening of the atmospheric pressure gradients between Siberia (High), Iceland (Low) and the Azores (High). Such pressure gradients not only lead to a strengthening of westerlies over the North Atlantic and Europe, but also support the regular influx of cold air masses from Siberia into the eastern Mediterranean (see below).

Subsequent comparisons of the GISP2 glaciochemical record with terrestrial and marine records on a global scale have demonstrated the existence of six distinct time-intervals, each of which showed major cooling anomalies during the Holocene (*Mayewski et al. 2004*). The ages attributed to these (wider) Rapid Climate Change (RCC) intervals are: 9000–8000, 6000–5000, 4200–3800, 3500–2500, 1200–1000, and 600–150 calBP. The most recent of these RCC-intervals corresponds to the LIA. The extent of global cooling that occurred during these periods is evident in widespread glacier advances in both hemispheres and in a strengthening of westerlies over the North Atlantic and Europe. Our idea, therefore, was to provide a more detailed analysis of archaeological sites in the eastern Mediterranean which were potentially affected by RCC-conditions (*Weninger et al. 2009*).

In the eastern Mediterranean, for all the periods mentioned above, the RCC conditions under study are characterised by one and the same, and indeed a quite significant, meteorological mechanism that is well-known from modern observations. This mechanism is not only evident in the palaeoclimate record of the eastern Mediterranean, but is also well-dated by the high-resolution Greenland ice-core record. This is of immediate interest for archaeological RCC-studies, since many prehistoric sites have been dated by the radiocarbon method, and calibrated ^{14}C -ages (despite all their shortcomings) can be pla-

ced in direct context with the respective climate records. As first recognised by Rohling *et al.* (2002), there is a strong correlation between Greenland GISP2 terrestrial potassium [K^+] peak values and sea-surface temperature (SST) fluctuations, as consistently observed at many core locations in the eastern Aegean. These apparently quite regularly (and abruptly) occurring SST-fluctuations were first measured in core LC21, located east of Crete. As previously noted, modern meteorological observations show that a strengthening of the atmospheric pressure gradients between Siberia (High), Iceland (Low) and the Azores (High) supports an influx of cold air from Siberia into the eastern Mediterranean. The rapid sea surface cooling, as initially observed in LC21, and recently confirmed in further cores (*e.g.* SL21 and MNB3) can therefore be plausibly related to this cold air influx with its source (ultimately) in Siberia. Today, these winds are known as the Mistral, Bora and Vardar, depending upon where they enter the Mediterranean basin (Fig. 1).

The remarkable intensity of the cold north-easterly winds is attested by their capacity to induce surface water cooling in the eastern Aegean. The surface water cooling is all the more remarkable, since the underlying cold air influx typically occurs only for a brief time each year, *i.e.* some few days or weeks during winter and early spring. In support of this interpretation, and due to the specific interest in this mechanism in large parts of the palaeoclimate community, a steadily increasing number of palaeoclimate records are now available from the eastern Mediterranean, the Balkans and north-western Anatolia. Although differing in many details (depending on the specific climate proxy under study), in combination all these records give an indication of the quite regular occurrence of some extreme cooling events in the course of the entire Holocene. An up-to-date selection of published records (June 2010), with an emphasis on records with the highest dating resolution, is shown in Figure 2. In summary, it appears that during RCC-periods, and well-dated by Greenland ice-cores, the eastern Mediterranean was regularly bathed in some of the coldest air masses to be found anywhere on the globe.

Time intervals for RCC

In continuation of previous studies on the societal impact of RCC we have identified a set of shortened (delimited) time-intervals for which we may expect the strongest impact of RCC-conditions. These intervals are as follows: 10.2–10 ka calBP, 8.6–8.0 ka calBP, 6.0–5.2 ka calBP, and (more accurately definable) 3.05–2.90 ka calBP (Weninger *et al.* 2009).

Geographic corridor for RCC

Additionally, based on modern meteorological analogues, we have undertaken efforts to specify the geographic regions in the eastern Mediterranean for which the strongest RCC-impact may be expected. These regions are situated along what we call the ‘RCC-corridor’, which runs from the Ukraine, through south-eastern Europe, into the Aegean. The RCC-corridor covers large parts of Anatolia and the Levant, as well as the islands of Cyprus and Crete. With the definition of RCC-time windows and the geographic RCC-corridor, we know (approximately) where and when we are most likely to encounter maximal potential societal RCC-impact. These studies are still in their infancy, and although we undoubtedly require a much more detailed geographical framework, as can only be defined by more precise (micro-regional) bio-climatic studies, we nevertheless expect to best identify the societal impact of RCC in semi-arid and/or high altitude (mountain) regions (*e.g.* in the highlands of the southern Levant, and in the Konya plain, Central Anatolia) in contrast to the generally milder coastal areas. However, whether these expectations actually correspond to the archaeological reality is

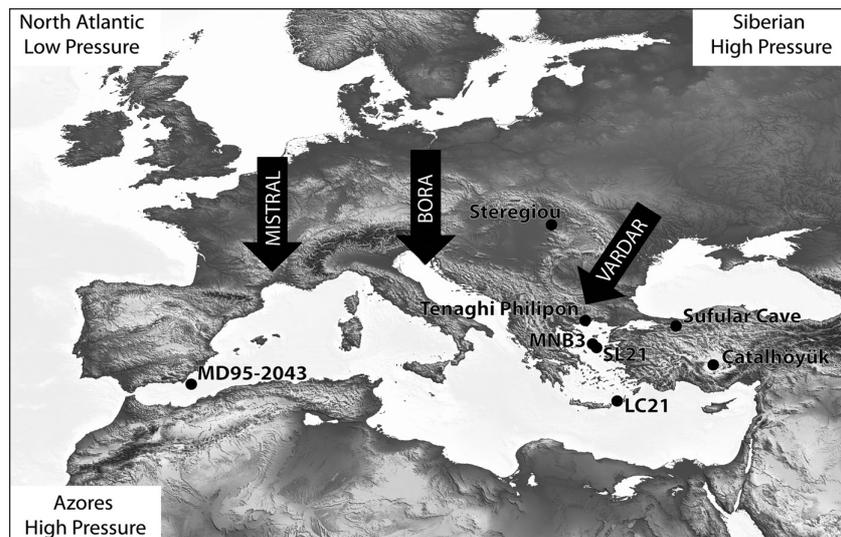
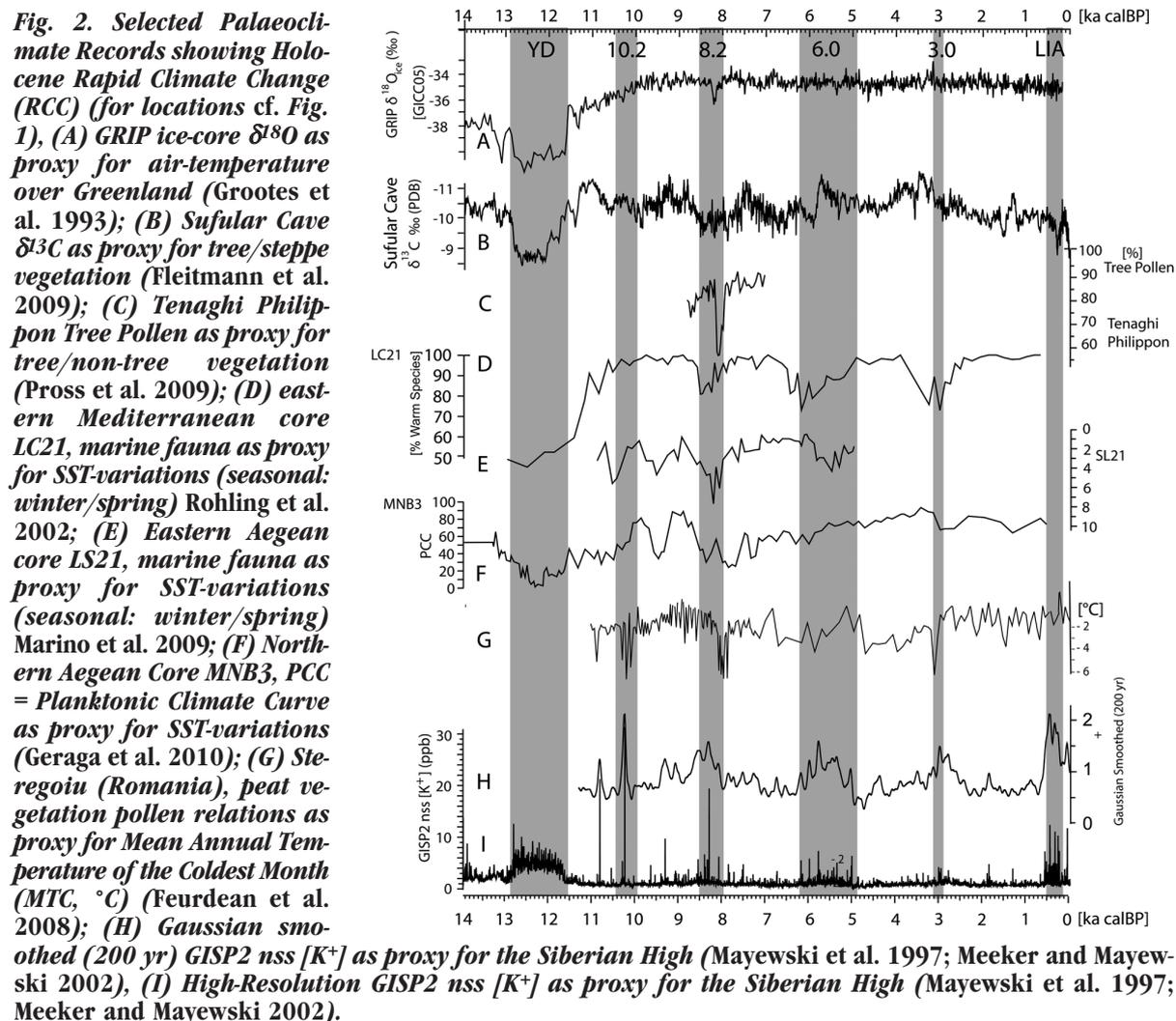


Fig. 1. Sites mentioned in this text and important RCC winds. SRTM Global Batymetry Data: courtesy of Becker *et al.* 2009.



still to be tested. Therefore, although we now have a sound understanding of the archaeology contemporaneous with Holocene RCC intervals, we are still lacking both a clearer perspective of the sensitivity of the different landscapes within the aforementioned RCC-corridor and data relating to the biophysical and societal vulnerability of afflicted prehistoric societies.

Climatic vulnerability of prehistoric communities: general considerations

To begin, we should not assume a priori that RCC-contemporary prehistoric communities were particularly sensitive to the effects of RCC. This remains to be established. Our initial judgement is, however, as already indicated above, that the apparent lack of corresponding archaeological data may simply be caused by prevailing theoretical perspectives, *i.e.* perhaps the data is already available, but its true background has yet to be recognised. Notwithstanding, in this paper, in pursuit of such questions, let

us now take loan of concepts that are central to modern vulnerability theory.

Climatic vulnerability: modern perspectives

The concept of vulnerability has in recent years found a reception in various spheres of risk and disaster research, as well as in poverty, food insecurity, famine, and climate studies (*e.g.* Blaikie et al. 1994; Cutter 1996; Adger and Kelly 1999; Kelly and Adger 2000; Alwang et al. 2001; Prowes 2003; Adger 2006). Current interpretations of the concept of vulnerability are dominated by two paradigms: biophysical vulnerability and social vulnerability. As will be shown below, although they were specifically developed for modern applications, it is possible to adapt certain components of these two concepts to the field of archaeology.

Perhaps the most widely accepted insight from modern vulnerability studies is that the societal impact of catastrophic events is not solely a product of the

physical event itself. It is equally attributable to the prevailing properties of the afflicted community. As such, it is the presence and actions of individual humans (*i.e.* the prevailing social and economic system itself) that may turn an otherwise only weakly acting natural event into a major human catastrophe. Depending on the complex interaction between natural events and properties of the afflicted community, natural catastrophes may – or may not – induce some significant disturbance in the stability of the social system affected (*Dikau and Weichselgartner 2005; Dikau 2008*).

Biophysical vulnerability

As introduced above, a differentiation is made in modern studies between biophysical and societal vulnerability. Biophysical vulnerability (*Burton et al. 1993; Hilhorst and Bankoff 2004; Macchi et al. 2008*) is typically defined as the exposure of human systems to natural extreme events and, as a consequence, to hazard. Hazard is described as a disruption in the equilibrium of the natural event's system (*e.g.* climate) (*Burton et al. 1993.31–34, Fig. 2.1*). When examining the severity of natural extreme events, a number of factors must be considered. *Burton et al. (1993.35)* refer to the seven dimensions of hazardous events: magnitude, frequency, duration, speed of onset, geographical extent, spatial dispersion, and temporal spacing. Evidently, different types of natural extreme event result in varying types of hazard, which can take different tolls and place quite different challenges upon afflicted societies (*e.g. Gaillard 2007*). For example, whereas in the case of an earthquake or a tsunami, a society must react spontaneously, the effects of intermittent droughts and epidemics are more gradual and demand quite different decisions made over longer time spans. Disruption to the prevailing equilibrium of natural events (climate) can compromise and, in severe cases, even lead to the destruction of human use systems. Thus, biophysical vulnerability focuses not only on the nature, frequency and magnitude of the natural extreme event itself, but also on its impacts upon a society's resources. Resource impacts are dictated by such factors as location of residence, availability of natural resources, building technology, as well as land use and land cover.

Location of residence dictates the relative profusion of available resources. It follows that groups living in physically isolated and already harsh environments are those most likely to be exposed to hazard. Particularly vulnerable landscapes include, for example,

semi-arid regions and high altitude (mountain) areas. Significantly, a group's location of residence will be rooted in past or present political, economic and social processes (*Hilhorst and Bankoff 2004.4*); here lies the interface between biophysical and social vulnerability (see below).

Availability of natural resources has obvious priority for the well-being of human systems. Following *Macchi et al. (2008.20–21)*, for traditional societies the most important resources (other than food and water) are wood for timber and fuel, fibre for clothing, medicinal plants for health care and religious purposes, as well as materials for income generating activities. Both extreme natural events and human impact can lead to the loss of natural resources culminating in an increased level of biophysical vulnerability.

Building technology (housing quality) and land use (land cover) patterns are, of course, closely related to the previously mentioned factors. In prehistoric periods, the erection of architectural structures relied strongly on the availability of local resources (timber, adobe, stone, fibre *etc.*). Housing quality will become of immediate concern for a community should natural events lead to the disappearance of construction materials, or structures no longer provide adequate shelter for inhabitants under changed circumstances. Since architectural structures in prehistoric periods are so strongly dependant on local building materials, we may expect building quality to vary with land cover.

Social vulnerability

In contrast to biophysical vulnerability, the term social vulnerability is used in modern risk and disaster studies to emphasise the human dimension to hazard: "*The crucial point about understanding why disasters occur is that it is not only natural events that cause them. They are also the product of the social, political, and economic environment (as distinct from the natural environment) because of the way it structures the lives of different groups of people.*" (*Blaikie et al. 1994.3*).

Clearly, social vulnerability can only be fully understood through familiarity with the afflicted communities, not only in terms of their socio-economic circumstances, but also the extent to which different groups of society are integrated within the mainstream system; particular groups may be excluded from this system and therefore disadvantaged. Ulti-

mately, social vulnerability studies must consider the societal perception of the causes of natural extreme events and environmental change. Indeed, this perception (and corresponding memory of past events) will itself have a strong impact on a group's (future) vulnerability. Such factors complicate all vulnerability studies, especially when contemplating prehistoric communities. There are, however, vulnerability models which are more easily adapted to prehistoric data than others, and to exemplify this adaptation, we focus here on the so-called 'pressure and release model' after Blaikie *et al.* (1994).

'Pressure and release'

The pressure and release model (Blaikie *et al.* 1994) is based on the assumption that: The risk faced by people must be considered as a complex combination of vulnerability and hazard. Disasters are a result of the interaction of both; there is no risk if there are hazards but vulnerability is nil, or if there is vulnerability but no hazard event. A disaster occurs when a significant number of vulnerable people experience a hazard and suffer severe damage and/or disruption of their livelihood system (Blaikie *et al.* 1994:21). In this model, the (wide range) of socio-economic factors constituting social vulnerability are grouped according to three different levels, each of which differs in its proximity – or remoteness – to the potential catastrophe (Fig. 3).

These three levels are termed (1) root causes, (2) dynamic pressures, and (3) unsafe conditions. Root causes are underlying ideological processes. They are described as a set of well-established, widespread notions within a society, which can be observed in economic, demographic, and political domains. These notions express themselves, for example, in prevailing forms of social hierarchy and ideologies. As such, root causes strongly affect the allocation and distribution of resources between different (more or less privileged) groups of people within a society. Such factors are particularly significant for the capacity of a group to respond, cope, and adapt in times of stress. Dynamic pressures translate the effects of root causes, and a culmination of both these factors leads to the emergence of unsafe conditions and (particular) group susceptibility. In the modern world, typical dynamic pressures can include such factors as a lack of local investments and markets, rapid population growth, deforestation and urbanisation, as well as failing infrastructures and public institutions. Unsafe conditions are expressed in a variety of factors, ranging from the coerced settlement of unsafe

locations to the practise of dangerous livelihoods, low income levels, malnutrition, and endemic disease. Of significance for our studies is the observation that (modern) social units already experiencing poverty, inequality, and marginalisation appear to be more vulnerable to the physical impacts of natural extreme events than those in which this is not – or is less – the case. To conclude, according to Blaikie *et al.* (1994), it would be the joint effects of root causes, dynamic pressures and unsafe conditions that – assuming the community indeed encounters a natural hazard event – ultimately leads to a catastrophic scenario.

Coping strategies

Coping strategies applied by a community vary, depending on the type of hazard involved; reactions to abrupt natural hazard events are distinct from responses to other dangers which develop at a more gradual pace. Among the many dangers associated with RCC, frequently recurring phases of intense aridity, the effects of severe winters and frosts, as well as the occurrence of severe downpours would have led to some drastic impacts on contemporary systems. Depending on the underlying social fabric, *i.e.* the capacity of a given system to counter this threat, severe food shortages would have ensued (either generally or among certain unprivileged groups within society).

Turning briefly to potential coping strategies, these can be either preventive, *i.e.* enforced in anticipation of a threatening event, or they can be applied during the event itself or in its aftermath (Dikau and Weichselgartner 2005). In the archaeological record, some of the most easily observable adaptation processes must be those to have been applied in the short-term following an abrupt and unexpected hazard event. On the other hand, socio-economic adaptations to long-term (prolonged) natural hazard events will probably prove especially difficult to detect in the cultural (archaeological) record. Coping strategies are numerous and can include, for example, an increase in levels of spatial mobility, resource diversification, and risk dispersion. In cases where assets and resources essential for coping (*e.g.* water, land, tools, labour, social networks, specialised knowledge and skills) cannot be 'commanded' by a population or part thereof, *i.e.* where coping ability is low, people may be forced to resort to such measures as theft, violence and warfare (Clare *et al.* 2008); indeed, in this respect, violence (in the form of raiding and pillaging) can – and should be – considered a

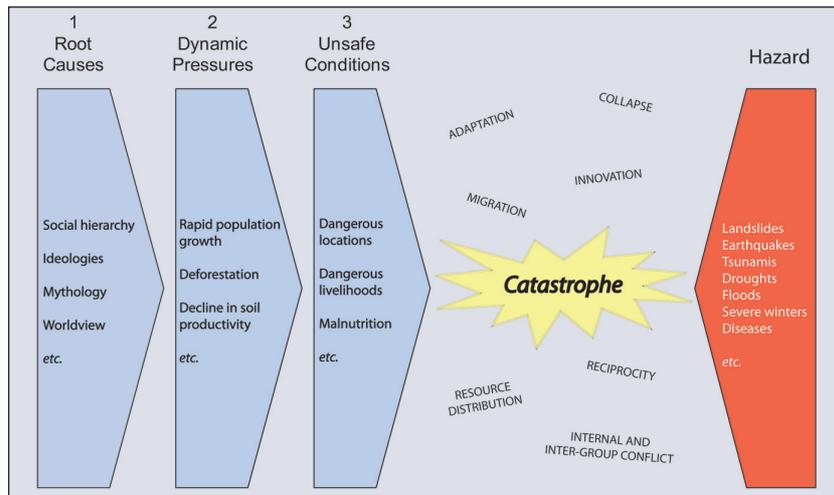


Fig. 3. Schematic representation of social vulnerability, adapted from Blaikie et al. (1994).

coping strategy in its own right (Clare *in press*). “The means by which human beings secure their food supply in the face of [...] uncertainty are thus as central to society as the consequences of shortage are drastic and they have far-reaching ramifications throughout cultural behaviour and social life.” (Halstead and O’Shea 1989.1).

A case study on the vulnerability of prehistoric communities: Neolithic Çatalhöyük

According to Asouti (2009), there is no evidence for the impact of RCC in Neolithic Central Anatolia. In particular, she doubts whether the abrupt abandonment of the East Mound at Çatalhöyük around 8.2 ka calBP has a natural causal background in RCC (contra Weninger et al. 2006). We again show the relevant ^{14}C -data in Figure 4. Further, in citing Boyer et al. (2006), she makes reference to geomorphological evidence for repeated flooding in the vicinity of Çatalhöyük. Remarkably, Asouti (2009) questions the existence of any relationship between flooding regime and settlement distribution, and she does not see any environmental evidence for RCC impact in the Konya plain. In her view, the observed changes in settlement patterns are most likely to have cultural and/or socio-economic causes. We agree with Asouti (2009) that climate variability alone does not provide a sufficient explanation for site history. Nevertheless, we would surely be ill-advised to isolate the cultural developments at Çatalhöyük in this manner from the climatic, environmental and vegetation history of the region.

The existence of significant interrelations between the biophysical, climatic and societal developments

in this region are well-illustrated by the following historical report by E. Neumann, an engineer who travelled the Konya region in 1890 on behalf of the Istanbul-Baghdad railway project. His report gives evidence as to the severity and societal implications of one of the worst (documented) human catastrophes in this region which occurred during the most recent RCC-interval (*i.e.* the Little Ice Age).

“One of the worst famines in the modern history of this region occurred from winter

1873 to spring 1875. It most strongly affected the Vilayets (provinces) Kastamuni [Kastamonu], Angara [Ankara] and Kaiserli [Kayseri]. The great drought of 1873 had produced a crop failure, and in November and December there occurred a series of torrential rains, followed in January and February 1874 by some quite extraordinary snowfall. The snowed-in villages had soon exhausted their small amounts of food reserves, and – since the extreme winter had disrupted all communication routes – widespread death and suffering soon followed. It is reported that altogether some 150 000 souls and 100 000 cattle died in a very brief time. The loss of sheep and goats is estimated at 40%.” (Naumann 1893; translated from the German by the authors).

What is perhaps most remarkable about this historical account is that it is not simply the occurrence of one specific catastrophe (*i.e.* the initial drought in 1873) but rather the combination of a number of consecutive natural hazard events (drought in 1873, torrential rainfall in the same year, followed by unusual snowfall in the subsequent winter) that ultimately leads to the disaster. But such an incidental combination of natural hazards is exactly what we expect, not only for the recent LIA, but also for the Neolithic RCC-period. Based on given climate proxies (Fig. 1) we expect the most dramatic natural hazards in the eastern Mediterranean to have occurred during the later subinterval 8.2–8.0 ka calBP of this RCC. At this time, the prevailing RCC-mechanism (8.6–8.0 ka calBP) was amplified by the outflow of the Hudson Bay, leading to a massive disturbance of the North Atlantic Ocean circulation. The climatically anomalous RCC-conditions and the Hudson Bay

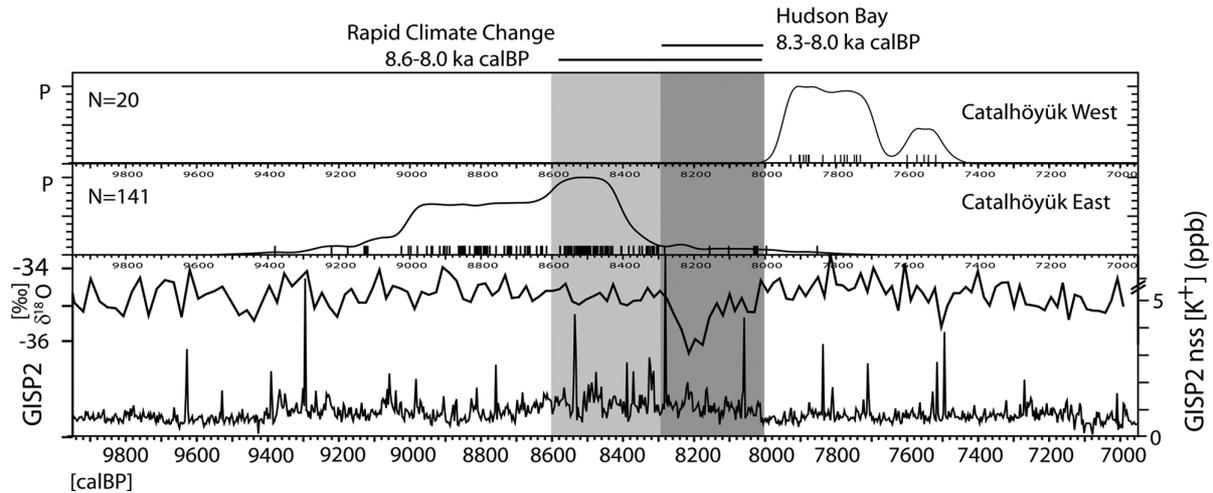


Fig. 4. Radiocarbon Dates from Neolithic Çatalhöyük (central Anatolia) in comparison to selected records for Rapid Climate Change (RCC). Top: ^{14}C -data from Çatalhöyük West ($N = 20$) and Çatalhöyük East ($N = 141$). Bottom: Greenland GISP2 ice-core $\delta^{18}\text{O}$ (Grootes et al. 1993); GISP2 potassium (terrestrial [K^+]) ion proxy for the Siberian High (Mayewski et al. 1997; Meeker and Mayewski 2002). According to the RCC-hypothesis (Wenginger et al. 2009), we expect that the sequence comprising the abandonment of Çatalhöyük East at around 8.2 ka calBP, a ~200 yr (temporary) desertion of the site, and subsequent re-location to the West Mound in the early ninth millennium calBP is causally related to RCC. In the present paper, we address the associated biophysical and societal processes (see text).

event both came to an end around -8.0 ka calBP. Hence, both the desertion of Çatalhöyük East and the re-occupation of the West Mound correlate with the onset of most extreme RCC conditions and the end of RCC respectively. Considering the expected (strong) causal relationship between given RCC-climate data and socio-economic mechanisms in the Konya Plain, there is every chance that such hazardous local conditions, as described by E. Neumann for the LIA, would also have occurred during the Neolithic RCC.

Consequently, we now take the RCC-hypothesis one step further and analyse societal conditions at Çatalhöyük prior to the (potentially) RCC-related collapse of the Neolithic socio-economic system. As far as presently known, before the attested switch of settlement relocation to the West Mound, Çatalhöyük East had been continuously settled for some 1200 years. This continuity is itself amazing, given the existing hazards of this site location. During this long period, the inhabitants of this settlement must have repeatedly experienced (and successfully survived) some quite adverse environmental conditions (RCC certainly has no monopoly over such hazards). As such, settlement continuity at Çatalhöyük attests to the existence and successful implementation of some efficient buffering and coping strategies - but which appear to have reached their limits during the later stage of the RCC.

We would like to complete these studies by formulating a number of questions to be addressed in fu-

ture research. First, what are the methods, techniques and strategies (whether conscious or not) by which the inhabitants of Çatalhöyük were able to cope with the - regular or irregular - occurrence of natural hazards (*i.e.* drought, flooding, snowfall)? Second, what happened to the community - assuming our hypothesis is correct - when these mechanisms failed to function under RCC-conditions? Finally, the third and perhaps most important question: how were coping strategies anchored in the Neolithic worldview?

Conclusions: Rapid Climate Change - an emerging Archaeological Research Program

In order to combine such concepts of modern vulnerability theory with archaeological data, what we need - ideally - is an archaeological laboratory dedicated to vulnerability research in prehistoric periods. Such a laboratory would provide an experimental framework within which we may (1) collect empirical data, (2) develop, test and refine corresponding theoretical models (aimed at reproducing compacted data, *i.e.* reliable forecasting of societal responses to natural hazards), and furthermore this laboratory should (3) allow us to study the impact of natural catastrophes on prehistoric communities for the widest possible field of alternative societal modes.

Although in many of its details clearly unachievable, we judge that such a laboratory is already now avai-

lable with the given RCC-mechanism. First, we have at our disposal a set of delimited RCC-time intervals for which the strongest societal impact of climate variability can be expected, as well as the corresponding geographic regions. Second, due to the recurring character of RCC, its societal impact can be studied for a quite wide range of cultural transitions in the eastern Mediterranean, from the Neolithic (with RCC window 8.6–8.0 ka calBP), through the Chalcolithic (RCC window 5.0–3.2 ka calBP) to the Bronze Age (RCC window 3.05–2.5 ka calBP). RCC-time windows also provide a good indication of the intervening cultural periods, during which the occurrence of the most extreme natural hazards (*i.e.* hazard combinations), at least in terms of climate variability, may be expected to be significantly less probable.

In particular, in view of its still quite hazardous environment, as well as its long settlement history, and not least the advanced state of archaeological research, Çatalhöyük has many of the properties that would allow the site to become a model for future and more detailed theoretical-methodological studies focussing on climate vulnerability in prehistoric societies.

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On the correlation of natural and cultural processes in the Neolithic – Volga-Kama area

Aleksandr A. Vybornov

Faculty of History, Samara State Academy of Social Sciences and Humanities, Samara, RU

Vibornov_kin@mail.ru

ABSTRACT – *The article is an attempt to retrace the appearance and growth or reduction in the number of Neolithic sites in relation to aridization and rainfall, and changes in the landscape in the Volga Kama region in the Atlantic period.*

IZVLEČEK – *V članku poskušamo slediti pojavu, rasti in zmanjšanju števila neolitskih najdišč v povezavi s sušnimi in padavinskimi obdobji ter okoljskimi spremembami v regiji Volga Kama v obdobju Atlantika.*

KEY WORDS – *Neolithic; aridization; transgression; regression; agricultural economy*

Researchers have advanced a hypothesis regarding the Volga-Kama region of an ecological crisis resulting in human migration and a transition from hunter-gatherer to agricultural economies (*Matyushin 1986.133–149; 1992.17–45; Petrenko 2008.10–29*). This implies a link between eco-crises with fluctuations in the level of the Caspian Sea and water level in northern regions and, consequently, non-contemporaneous sites located at different hypsometric levels. In other words, general postulates enable Neolithic cultures, their genesis and type of economy to be dated.

Thus, the Mullino IIa layer lies on a flood plain and dates to 8050±160 BP, and the settlement corresponds to the Mangyshlak regression. The bones of domestic animals discovered in this faunal layer lead to the conclusion that agriculture appeared in the Pre-Urals at the end of the 7th millennium BC (*Matyushin 1996; Petrenko 2008*).

During the Jilandin regression (Mullino III, the second part of 6th–7th millennium BP), tribes with colored pottery migrated to this region from the northern shores of the Caspian Sea, while the population with combed ware left the region, appearing in the forest zone of Prikamiye and Middle Povolzhie. However, the composition of domestic animals bones

found at the Houtorskaja site in Upper Prikamiye was identical to that at Mullino-Davlekanovo (*Matyushin 1988.34–37*). We have already pointed out the contradictions in Matyushin's hypothesis (*Vybornov 1999*), and we present some new evidence and comments in this paper.

There was ecological pressure in the northern Caspian Sea region between 8000 and 7000 BP connected with aridization and desertification (*Lavroushin et al. 1988*). A cold snap and siccation at the end of the Boreal period have been noted (*Bolikhovskaja 1990.59*), and these phenomena have been substantiated by cryogenic veins in the soil of the cultural layer at the Mesolithic Zhekolgan site (*Ivanov and Vasiliev 1995*). These processes were probably related to the end of the Jilandin regression. It is remarkable that researchers point out the existence of Mesolithic sites similar to the Zhekolgan examples at the forest-steppe settlement in Central Povolzhie (*Lastovskii 2006*). It should not be expected that their appearance was caused by climate anomalies and fluctuations in sea levels. At the same time, it is necessary to mention the horse bones at the Mesolithic site at Kairshak V, but it would be hasty to affirm that they are domesticates. The question of whether an eco-crisis around 8200 BP influenced the transition from the Mesolithic to the Neo-

lithic on the well-explored territory of south-western Europe is still open (Budja 2007. 191–198).

The recently received radiocarbon dates of ceramics from the earliest Neolithic sites in the northern Caspian Sea region are from 7950±90 BP to 7530±90 BP (Vybornov 2008). It is still uncertain if their appearance is connected with the end of the Mangyshlak regression and an eco-crisis at the end of the Boreal. Out of eight dates on two monuments, six cluster in a range from 7780 BP to 7530 BP, *i.e.* the second quarter of the 6th millennium BP. This period is associated with the Dagestanian transgression (8.0–7.5BP), when the climate became more humid and winters warm (Ivanov 1986.21), creating favourable conditions for life in this area. It is worth noting that the animal bones found at the Neolithic site at Kairshak III were only of wild species (Kozin 2002).

Some experts notice sharp aridization and climate anomalies at the 7500 BP (Bolikhovskaja 1990.60). Others have described dry, but hot conditions in the period 7500–7000 BP, connected with the Jelandin regression (Ivanov 1986.21; Ivanov and Vasiliev 1995.17). However, no Neolithic sites have been

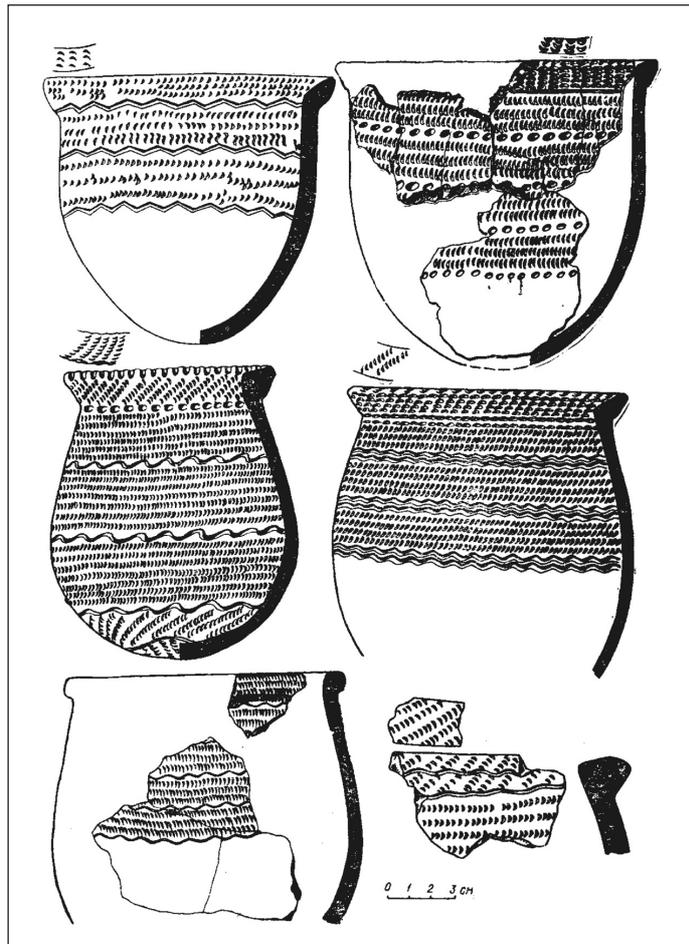
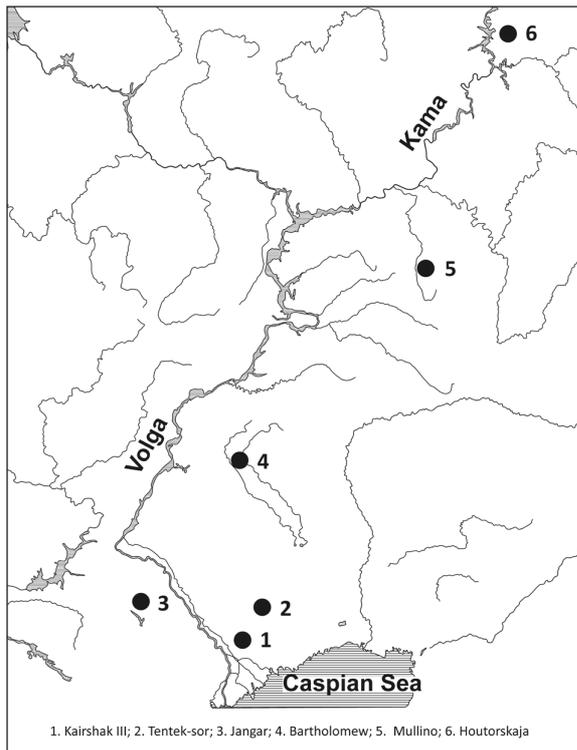


Fig. 1. The Khvalynsk pottery.



found in the northern Caspian Sea region between 7500 BP and 7200 BP. Perhaps this is no coincidence, and is connected with the deterioration in the ecological situation in this region, which lasted until 7200 BP (Spiridonova, Aleshinskaja 1999). Researchers have supposed that the Kairshak population left the inhospitable region, and moved north (Barynkin, Kozin 1998), a process evidently occurring within the stated chronological time span and supplemented with an economy of a specific character – koulán and saiga hunting. These animals even now head north from the Ryn-Peski Desert during the dry season, and return with the beginning of the rainy season. But there is no proof of their domestication in the Neolithic.

According to the paleogeographic data, transgression ‘6’ occurred in the northern Caspian Sea region at 7200–6800 BP, and again caused loss of land. This is confirmed by the radiocarbon dates of late Kairshak pottery type: 7180–6929 BP; (bone sample, 7190–7010 BP), Tentek-sorsskii: 7005–6630 BP; Jangar: 7080–6680 BP (charcoal sample, 6870±130 BP); Bartholomew: 7170–6980 BP (charcoal sample,

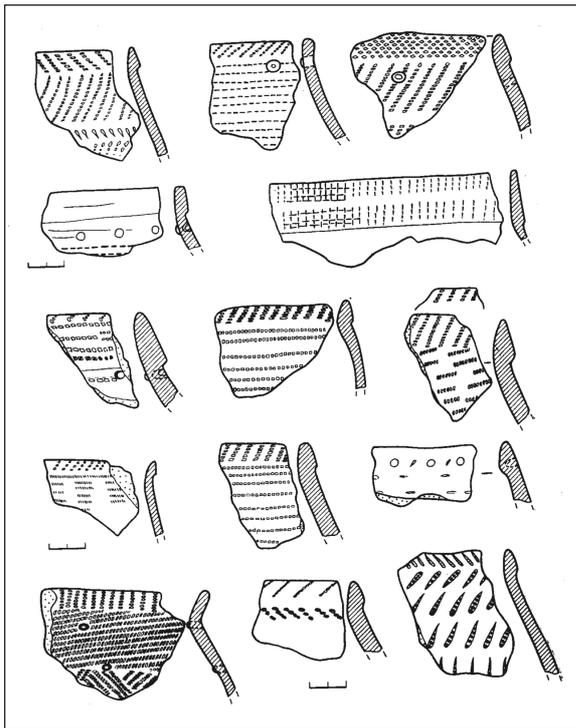


Fig. 2. The Agidelsky pottery.

6980±200 BP). It is important to emphasize the appearance of late Kairshak pottery in the lower layers at the Jangar and the Bartholomew settlements, which only goes to confirm the ability of these populations to migrate and interact even in an earlier period. On the other hand, it is essential to highlight the absence of domestic species among these faunal finds in these contexts. There are no collar pottery types in either the northern Caspian Sea region or Lower Povolzhie during the Jelandin regression period and transgression '6', so it is difficult to accept their appearance at Mullino III in the Cis-Ural region in the chronological interval from second half of 6th to first half of 5th millennium BP. The ¹⁴C dates show collar pottery distribution in the North Caspian Sea region in the period of 6800– 6000 BP (Vybornov et al. 2008) (Fig 4), which is precisely the period when domestic animals appeared in the area. The Khvalynsk culture appeared in the region at 6000–5600 BP (Fig. 1) (Map 1). According to the palaeographic data, this period corresponds with the Gousanskaja transgression (6500–5200 BP).

Thus, the fluctuation in Caspian Sea levels in the 6th millennium BP can be partially correlated with bodies of ground water in the Trans-Urals. The situation in the Pre-Urals is not still clear. The date 8050±160 BP, offered by Matyushin to link with Neolithic layer Mullino IIa, fits well into the group of dates in the Mesolithic layer from 8500 BP to 8300 BP that cor-

responds to the Mangyshlak regression at the end of the Boreal period. This is proven by the pollen composition from this layer, which comprises semi-desert species unusual for this region, indicating sharp aridization at the beginning of the 6th millennium BP (Matyushin 1996.104).

Concerning the 6th millennium BP, there is no data suggesting any correspondence with regression '6' (Jilandin) of the Mullino II B and II C and Mullino III (with collar pottery) layers. All the cultural layers at the Mullino site are dated in the period marked by floods in the plain, and no migrations have been observed.

Matyushin (1996) and Petrenko (2008) date the Mullino III layer by the presence of collar pottery at 6450±80 BP, and correlate it with the Eneolithic period. However, this date relates to Neolithic Mullino II (A–C) layer, and it is not clear what pottery type corresponds to it (Zajceva, Timofeev 1998.114). Matyushin (1996) points out that pottery without ornamentation was found in the lower Mullino IIA layer, so it is possible that the date corresponds to this pottery. Other ¹⁴C dates range from 6800 BP to 6500 BP (Vybornov 2008). It is worth remembering that ornamented pottery does occur in the Neoli-

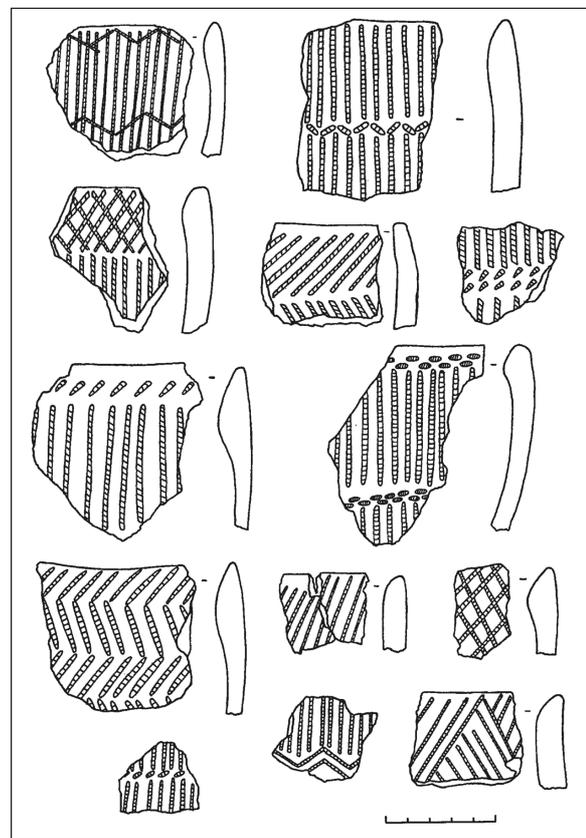


Fig. 3. The Comb pottery. Prikamiye.

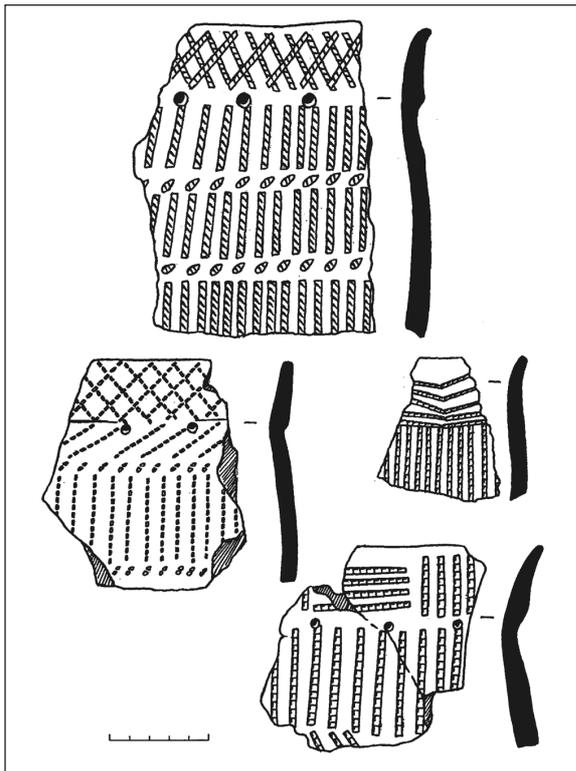


Fig. 4. The Collar pottery. Prikamiye.

thic Mullino II layer (see *Matyushin 1982.254, Tab. 111.3*).

The ^{14}C date 6260 ± 70 BP listed in the catalogue relates to the Mullino III layer (*Zajceva, Timofeev 1977.114*). It corresponds well with the early phase of the Samara culture in the Povolzhie forest-steppe (*Vybornov 2008*). The problem remains, since the Mullino III layer contains the Ivanov type collar pottery typical of the second phase of Samara culture. Other dates range in the interval from 6000 BP to 5600 BP. Thus the date 6260 ± 70 BP for the Mullino III layer remains problematic.

There are some grounds for referring this date to the Neolithic Mullino II layer with comb pottery. Two pottery fragments have been dated to 6290 ± 80 BP and 6170 ± 80 BP (see Tab. 1). Similar dates were obtained for comb type vessels from both the forest settlement at Prikamiye and at Middle Povolzhie (Fig. 3). Therefore, we may hypothesise that forest tribes migrated to the south, reaching the River Samara during the Goussanskaja transgression (6500–5500 BP). Data on spore/pollen analysis also confirm the hypothesis. For the Neolithic Mullino II layer, herbage (54%) and aboreal (43%) species are represented by birch (38%), pine (3%) and alder (2%) (*Matyushin 1996.104*). Besides the pollen of herbaceous plants, also birch, pine and alder were

discovered at the Ivanovskaja site, south of Mullino, in the upper part of the Neolithic layer (mainly comb pottery type occurred there) and in the lower part of the Eneolithic layer (*Morgounova 1995.175*). It is interesting that the comb type pottery dates from the Ivanovskaja site at 6100 ± 90 BP and 6090 ± 80 BP are nevertheless somewhat later than those from Mullino. Thus, judging from these data, a reverse process occurred, connected not with the Jelandin, but with the Goussanskaja transgression.

The Ivanovsky (Agidelsky) pottery type presents a combination of both the Kamskaja and the Samarskaja types, which means they were contemporaneous (*Vybornov 1985*) (Fig. 2). Therefore, the hypothesis that a population with collar type pottery from the northern Caspian Sea region superseded a comb type pottery culture in Prikamiye does not correspond to the available data. It is necessary to recall that the Houtorskaja site in Upper Prikamiye (derived from Mullino II during the Jelandin regression according to *Matyushin*) is situated on a terrace at altitudes of 16 metres that does not correspond with the low level of standing water. It is notable that while specialists identified horse bones at the Houtorskaja site, they did not consider them domesticates.

For a more detailed concretization of the issue, a series of radiocarbon dates is required for all types of Neolithic and Eneolithic pottery from the Mullino site.

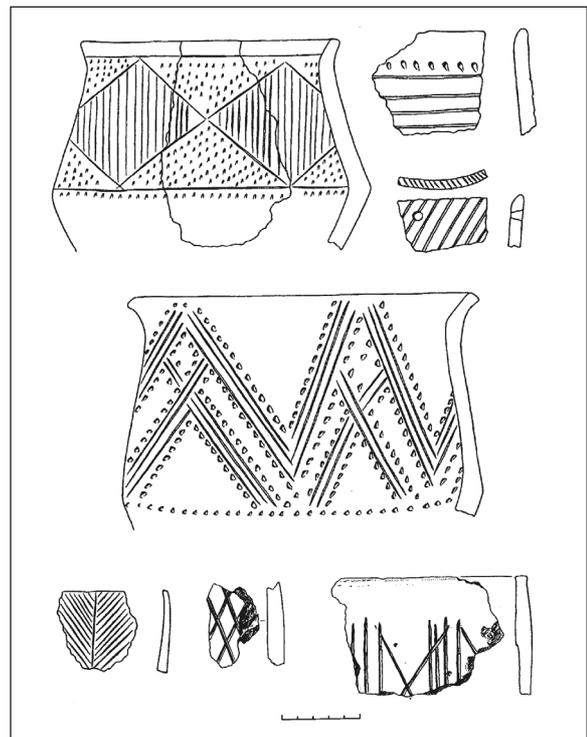


Fig. 5. The Kairshak pottery. North Caspian Sea.

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Mesolithic fish and fishermen of the Lower Danube (Iron Gates)

Alexandru Dinu

Department of Sociology and Anthropology, North Dakota State University, Fargo, ND, US
alexandru.dinu@ndsu.edu

ABSTRACT - This study analyzes the importance of fishing as part of the survival strategies of the Mesolithic and Early Neolithic groups of the Danube Iron Gates. It considers the species of fish present in the archaeological record of the Iron Gates sites, ecology, and possible fishing tools and techniques, in order to determine if the quantities caught during favorable seasons could have insured food reserves for the winter. The author concludes that the presence of large species like sturgeon may be misleading with regard to how intensively these fish were caught, and that besides common species such as carp and catfish, the bulk of the harvest was mainly of smaller species that had fewer chances of being well preserved in the archaeological record.

IZVLEČEK - V študiji predstavljamo pomen ribolova v kontekstu preživetvenih strategij mezolitskih in zgodnje neolitskih skupin ob Donavi v soteski Železna vrata. Preučujemo vrste rib v arheoloških zapisih, ekologijo, ribiško opremo in tehnike ribolova. Želimo namreč ugotoviti ali je količina ulova predstavljala dovolj veliko rezervo za zimo. Ugotovljamo, da je prisotnost velikih vrst (jeseter), glede na to, kako intenzivno je bilo lovljenje, lahko zavajajoča. Poleg krapov in somov večina pripada manjšim vrstam. Njihovi ostanki pa so v arheoloških zapisih slabo ohranjeni.

KEY WORDS - Mesolithic; Danube Iron Gates; Schela Cladovei; sample bias; fishing technology; climate

Introduction

The particular features of the Danube in the Iron Gates defile area (Fig. 1), such as the swift current, variable depth, and mostly rocky bottom, conditioned the existence of a self-regulating ecological community with a great number of individuals, but a relatively small number of species.

Within this ecological community, the ichthyofauna is mainly dominated by reophilic (flowing water) species like *Barbus barbus* (barbel), *Leuciscus cephalus* (European chub), *Chondrostoma nasus* (undermouth), *Vimba vimba* (Baltic vimba), but also by limnophil (not flowing water) species like *Cyprinus carpio* (carp), *Stizostedion lucioperca* (pikeperch), *Silurus glanis* (catfish), *Tinca tinca* (tench), *Perca fluviatilis* (perch). One particularity of the area is the massive migration up to 3–4km upstream in small tributaries of young fish of species such as *Leu-*

ciscus idus (golden orfe), *Alburnus alburnus* (bleak), *Rutilus rutilus* (roach), *Aspius aspius* (asp), *Blicca bjorkna* (white bream). Of importance is the presence of a number of sturgeon species: *Acipenser nudiiventris* (or *A. glaber*, *A. schipa*) (spiny sturgeon), *A. ruthenus* (starlet, sterlet), *A. stellatus* (starry sturgeon), *A. gueldenstaedtii* (Russian sturgeon), and *A. huso* (*Huso huso*, Linnaeus) (beluga).

Most of these species have been recovered from Mesolithic and Early Neolithic sites in the Iron Gates region. Regrettably, even if excavations of the first sites began more than forty years ago, a thorough investigation of the fish remains has never been conducted. Moreover, some of the osteological material shown here (Fig. 2A) has been found in storage facilities labeled as 'not studied yet'. The study of the diet and subsistence economy of the Mesoli-

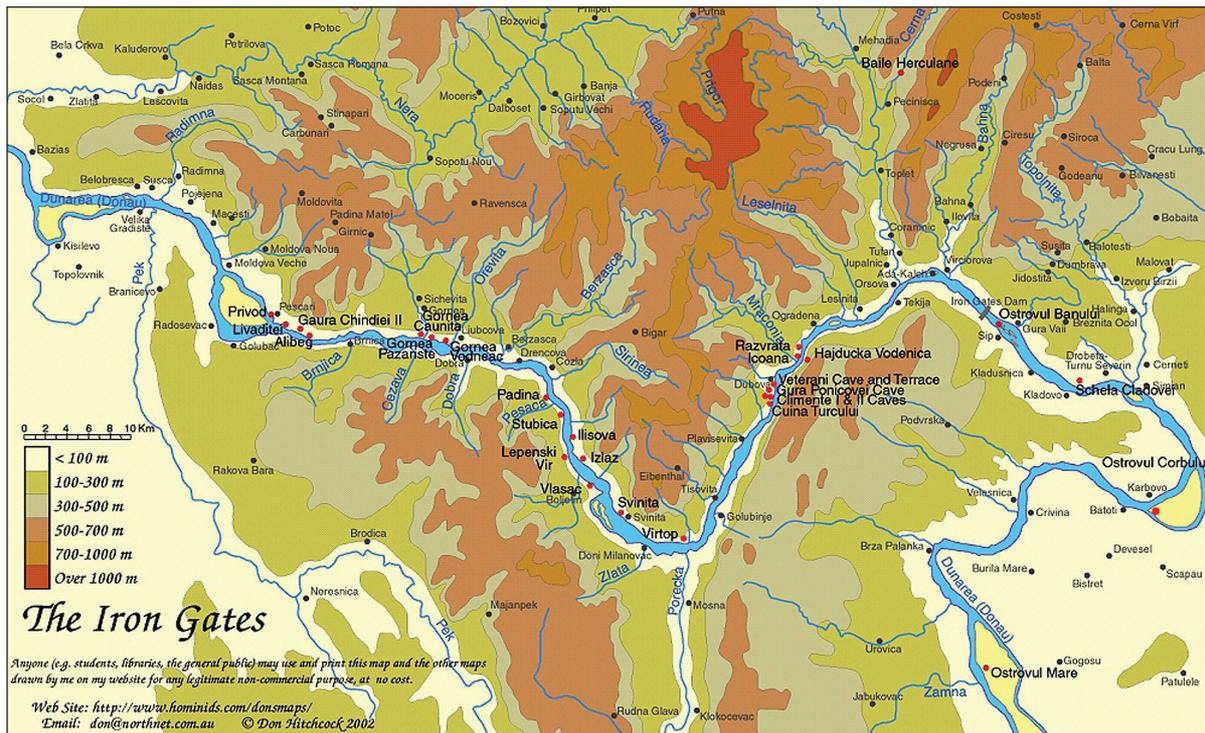


Fig. 1. General map of the Iron Gates region.

thic and Early Neolithic groups of the Iron Gates (Bartosiewicz *et al.* 1995; 2001; 2006; Bartosiewicz and Bonsall 2004; Bokonyi 1970; 1972; 1978; Bolomey 1973a; 1973b; Bonsall *et al.* 2000; 2004; 2002/3; 1997; Borić 2001; 2004; Dinu *et al.* 2006) cannot be fully understood unless a more in-depth analysis of the fish remains is performed. Although fishing was a major part of the daily struggle for survival of the inhabitants of the Gorge, it has been given only partial attention in previous publications, except for rather succinct species identification. Undoubtedly, there are some extremely difficult obstacles to overcome, such as preservation, less careful excavation techniques, or sample bias, and such aspects will be considered in this paper. However, we can only hope that in the future, fish remains from the Iron Gates sites will receive the attention they deserve. The information on peasant fishing tools and techniques presented here was collected during the last part of the nineteenth century (Antipa 1909). Sadly, modernization took its toll, and almost none are now in use. It is important to note that the implements contained no metal parts, except for the hooks, which could also have been of bone or wood (Fig. 2 B).

This study will explore the fish species, and fishing techniques that could have been employed by Mesolithic and Early Neolithic groups at Iron Gates, in an attempt to better understand their economic impor-

tance, and the role and the magnitude played by this activity in the life of these people.

Importance of fishing

Schela Cladovei-Lepenski Vir was obviously a riverine culture. Had it been otherwise, there would have been no reason whatsoever for these people to settle *ad literam* at the waters' edge. In fact, only about 20km away on the Cerna River (a tributary of the Danube) at Herculane (Fig. 1), Upper Paleolithic and Neolithic settlers from Pesteră Hotilor (Thieves' Cave) benefited from the same richness of fauna, flora, and the same climacteric conditions enhanced by dozens of hot springs; however, no Mesolithic Schela Cladovei culture remains have been found at this location, (Bitiri 1959; Nicolaescu-Plopsor and Comsa 1957; Nicolaescu-Plopsor, Comsa, and Paunescu 1957; Nicolaescu-Plopsor and Paunescu 1961; Paunescu 2000). It may be assumed, therefore, that fishing was perhaps the first reason that led the Mesolithic Iron Gates communities to settle along the Danube rather than inland.

Although the importance of fishing as a resource procurement strategy of the Mesolithic Iron Gates population has never been underestimated, publications solely on ichthyological analysis have never been offered. Some authors (Prinz 1987) implied that the importance of fishing relative to hunting



Fig. 2. Huge *Silurus vertebrae* from Icoana, and Early Neolithic fish hooks from Iron Gates. Photos by the authors. Courtesy of the Institute of Archaeology 'V. Parvan', Bucharest, and Museum of the Iron Gates, Turnu Severin.

was much greater than has been generally suggested, referring in particular to Vlasac. Prinz considers that the reason for this underestimated importance of fishing arises from sample bias – a consequence of poor recovery techniques – and offers as an example the quantity of pike remains at Vlasac, and of barbel at Ostrovul Banului, where larger quantities of remains were excavated. This may indeed be a problem at all sites if attempts to reconstitute ancient diets are undertaken.

Furthermore, considering the archaeological data, it is extremely difficult to outline a general image of the volume of aquatic food harvested and consumed by the ancient population in the Iron Gates. Sample bias truly plays the determining role in this estimation, and more than one factor affects it. It is more likely that mostly large bones were collected. The fact that no fish remains were reported at Alibeg, Razvrata, and Ostrovul Corbului may be a result of such biased material recovery; it is extremely hard to believe that fish was not consumed at these sites. Only after 1990 was fine sieving applied systematically at Schela Cladovei, the only northern shore Mesolithic site still accessible.

As was true at Lepenski Vir and Vlasac, fishing was very important from the Mesolithic into the Neolithic (Bonsall *et al.* 1997:57). However, at Schela Cladovei the fish bone assemblage differs from those at Lepenski Vir and Vlasac in the high representation of anadromous species, especially sturgeon. It has been suggested (Bonsall *et al.* 1997) that since these fishes are larger than most other species present in the Danube, their dietary contribution may have been correspondingly higher. On the other hand, as shown in Table 2, the presence of sturgeon in the

Danube is restricted to a rather short period of the year, a factor that may have greatly influenced the dietary contribution of these species.

In many cases, fish bones do not preserve well; as a result, subsequent species identification was problematic. In the sturgeon case, the identification problem arises from the fact that aside from plates (scutes), little else would preserve. Moreover, other small fish are often eaten whole, and it can be also assumed

that a great percentage of the fish caught was actually of a smaller size, given the techniques described later in this paper.

One other problem is presented by the number of species recovered. Of the sixty-nine species of fish presently found in the Danube at Iron Gates (GCCPF 1976), only seventeen were identified at the Mesolithic Iron Gates sites (Tab. 1). Of these, only two, carp and catfish are present at all sites. Both of these, particularly the latter, may grow to a very large size, therefore the probability of bone preservation is higher. Although it may be assumed that preference was given to some species of large fish and to large specimens, it is correct to assume that all fish caught belonged to the category of food, even if some were perhaps used for other purposes, such as bait. It should not be forgotten that, because over-fishing did not constitute a problem until very recent times, the chances of catching some larger fish of all species was much higher 9000 years ago, even using rudimentary tools.

The absence of barbel (*Barbus barbus*) at all sites is remarkable, because this fish may easily reach 4kg (Berg 1962). Isolated individuals may reach 10–12kg, so this species may have been an important source of meat. It is very abundant in this area of the Danube, preferring stronger currents and a rocky or gravel river bed, conditions associated with the region of Iron Gates. There are two characteristics of this species that may explain its absence: it is nocturnal, and the roe are poisonous.

On other hand, *Silurus glanis* (catfish) is present at all sites; like barbel, it is nocturnal and the roe are poisonous (Berg 1962; Pirogovski, Sokoloff and Va-

Species	Site	Alibeg	Razvrata	Icoana	S.Cl. M.	S. Cl. N.	O. Ban.	O. Corb.	O. Mare	Cu. Turc.*	L. Vir, I	L. Vir, II	L. Vir, III	Pad.	Vlas.	Starc.
Sturgeon sp.																
<i>Huso huso</i> ; beluga																
<i>Acipenser gueldenstaedtii</i> ; Russian sturgeon																
<i>Acipenser ruthenus</i> ; sterlet																
<i>Silurus glanis</i> ; catfish																
<i>Esox lucius</i> ; northern pike																
<i>Stizostedion lucioperca</i> (<i>Sander lucioperca</i>); zander, pikeperch																
<i>Chondrostoma nasus</i> ; sneep, undermouth																
<i>Barbus barbus</i> ; barbel																
<i>Cyprinus carpio carpio</i> ; European carp																
<i>Abramis brama</i> ; bream																
<i>Leuciscus idus</i> ; orfe																
Small cyprinidae																
<i>Leuciscus cephalus</i> ; chub																
<i>Hucho hucho</i> ; Danube salmon, huchen																
<i>Perca fluviatilis</i> ; European perch																
<i>Aspius aspius</i> ; asp																

Tab. 1. Species of fish identified at Iron Gates sites. *Cuina Turcului: Epipaleolithic. Sites: Ali., Alibeg; Raz., Razvrata; Ico., Icoana; S.Cl.M., Schela Cladovei Mesolithic; S.Cl.N., Schela Cladovei Neolithic; O.Ban., Ostrovul Banului; O.Corb., Ostrovul Corbului; C.Tur., Cuina Turcului; L.Vir.I, Lepenski Vir I; L.Vir.II, Lepenski Vir II; L.Vir.III, Lepenski Vir III; Pad., Padina; Vla., Vlasac; Stac., Starčevo. (Bartosiewicz et al. 1995; 2001; Clason 1980; Nalbant 1970; Paunescu 2000; Radovanović 1996).

sil'ev 1989). As a parallel, it seems unlikely that barbel was not consumed at any of the sites. It also appears somehow striking that at Schela Cladovei, neither undermouth nor barbel is present in the archaeological strata associated with the Mesolithic and Neolithic, but they do appear in Iron Age strata. Meanwhile, pike, bream, and pikeperch are present in the Mesolithic and Neolithic, but not in the Iron Age (*Bartosiewicz et al. 2001*).

Moreover, *Perca fluviatilis* (perch) for instance, which is one of the most abundant fish in the Danube, is present only at Cuina Turcului in the Epipaleolithic strata (*Nalbant 1970*), but absent from other sites and periods. One other species, *Aspius aspius* (asp), which can grow up to 1m long and 10–12 kg (*Berg 1962*) is only present at Starčevo site. Like salmon, for reproduction it migrates up smaller rivers, when it can be caught easily. It appears, therefore, that Prinz's (*1987*) observation regarding sample bias due to poor recovery techniques is true, unfortunately.

The situation is further complicated because in most cases the stratigraphic level of provenance of remains was not specified. Simply comparing ichthyological material from Icoana with Schela Cladovei and Ostrovul Banului in general, for instance, results in a very coarse picture.

Aside from sample bias, other factors may contribute to a negative view of the presence or absence of fish species at these sites, and the fishing capabilities of Mesolithic groups in general. The two most important such factors are fishing tools, and climate.

To better understand these factors, I present some of the most prized species found in the Danube, and some of the fishing tools and techniques that could have been used by Mesolithic people.

Migratory and large fish in the archaeological record

A. *Acipenseriformes*

Acipenseridae are commonly known as sturgeons. The name sturgeon, however, is a misused generalization of *Acipenser sturio* (Linnaeus), which is only one the species of genus *Acipenser*. Other 'sturgeon', like *Huso huso* (Linnaeus) and *Huso dauricus* (Brandt), belong to the family *Acipenseridae*, but not to the genus *Acipenser*.

There are mainly five species of sturgeon found in the Danube: *Acipenser gueldenstaedti* (or, *gueldenstaedti colchicus*, *Acipenser stelatus*, and *Huso huso*, live in the Black Sea and migrate upstream for reproduction. The other two, *Acipenser nudiventris* and *Acipenser ruthenus ruthenus* do not migrate. However, the Danube as a terra typica has been established only for *Huso huso* (*Banarescu 1964*).

① *Acipenser gueldenstaedti* (or, *gueldenstaedti colchicus natio danubicus* (Marti). Also known as the 'Russian sturgeon', it lives in the Black Sea, the Caspian, and their large tributaries (*Vlasenko, Alexander, and Pavlov 1989*). In the Danube, it grows up to 4m and 100kg, but the usual size is 1–2m and 20–30kg (*Banarescu 1964.210*). According to some authors (*Seeley 1886*), it may live up to fifteen to twenty years. It is an anadromous migratory species,

very much like *Huso huso*. First migration begins after the *H. huso* by the end of February-March – when the water temperature rises to 8–11°C – reaching a peak in April, and by mid-May. The second migration begins by August-September, peaking by late September to mid-October, and ending by mid-November. In contrast to *Huso*, during autumn migrations, there is a greater number of individuals than during the spring migration. Apparently, this species was not present further upstream from the Iron Gates region (Banareescu 1964.213). It is caught with the same technique as for *Huso*.

② *Acipenser stellatus* (Pallas), also known as the starry sturgeon, lives in the Black Sea, Caspian and their large tributaries (Banareescu 1964.218; Berg 1962.95–97). In the Danube, it used to be fished upstream as far as Austria (Seeley 1886.393). It grows up to 2m long and 20kg, but average size is 1–1.2m and 6–8kg. It is an anadromous migratory species. In the Danube, the first migration begins a little later than *Huso* and *A. gùldenstaedti*, in late March and April – when the water temperature reaches 8–11°C – and peaks in May. The second migration begins by August to September/mid-October, and is more intense than the first (Berg 1962).

③ *Huso huso* (Linnaeus). Also known as ‘Beluga’, it lives in the Black Sea, Caspian, Adriatic, and their big tributary rivers. It may live beyond 75 years. Usually reaches a weight of 100–250kg, and 4–6m long, although fish of almost 900kg have been caught in the Danube. Moreover, examples of over 9m long and 1300kg have been caught (Banareescu

1964.198), and other authors (Pirogovski et al. 1989. 157) have reported fish weighting up to 3200kg. According to older accounts:

“...it was formerly much more abundant, and attained a far larger size in the Danube than it ever grows to in the present day... Fish twenty-four feet long were common, and it was slaughtered in Hungary by the thousand.” (Seeley 1886.414)

The species is anadromous, marine. It has two spawning migration periods, one in the spring, and one during early autumn, ascending as far as the Morava River (Berg 1962.58). In the Danube region, if the spring is early and the water temperature is at least 4–5°C, it may begin its first migration upstream in January. However, the usual time is during the second half of March or the beginning of April. In April, it reaches peak intensity, and in late May-June, ends completely. The first migration is more intense than the second, which begins by very late August, peaking in October or the first half of November, after which, it ends completely. The phenomenon is not understood yet; the puzzle arises from the fact that reproduction takes place only during the spring migration when the water temperature is no lower than 15°C, but no higher than 17°C. For egg-laying, holes on the river bed are used, at depths of 8–20m. The river bed must be a mix of clay, gravel, and sand. Apparently, from the Iron Gates to the Black Sea there are only two stretches of the river where such conditions are met: at Iron Gates, and the last few kilometers before the river drains into the sea. Banareescu (1964.199) cites sources according to

Species	Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<i>Huso huso</i> ; beluga or European sturgeon					■								
<i>Acipenser gueldenstaedtii</i> ; Russian sturgeon										■			
<i>Acipenser stellatus</i> ; starry sturgeon													
<i>Acipenser nudiiventris</i> ; fringebarbel sturgeon													
<i>Acipenser ruthenus</i> ; sterlet													
<i>Cyprinus carpio carpio</i> ; European carp													
<i>Silurus glanis</i> ; wels catfish, sheatfish													
<i>Stizostedion lucioperca</i> (<i>Sander lucioperca</i>); zander, pikeperch													
<i>Esox lucius</i> ; northern pike													
<i>Chondrostoma nasus</i> ; sneep, undermouth													
<i>Barbus barbus</i> ; barbel													
<i>Abramis brama</i> ; bream													
<i>Leuciscus idus</i> ; orfe													
<i>Leuciscus cephalus</i> ; chub													
<i>Hucho hucho</i> ; Danube salmon, huchen													
<i>Perca fluviatilis</i> ; European perch													
<i>Aspius aspius</i> ; asp													
<i>Alosa pontica</i> ; Pontic Shad													

Tab. 2. Fish species availability at Iron Gates. Darker shades represent peak availability.

which, after reproduction, the fish return downstream, swimming on the surface of the water at high speeds. According to some descriptions:

“The fishery in the Danube is carried on in a variety of ways. Lines are stretched over the river, to which bright glistening hooks, without barbs, but well baited, are suspended, and sunk to different depths, so as to intercept the fishes like a curtain. As the sturgeon come up, they strike the festoons of hooks with their noses, and turn about till they get entangled, when the fisherman, seeing the strain on the line, knows where a fish may be found... When swimming on the top of the water, they are harpooned... It is sold either alive or frozen or salted. It is also dried in the sun (then termed balik), and often smoked.” (Seeley 1886.418)

Unfortunately, data on Danube *Huso huso* are generally scarce (Banarescu 1964.199), with some authors mentioning it, but offering no detailed information.

④ *Acipenser nudiiventris* (Lovetzky). Also known as the ship sturgeon, it is found in the Caspian Sea, the Aral Sea and their large tributaries. Strangely, it is present in the Azov Sea, but nowhere else in the Black Sea (Sokolov and Vasil'ev 1989a). In the Danube, it practically does not leave the river, and is only found from Komarno (Czech Republic) downstream. In the past, on exceptional occasions, it has been found in the delta and the Black Sea. It reaches a maximum length of 1.5m and a weight of 46kg. The most common examples average 8–10kg. It lives at depth, in strong currents, on a clean rocky or sandy/gravel river bed. Reproduction takes place during the second half of April and May if the water temperature reaches 10–15°C. Eggs are deposited on sandbanks and gravel exposed to fast current. Both fish and eggs need very high water oxygen content. They reproduce once every 2–3 years.

⑤ *Acipenser ruthenus ruthenus* (Linnaeus). Also known as the sterlet or starlet, it lives exclusively in fresh water, inhabiting most of the great rivers flowing into the Black and Caspian seas, but also the northern rivers flowing into the Baltic, White, Barents and Kara seas (Sokolov and Vasil'ev 1989b). In the Danube, before the building of the Iron Gates I Dam, this was the predominant species along the entire canyon sector. It prefers very deep, clean water and a hard river bed, usually finding shelter in a hole next to a higher edge. It comes closer to the shore only if there is an abrupt, rocky formation.

During winter, it congregates in large numbers, retreating to deep river-bed depressions with a hard, clean floor. Reproduction takes place during April–May if the water temperature reaches 15–17°C. The eggs are laid on sandy or small grain gravelly banks, at about 10m depth. Although along the Danube cataracts this fish is always abundant, the highest population density of *A. r. ruthenus* is found between Coronini and Turnu Severin at: Coronini (Moldova Noua), Tisovita, Plavisevita, and Svinita.

B. Family Siluridae

The Danube has one species, *Silurus glanis* (Linnaeus) (Berg 1964.470; Seeley 1886.90–133), commonly known as catfish. It spawns in early spring, when the water temperature is below 10°C. It grows up to 5m and 300–400kg (Banarescu 1964.548). It prefers depths with muddy water and eats:

“... anything that lives in the water or comes into it. It will seize on swimming ducks or wading geese; and Heckle and Kner mention that a poodle and the remains of a boy have been found in the stomachs of old fish.” (Seeley 1886.93).

Having very sharp teeth, *Silurus* is both predator and scavenger. It eats dead fish and animals even if the decomposing stage is extremely advanced. *S. glanis* is nocturnal. It feeds only at night, spending the day hiding on the bottom. It does not feed during winter (Banarescu 1964.549). The best fishing time is from June to September.

C. Family Clupeidae

Represented by *Alosa pontica*, *Alosa maeotica*, *Alosa nordmanni* and *Clupeonella delicatula*. Of these, the most important is *Alosa pontica* (Danube shad). It is also an anadromous migratory fish, swimming upstream for spawning. As the water becomes warmer, *A. pontica* crowds closer to the Danube's mouth in less deep areas. They begin to swim into the Danube when the water temperature becomes relatively stable at about 5–6°C. This usually happens in the last ten days of March/beginning of April. The maximum intensity of migration is at the end of April to May, when the water temperature is about 9–13°C. Usually, the migration lasts for 120–130 days. *Alosa* may swim upstream for about 1000km from the sea, passing Iron Gates. By June, the migration is completely over. *Alosa pontica* is very sensitive to water temperature, water turbidity, and the amplitude of water level oscillations. High turbidity or low water levels have a strong negative impact on migration (Banarescu 1964; Ciolac 2004). There is

an extremely interesting detail about this species: although not large in size, by migration time it becomes extremely abundant, making it economically very attractive. Despite its abundance, it does not occur at any of the pre-Mesolithic, Mesolithic or Early Neolithic sites at the Iron Gates, or any of the Early Neolithic sites along the Danube from the Iron Gates up to the Black Sea. It was found only at Harsova, Neolithic Gumelnita, about 3800–4000 BC. This absence is not fully understood, but may relate to the fact that it swims only along the main river channel, and only accidentally – such as when a strong storm alters the topography of the riverbank – does it enter fishing baskets placed at lower depths and intended to catch other species. During migration upstream, it does not feed, and therefore can only be caught with fine nets. It may be inferred, but not stated with a maximum degree of certainty, that the Mesolithic and the Early Neolithic inhabitants of the Danube shore were not able to weave such fine nets, or perhaps caught only small quantities, accidentally.

D. Family Cyprinidae

In the Danube, this species is represented by *Carpio cyprinus* (carp). Quantitatively, it is the most important species in the river. It prefers more tranquil water, with a softer, muddy bottom in which it can dig for food. Like many other fish, it feeds more intensively before the spawning season. In winter, as soon as the water begins to freeze, the carp takes refuge on the bottom of the river in the deepest places, excavating holes and often hibernating until spring, almost without feeding. It becomes active again in April-May, depending on an early or late spring (Seeley 1886.97). During summer, the carp prefers the more abundant aquatic vegetation of shallow waters, 1–2m deep, which warm up to about 25°C. In rivers, it prefers sandbanks, particularly at river confluences. The length of adult individuals may surpass 1m, and they can weigh over 16kg (Berg 1962.392). Among the material excavated at Icoana, there were great numbers of carp teeth larger than a corn kernel, extremely suggestive of the size of these fish. The density and dispersal of the carp population in the Danube depends on the way migration for reproduction occurs in relation to water level (floods) and temperature, which must be as high as 12–15°C, usually by May. It returns to the main river once the eggs have been laid in the flooded area (Ciolac 2004).

F. Family Esocidae

In the Danube represented by *Exos lucius* (pike) – it may grow up to 65kg, but most commonly 1–1.5m

and 16–24kg (Seeley 1886.363; Berg 1962.487), and live up to 26 years. Spawning occurs at the end of March/beginning of April, when the water temperature is less than 10°C in the shallow waters of flooded areas. During this period, the female is listless and sluggish.

In summarizing the data in this section, it can be understood that most of the fish presented here, although being valuable prizes for fisherman, are available only during limited periods of the year, and that catching them may pose serious problems even with modern tools. Most are sensitive to water temperature for reproduction, and warmer or cooler years may affect reproductive success, and therefore fishing productivity. It is possible to assume that large specimens were not caught on a regular basis; water currents, fluctuations in water quality and nutrients, may have had a strong influence on fish availability. As a whole, considering the species listed here, and their characteristics, fishing may have insured a regular, constant source of food during the warmer period of the year. However, if the bulk of the harvest consisted of smaller fish or species easier to catch, the importance of fishing as a major source of insuring preserved nourishment during the late autumn/early spring period appears to be questionable, at least.

Fishing productivity

It may be assumed that the ancient inhabitants of the Iron Gates were very well acquainted with the habits of the fish they caught. There is not much evidence, however, of the fishing tools these people may have used. Aside from two barbed harpoons from Vlasac (Prinz 1987.61), it is only possible, in the light of ethnological and ethno-archaeological information, to guess about the tools they used. Large hooks for large sturgeon and catfish were probably made of bone or antler. There is no direct evidence of nets, sinkers, floats, ropes or lines of any kind, but the possible use of large hooks (Fig. 2B) for sturgeon implies the existence of strong fishing line, to which a number of hooks were attached across the water (Fig. 3 B, D). In addition, sturgeon is the host of a parasite located under its scales that produces an unpleasant sensation in the fish. In order to get some relief, the fish rubs against big rocks. Up to the construction of Iron Gates I Dam, this was the best moment to harpoon them close to shore (personal communication with the villagers of Dubova, Iron Gates).

The method is extremely productive, but it requires teamwork, particularly for landing the fish. For bottom-dwelling sturgeon such as *A. ruthenus* and other bottom fishes, reed baskets were used extremely successfully until the construction of the hydroelectric dam (Fig. 3 A, C; Fig. 5).

Although there is some evidence for frequent swimming and particularly deep diving (Frayer 1988; Miritoiu, Sultana and Soficaru 2004), the Iron Gates people needed some equipment in order to manage some of the requirements associated with fishing for large sturgeon and catfish, or even other species. The remains of Mesolithic boats have not been found at any of the Iron Gates sites, but it seems only obvious that dugout canoes were used (Fig. 4), not only for fishing, but also for access to the sites on islands at Ostrovul Banului, Ostrovul Corbului, Ostrovul Mare (Fig. 1).

With regard to the other species (Nalbant 1970) it may be safely suggested that during floods fences of reeds were probably built across small valley-ends and river mouths (Fig. 3Ac); when the water receded, fish could be harvested in high quantities. Fishing (scooping) from small, artificial enclosures next to the shore is still practiced in the region (Fig. 6).

Such fishing practices using fencing, “basketing”, or weirs, were common in Mesolithic Europe (Andersen 1985; 2004; Bogucki 2004; Zaliznyak 1997), and widely practiced until the late 1960’s in many Iron Gates villages (personal communication with villagers from Dubova and Ogradena). According to some local accounts, large carp could jump such a fence over 2m high.

Furthermore, given the location of the sites, and the fact that almost all of them were placed either at, or near the confluence of a small tributary, or on islands partly submerged during high waters, fishing by fencing and basketing as illustrated above could be considered the main method of insuring a large amount of food with the minimum effort. One great advantage of such

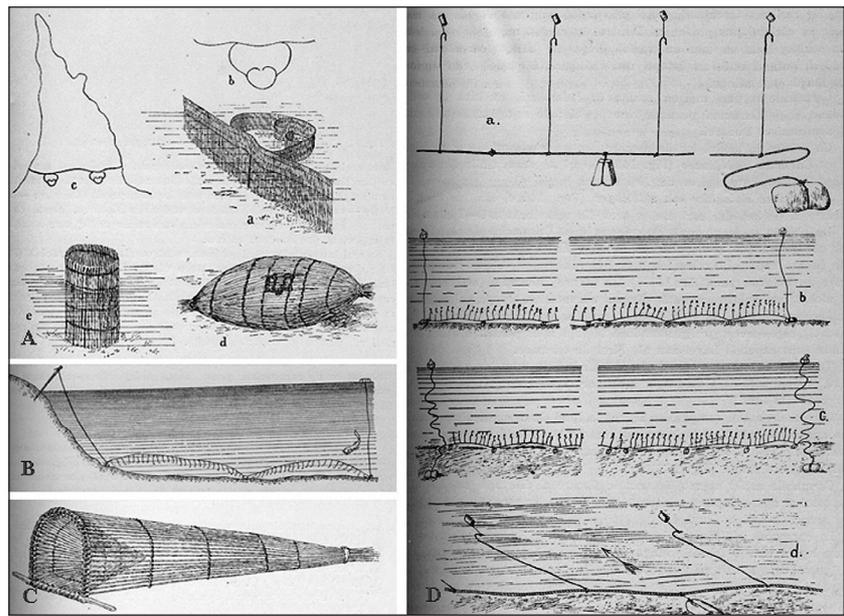


Fig. 3. Sturgeon hocks line (Antipa 1909). Courtesy of Museum “G. Antipa”, Bucharest.

methods lies in the fact that only reeds and tree bark or perhaps leather strings are needed; therefore, for smaller species, the Mesolithic inhabitants of the Iron Gates could have insured a good catch even without hooks, boats, or ropes.

The problem is that fishing may have been only a temporary solution to the resource acquisition problem; some methods as described above were practicable only if the water was high enough and for a short period of time during the spring, and sometimes during autumn. Additionally, even a constant supply of aquatic food could hardly have insured the necessary amount of protein. There is also the problem of resource seasonality, since not all fish are available throughout the year, and the large ones are present in the area only for a very limited time.

One analysis of fish remains from the pre-Mesolithic Cuina Turcului levels (Nalbant 1970) indicates the



Fig. 4. Early Neolithic dugout canoe at the Iron Gates Museum in Turnu Severin. Photo by the authors. Courtesy of the Museum of the Iron Gates.



Fig. 5. Fishing device used in the Iron Gates region for catching *A. ruthenus ruthenus*. Photo by the authors. Courtesy of the Museum of the Iron Gates in Turnu Severin.

predominant species during Epipaleolithic Romanello Azilian I, and II. During the first period, bream and pikeperch are predominant, but there is also carp and perch. For the second level, *Acipenseridae* becomes predominant, with pike, pikeperch, smaller *Cyprinidae*, chub, and catfish also being present. Due to the location of the site in the center of the Greater Cauldrons – where the Danube once flowed at high speeds before the construction of the hydroelectric plant, very high turbulence – and the very rough bottom, with many deep holes, huge rocks and boulders, and whirlpools, most of the species listed for this site, excepting sturgeon, are less likely to be found in the site vicinity, preferring the calmer waters of many of the small gulfs like Dubova and Ogradena that border the Cauldrons.

Combining site location and identified fish species, it is possible to reconstruct a certain fishing strategy: both Cuina Turcului and the Mesolithic sites were located at points which allowed fishing for species preferring more turbulent waters, and those preferring a more peaceful environment, without the need to cover long distances on expeditions to either type of site (Fig. 7).



Fig. 6. Ogradena Gulf. Scooping fish from an artificial enclosure. Photo by the authors.

This may constitute another point in supporting the hypothesis that the sites were located primarily with regard to fishing rather than hunting, the latter being less problematic in terms of site location or species availability.

It can be seen (Tab. 2) that all the larger fish are available only for a limited time, and only during warmer periods, while smaller species are available all year round. It may be that large sturgeon was not caught for winter food storage, or at least not in large quantities, because it generally appears somewhat too early in the year to allow preparation for long-term storage. It also appears that fish did not comprise a major

food source for the most difficult period of the year, winter/early spring. By February/March, the water was still too cold for humans to enter and spend time building artificial enclosures, for instance.

Conclusion

Several general patterns appear in the above presentation. First, water levels/currents and temperatures affect the reproduction, feeding, or presence in a particular river area of all of these species of fish. Looking again at Table 1, it can be seen that the two species present at all sites, including Upper Paleolithic Cuina Turcului, Mesolithic sites, and the Neolithic levels at Schela Cladovei and Starcevo, are catfish and carp – the two most resistant and most adaptable species, which will eat almost anything. More drastic climatic changes that could have affected the Danube's water levels and temperature could have also disrupted to a rather high degree the life-cycle of the fish species inhabiting the region of Iron Gates, with serious effects on the subsistence economy of Mesolithic groups, but this was less likely to have affected highly adaptable species like carp and catfish.

It is not impossible that larger scale fishing could have been practiced by means of very basic techniques and rudimentary tools. Implements and techniques such as those presented here were recovered from other Mesolithic sites like Tybrind Vig (Andersen 1985; 2004) and some Eterbølle sites (Bogucki 2004). It is, however, very difficult to argue in favor of a fishing productivity that would have insured food for the long winter months, even considering the milder climate of the Iron Gates.

Shortages of fish during the autumn/spring period could have triggered more intensive hunting during times of less optimal climatic evolution, a development that would show clearly in the archaeological record in a fluctuation in the number of terrestrial animal bones. Some authors (Bokonyi 1978) argue that climatic fluctuations within the Gorges were always less pronounced than in the surrounding environment because of the natural sheltering effect of the canyon walls and the stabilizing humidity and warmth of the river. However, what must be considered here is not a climatic fluctuation on a small scale, but on a wider, European scale. These kinds of change could have affected the debit and temperature of the Danube River, affecting therefore, the

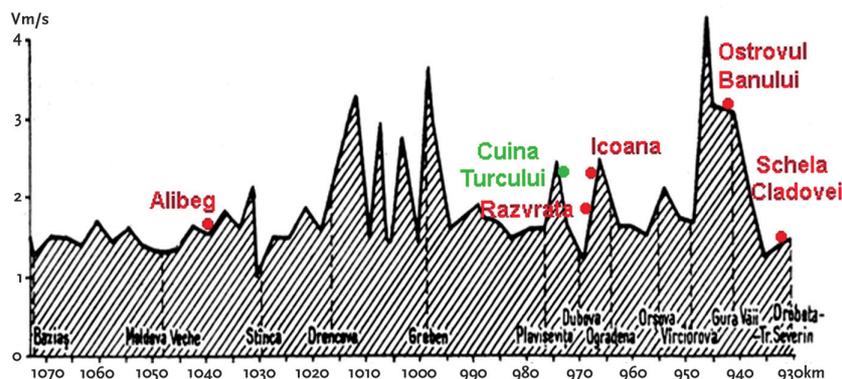


Fig. 7. The surface water speed at Iron Gates from Bazias to Turnu Severin (I.G.G.A.R.S.R. 1969.297). Courtesy of the Institute of Geography, Bucharest.

ichthyofauna in terms of migration and reproduction. Nevertheless, for this alternative to be considered, there should be consistency in the increased terrestrial faunal record at all sites for the same period. Such a change in diet was proposed for the site at Schela Cladovei for the end of the Mesolithic (Bonsall et al. 1997), yet the causes remained unclear.

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Zgornje Radvanje, Cluster 10 – a Late Neolithic pit with a structure and smaller pits

Bine Kramberger

Maribor, SI

bine.kramberger@siol.net

ABSTRACT – *Many hollows defined as pit houses are known from the Neo-Eneolithic period. Similar pits were also detected at the Neo-Eneolithic settlement of Zgornje Radvanje. The cluster of pits presented in this paper shows a stratigraphic sequence. One of the phases yielded a structure. Pottery forms, production and decoration are presented for each individual phase. A comparison of pottery forms and decoration with other sites indicates that the earliest pottery assemblages originate from the late Neolithic period.*

IZVLEČEK – *Iz neo-eneolitskega obdobja so poznane številne jame, ki so opredeljene kot zemljanke. Podobne jame so bile odkrite tudi v neo-eneolitski naselbini Zgornje Radvanje. V kompleksu jam, ki ga predstavljamo je bila odkrita stratigrafska sekvenca, v kateri objekt predstavlja le eno izmed faz. Po posameznih fazah smo predstavili keramične oblike, tehnologijo izdelave keramike in ornament. Na podlagi primerjav oblik lončenine ter ornamentov z drugimi najdišči, smo keramične zbirke najstarejših faz časovno umestili v obdobje poznega neolitika.*

KEY WORDS – *Neolithic, Eneolithic, northeastern Slovenia; settlement; pottery*

Introduction

Radvanje, a quarter of the city of Maribor, is located on a plain which forms part of the Subpannonian Dravsko-Ptujsko polje (Ptuj-Drava field), located in close proximity to the Alpine foothills of Eastern Pohorje (*Gams 1998.229–230, 236*) (Fig. 1). Until recently, Radvanje was known as a Late Bronze Age, Hallstatt, Late La Tène, Late Roman (*Teržan 1990. 26–36, 59–70*), Roman and Early Medieval site (*Strmčnik Gulič 1990; 1991; Šlosar 2009*), while only individual stone finds from the Neo-Eneolithic period were identified (*Pahič 1972.30*). In 2007, during the construction of the Maribor Western ring road, a multi-period site was discovered at Radvanje, location Zgornje Radvanje. A Neo-Eneolithic settlement covers most of this site. The site is still undergoing rescue excavation campaigns.¹ The excavation at Zgornje Radvanje conducted during 2007 and 2008 yielded 35 structures, of which some 29 fall within the Neo-Eneolithic period and the others with-

in the La Tène and Roman periods. In addition, two cremation graves and smaller pits dating to different periods were discovered (*Koprivnik et al. 2009.16–17*). Some of the Neo-Eneolithic archaeological remains were damaged by water, which used to flow across one part of the site.

Stratigraphic sequence of cluster 10

This paper presents part of the Neo-Eneolithic settlement of Zgornje Radvanje. Six phases were identified within the deposit. Four are associated with the settlement, construction and destruction of the recognised structure and everyday activities. Two are related to water activity and are documented with a layer of alluvium and a palaeochannel. Phases were documented with a stratigraphic sequence and a Harris Matrix diagram (Fig. 2).

¹ The excavation was, until the end of 2008, carried out by the Maribor Unit of the Institute for the Protection of Cultural Heritage (ZVKDS), under supervision of Mira Strmčnik Gulič.

Phase 1

Phase 1 is the earliest phase of the settlement. It is documented with several pits (SE 323, 325, 327, 329, 331, 333, 336) cut into the bedrock (Fig. 3, App. 1, 2). Their infill contained highly fragmented and burnt pieces of clay daub, pottery fragments and stone tools (Pl. 1.1 – Pl. 4.20).

Phase 2

Phase 2 is defined with the remains of a house. Its construction (posts) as well as destruction (fragments of burnt clay daub and a wooden structure) were documented (SE 271/272, 273/274, 343/344, 346/347, 348/349, -100/-101, -108/-109, 318). Everyday activities are noted with the remains of a hearth (SE 345) and clusters of pottery fragments and stone tools on the former walking surface (Fig. 4, App. 1, 2, Pl. 4.21 – Pl. 10.58). Several smaller pits were discovered adjacent to the house (SE 238/239, 267/268, 269/270, 275/276, 277/278, 680/681).

Phase 3

Phase 3 is defined with a limited concentration (SE 279) of highly fragmented clay daub, charcoal and stone tools (Fig. 5, App. 2).

Phase 4

Phase 4 is shown as sludge alluvium (SE 232, Fig. 5, App. 1, 2). Randomly scattered fragments of Neolithic pottery and stone tools (Pl. 10.59 – Pl. 12.79) were found in the layer. The structure, dating to the La Tène period, was cut into the alluvium, and we therefore assume that the layer was deposited prior to this period (Fig. 6).

Phase 5

Phase 5 is defined with a palaeochannel (SE 234, 236) (Figs. 6, 7, Apps. 1, 2) with scattered fragments of Neolithic (Pl. 12.82), prehistoric (Pl. 12.81) and Early Medieval pottery (Pl. 12.80, 83).

Phase 6

The most recent part of the stratigraphic sequences of cluster 10 is represented by topsoil (SE 001, 002).

Pottery assemblages

A total of 1862 pottery fragments were found in cluster 10; most belong to Phase 2 (1042), followed by phases 4 (728), 1 (76) and 5 (16). No pottery was found in phase 3.

Some 285 fragments of the total amount were typologically determined. The manufacturing technology

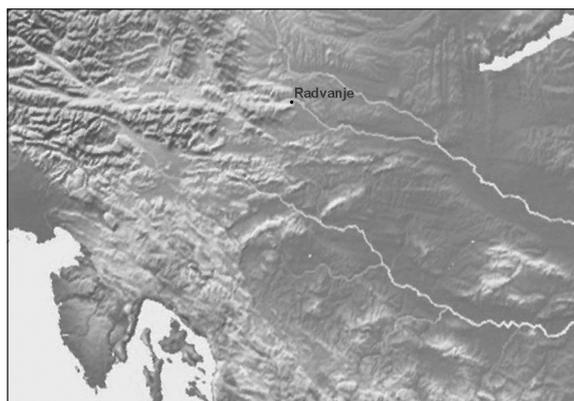


Fig. 1. Geographical location of Radvanje.

was defined with macroscopic standards (Horvat 1999; Tomaž 1997; 1999).

Twenty-one Neolithic (Figs. 8.LM01–21, 9) and two Early Medieval fabrics (Fig. 8.LM22–23) were identified. They differ by type, size and frequency of inclusions. Quartz, mica and iron oxides were the most commonly used inclusions and were present in all fabrics. Organic material and an unidentified white material are rarer. Calcium carbonate is present only in the Early Medieval fabric (Fig. 8).

For the purposes of the macroscopic analysis, we also considered differences in the granularity of fabrics, surface treatment before firing, firing technique, hardness of pottery and pottery decoration techniques.

The typologically determined pottery assemblage consists of bowls, dishes, footed bowls/dishes, two miniature bowls and dishes, a miniature footed bowl/dish, a pitcher, a pot, a ladle, a spoon, a lid and an oil lamp. The remainder of the assemblage was defined as fragments of bases, applied decoration, handles, lugs and spouting nozzles.

Phase 1

The Phase 1 pottery was made of eight different fabrics. Fine-grained fabric prevails (74.1%) (Fig. 18), with the most common fabrics being LM09 (29.6%) and LM12 (25.9%). LM01 (18.5%) and LM08 (11.1%) were less frequent. LM06 (Pl. 4.19 wall of a pot), LM11 (pot Pl. 3.13), LM16 (Pl. 2.10 wall fragment) and LM18 (Figs. 9 and 17) are rare.

The sponging of pottery before firing is common (88.9%). Burnishing is less frequent (Fig. 19), while coloured clay slip (Pls. 1.1, 4.19) is rare.

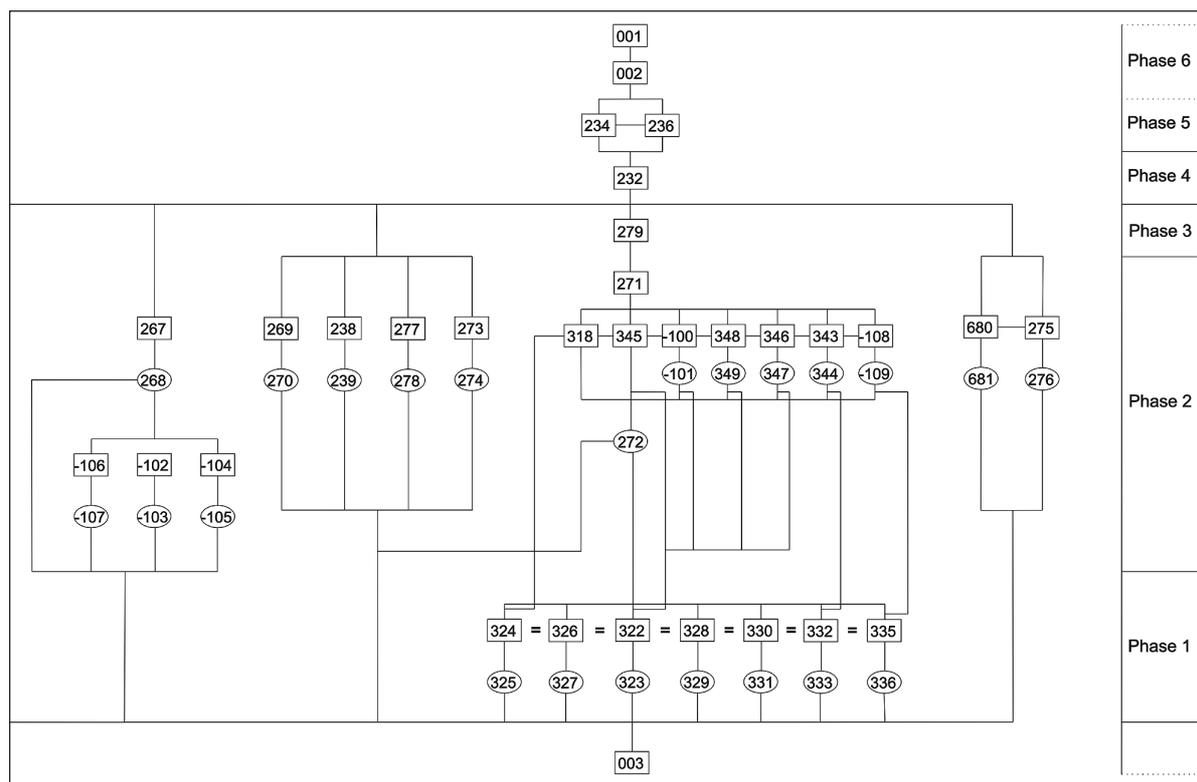


Fig. 2. Cluster 10, the stratigraphic sequence.

Firing under incomplete oxidising conditions is most common in Phase 1 (59.3%). This is followed by firing under oxidising conditions (14.8%); reducing conditions with oxidising conditions used at the end of the firing process (11.1%); incomplete oxidising conditions with reducing conditions at the end of the firing process (7.4%); and oxidising conditions with reducing conditions at the end of the firing process (7.4%) (Fig. 20).

Most of the Phase 1 pottery is very hard (7, 8 and 9 on Mohs' scale of hardness) (63%). Hard pottery (3 and 4 on Mohs' scale of hardness) (22.2%) and very hard pottery (5 and 6 on Mohs' scale of hardness) (14.8%) are less frequent (Fig. 21).

Some 27.33% of the Phase 1 pottery was decorated with grooving (motifs Fig. 10f, g), 27.33% with awl impressions (motifs Fig. 10a, e) and 27.33% with handmade applied decoration (motifs Fig. 10b–d). Only one fragment carries a combination of handmade applied decoration and channelled decoration (motif Fig. 10h), and another one a combination of handmade applied decoration, channelled decoration and awl impressions (motif Fig. 10i) (see also Fig. 22).

The pottery assemblage contains 27 fragments, which were typologically determined as pots (55.6%) (Fig.

11g–n, Pl. 2.9, Pl. 2.11, 12, Pl. 3.13 – Pl. 4.20), bowls (18.5%) (Fig. 11a–c, Pls. 1.3, 4, 1.6, 7), dishes 7.4% (Fig. 11d–e, Pl. 1.5, 8) and dishes or bowls (3.7%) (Fig. 11f, Pl. 1.1). The remaining 14.8% of the pottery finds do not fall within these categories (*e.g.* Pls. 1.2, 2.10) (Fig. 23).

Phase 2

The Phase 2 pottery was manufactured from 15 different fabrics. Very fine-grained fabric is most common (41.7%), followed by fine- (35.2%), medium- (23.5%) and coarse-grained fabric (0.6%) (Fig. 18). The most frequently used fabrics are LM01 (35.8%) and LM08 (25.3%), followed by LM18 (11.7%), LM07 (6.8%) and LM16 (6.2%). LM02–LM05, LM12, LM13, LM17, LM19, LM21 are rare (Figs. 9 and 17).

Some 89.9% of pottery was sponged before firing. Burnishing and smoothing are less frequent (Fig. 19). Some 4% of pottery shows sponging with an additional coloured clay slip (Pls. 9.55, 8.51, 9.54).

Firing under incomplete oxidising conditions prevails (46.6%), followed by oxidising conditions with reducing conditions at the end of the firing process (20.5%), incomplete oxidising conditions with redu-

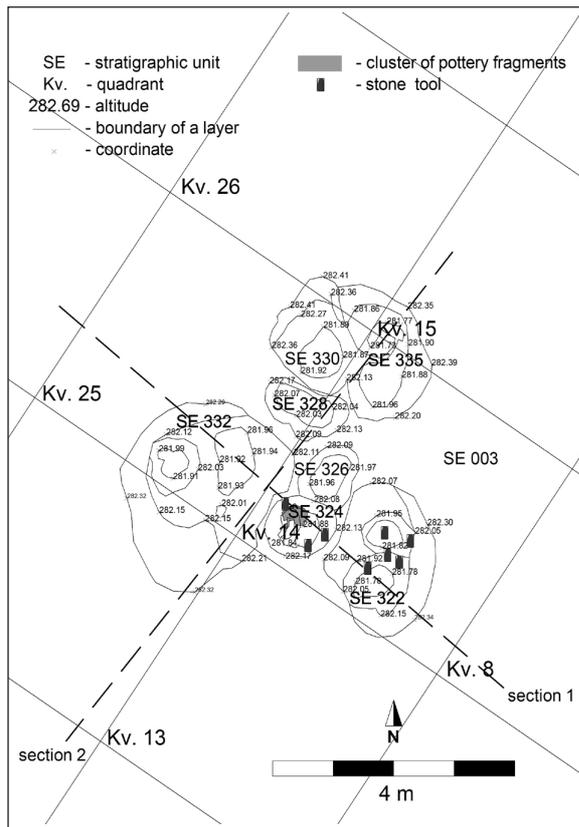


Fig. 3. Plan. Phase 1.

cing conditions at the end of the firing process (11.8%), oxidising conditions (9.9%), reducing conditions with oxidising conditions at the end of the firing process (7.5%) and reducing conditions (3.7%) (Fig. 20).

Most of the Phase 2 pottery is hard (3 and 4 on Mohs' scale of hardness) (49.4%). Very hard (5 and 6 on Mohs' scale of hardness) (36.4%) and extremely hard pottery (7, 8 and 9 according to Mohs' scale of hardness) (14.2%) are less common (Fig. 21).

As far as decoration is concerned, grooving (48.2%) and channelled decoration (22.2%) prevail (motifs Fig. 12d-f, h-i, k-n). These are followed by applied decoration (12.9%) (motifs Fig. 12b, c), awl impressions (1.9%), a combination of grooving and awl impressions (7.3%) (motifs Fig. 12g, j), a combination of grooving and handmade applied decoration (1.9%) (motif Fig. 12o) and a combination of channelled decoration and awl impressions (5.6%) (motif Fig. 12a) (see also Fig. 22).

The pottery assemblage comprises 162 fragments which were typologically determined as pots (29%) (Fig. 13s-y, Pl. 7.46 - Pl. 9.52, Pls. 9.55, 10.58), bowls (9.3%) (Fig. 13a, c-i, Pl. 4.22 - Pls. 5.31, 6.34,

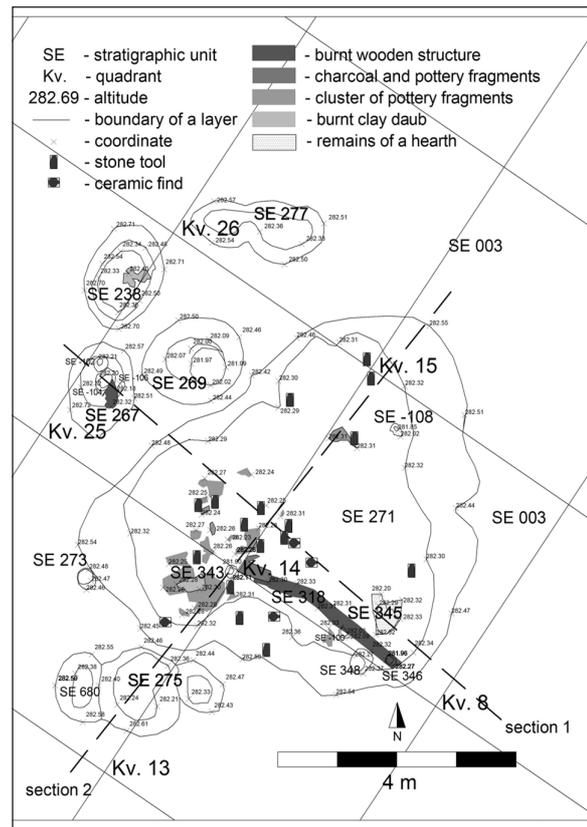


Fig. 4. Plan. Phase 2.

35, 10.57), pitchers (8.6%) (Fig. 13q-r, Pl. 7.41-45), dishes (6.2%) (Fig. 13j-p, Pl. 6.32, 33, 36, 37, 39, 40), dishes or bowls (4.9%) (Pl. 4.21), and pitchers or bowls (4.3%). Other forms are less frequent (37.7%). We recognised a miniature cup (Fig. 13b) (Pl. 6.38), ladles (Pl. 9.53, 54), fragments of handles, lugs, applied decoration, spouting nozzles, and a special find that can be interpreted as a lamp (Pl. 9.56) (Fig. 23).

The lamp was well fired in oxidising conditions and falls within the category of the hardest pottery (7, 8 and 9 on Mohs' scale of hardness). It has a solid handle and a nozzle on its opposite side. The base is flat. Traces of secondary burning can be seen on both, the internal and the external side of the spout (Fig. 14).

Phase 4

The phase 4 pottery was made of fourteen different fabrics. Most fabrics are very fine-grained (47.8%), followed by fine- (29.3%), medium- (20.7%) and coarse-grained (2.2%) (Fig. 18.). The most common fabrics are LM01 (44.6%) and LM08 (21.7%), followed by LM18 (6.5%) and LM07 (5.4%). LM03, LM10, LM13-17 LM19-21 are rare (Figs. 9 and 17).

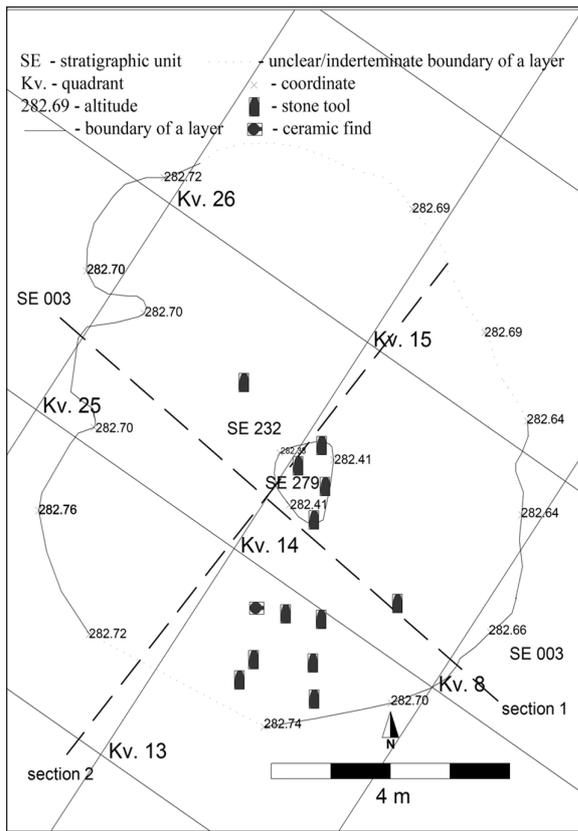


Fig. 5. Plan. Phases 4 and 3.

Sponging of pottery before firing prevails (93.2%), followed by burnishing and smoothing (Fig. 19). Clay slip is rare (1.4%).

Firing under incomplete oxidising conditions was used most often (46.1%), followed by incomplete oxidising conditions with reducing conditions at the end of the firing process (25.3%), oxidising conditions with reducing conditions at the end of the firing process (14.3%), reducing conditions (6.6%), oxidising conditions (4.4%) and reducing conditions with oxidising conditions at the end of the firing process (3.3%) (Fig. 20).

Most of the pottery is hard (3 and 4 on the Mohs' scale) (51.6%), followed by very hard (5 and 6 on the Mohs' scale) (36.3%) and extremely hard pottery (7, 8 and 9 on the Mohs' scale) (12.1%) (Fig. 21).

Grooving (32.6%) and channelled decoration (38.2%) are the most common decoration techniques (motifs Fig. 15c-d, f-g, i-j). Incised decoration (2.9%), awl impressions (2.9%) (motif Fig. 15e), handmade applied decoration (5.9%) (motifs Fig. 15a, b), modelled applied protrusions (2.9%) and combinations of incised decoration and awl impressions (2.9%), grooving and awl impressions (2.9%) (Fig. 15h), chan-

nelled decoration and awl impressions (8.8%) (Fig. 22) are also present.

The Phase 4 pottery assemblage contains 92 fragments, typologically determined as pots (21.8%) (Fig. 16k-m, Pl. 11.72 – Pl. 12.75), pitchers (14.1%) (Fig. 16i-j, Pl. 11.68–71), bowls (5.4%) (Fig. 16a-e, Pls. 10.59–62, 11.66) and dishes (1.1%) (Fig. 16f, Pl. 11.63). Some 51.1% of the remaining pottery finds do not belong to these categories. This group includes two miniature dishes (Fig. 15h) (Pl. 11.64), a miniature bowl (Fig. 15g) (Pl. 11.65), a spoon (Pl. 12.77), ladles (Pl. 12.78), a decorated object (Pl. 12.79) and fragments of handles, lugs and rims (e.g. Pl. 12.76) (Fig. 23).

Characteristics of pottery production of phases 1, 2 and 4

There are noticeable differences in the production technologies of the pottery of phases 1, 2 and 4. The most common fabrics of the earliest phase are LM09 and LM12 (Fig. 17). Both are distinguished by inclusions of quartz, mica, iron oxides and macroscopically unidentified white material. They differ from one another only in particle size and amounts of mica and quartz. In Phases 2 and 4, fabrics LM01 and LM08 prevail in roughly equal proportions (Fig. 17). These two fabrics include quartz, mica and iron oxides. Fabrics differ from one another in size and quantity. It is important to stress that a substantial proportion of LM09 occurs only in the earliest phase. It is followed by LM06 and LM11 (Fig. 17).

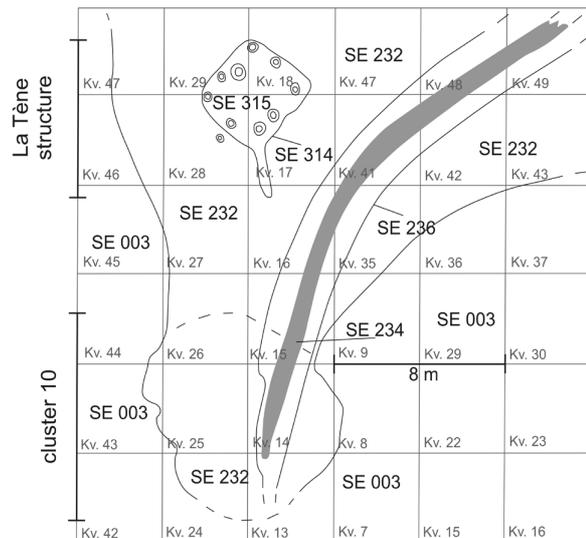


Fig. 6. Location of the alluvium layer (Phase 4), with the La Tène structure (SE 314/315) cut into it, the palaeochannel (Phase 5) and cluster 10 (sketch).

Most of the fabrics in phases 2 and 4 are very fine-grained. Most of the Phase 1 pottery is fine-grained (Fig. 18).

We documented three methods of surface treatment of unfired pottery. Sponging is most common in all phases. In addition, smoothing is present in Phase 1, and smoothing and burnishing are present in phases 2 and 4 (Fig. 19). Clay slip is not frequently applied before firing in any phase.

Firing under incomplete oxidising conditions prevails. Compared to Phase 1, phases 2 and 4 show slightly larger proportion of incomplete oxidising conditions with reducing conditions at the end of the firing process and oxidising conditions with reducing conditions at the end of the firing process. On the contrary, the proportion of incomplete oxidising and oxidising conditions of firing is lower. Phases 2 and 4 are also characterized by reducing conditions of firing (Fig. 20).

The hardness of pottery assemblages of phases 1, 2 and 4 differs from one another. Most of the Phase 1 pottery is very hard (7, 8 and 9 on Mohs' scale), while the pottery of phases 2 and 4 is hard (3 and 4 on Mohs' scale) (Fig. 21).

Comparison of the proportions of decoration techniques shows differences among phases 1, 2 and 4. Phase 1 contains equal proportions of grooving (motifs Fig. 10f-g), awl impressions (motif Fig. 10a, e) and handmade applied decoration (motifs Fig. 10 b-d) (Fig. 22. Phase 1). Phases 2 and 4 show a high percentage of grooving and channelled decoration (motifs Fig. 12d-f, h-i, k-n, Fig. 15c-d, f-g, i-j), while applied decoration (motifs Fig. 12b-c, motif Fig. 15a-b) and awl impressions (motif Fig. 15e) are less frequent (Fig. 22. Phases 2 and 4).

Decoration is always applied to the exterior upper parts of vessels (Pls. 1.6-8, 2.12, 3.15-18, 4.20, 22, 23, *etc.*). Pots mainly carry their decoration on shoulders (Pls. 2.12, 3.15, 17, 4.20, 7.46, 48, 49, 8.50, 10.58, 11.72, 12.74) and sometimes on shoulder-to-neck transitions (Pls. 9.55, 12.75) or necks (Pls. 3.18, 9.52, 11.73).

It is important to note that all the pot necks of phases 2 and 4 are decorated with a bunch of continuous horizontal lines (Figs. 12h, i, 15f, g). The only pot with a decorated neck from Phase 1 shows bunches of vertical lines (Fig. 10f).

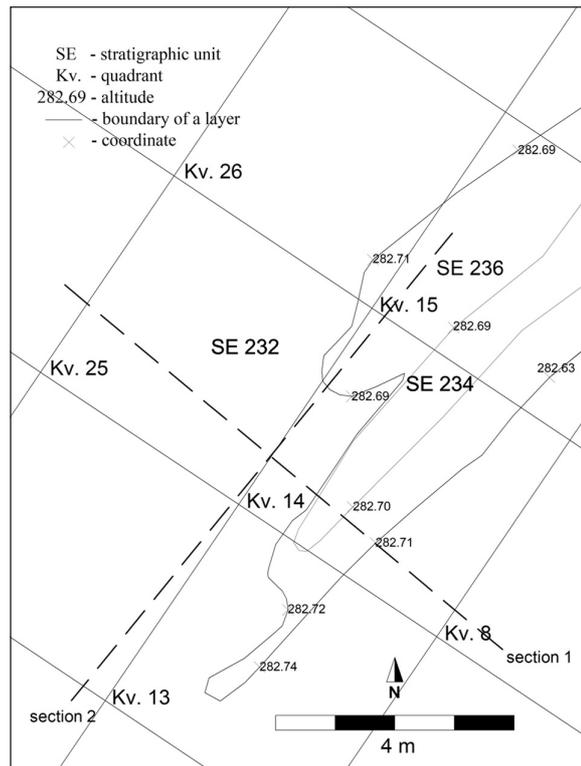


Fig. 7. Plan. Phase 5.

Pots are the most common forms of pottery in all phases (Fig. 23). Phase 1 is characterised by pots with convex shoulders and short necks (Pl. 3.13, 14, 18). One example of this form was also found in Phase 2 (Pl. 9.52) and one in Phase 4 (Pl. 11.73). Pots with biconical bodies and almost cylindrical necks of various sizes (Pls. 2.11, 12, 4.20), a pot with an extremely rounded lower-to-upper body transition (Pl. 4.19) and a neck-less pot (Pl. 2.9) are also typical of Phase 1. The most common form of Phase 2 pots are pots with convex shoulders and cylindrical necks (Pls. 7.48, 49, 10.58).

Single-handled pitchers (Fig. 23) are also frequent in phases 2 and 4 (Pls. 7.41-45, 11.68-71). This form is not present in Phase 1.

Dishes and bowls occur in all phases of cluster 10 (Fig. 23). Phase 1 shows a greater number of dishes and bowls with bevelled lips (Pl. 1.3-5). Biconical bowls with everted lips (Pl. 1.6, 7), a dish with a spout hole just below the rim (Pl. 1.8), a dish/bowl with a hollow, slightly concave foot (Pl. 1.1), and a miniature dish/bowl with hollow, slightly concave foot (Pl. 1.2) are also typical. The most common form of bowls and dishes of phases 2 and 4 has a vertical or slightly inverted lip (Pls. 4.22-23, 5.25, 27-29, 6.35, 37, 40, 10.57, 61, 62, 11.66) (Pls. 4.22-23, 5.25, 27-29, 6.35-37, 40, 10.57, 61, 62, 11.63).

FABRIC	MACROSCOPIC DESCRIPTION
LMo1	Very fine grained fabric with quartz (1O), mica (2O) and iron oxides (3R,2R) inclusions.
LMo2	Very fine grained fabric with quartz (1O), mica (2O) and iron oxides (3R,2O) inclusions.
LMo3	Very fine grained fabric with quartz (2R,1O), mica (2O) and iron oxides (3R, 2Z) inclusions.
LMo4	Very fine grained fabric with quartz (2R,1O), mica (3Z,2Z) and iron oxides (3R) inclusions.
LMo5	Very fine grained fabric with quartz (2R,1O), mica (3R,2Z) and iron oxides (4R,3R,2Z) inclusions.
LMo6	Fine grained fabric with quartz (2Z,1O), mica (3R,2Z), organic matter (3R) and iron oxides (3R, 2R) inclusions.
LMo7	Fine grained fabric with quartz (2Z,1O), mica (3R,2Z), and iron oxides (3R) inclusions.
LMo8	Fine grained fabric with quartz (3R,2R,1O), mica (3R,2Z) and iron oxides (2R) inclusions.
LMo9	Fine grained fabric with quartz (3R,2R,1O), mica (4R,3R,2Z), iron oxides (3R,2R) and unidentified white material (3R) inclusions.
LM10	Fine grained fabric with quartz (3R,2R,1O), mica (3R,2Z), iron oxides (3Z,2O) and unidentified white material (3R) inclusions.
LM11	Fine grained fabric with quartz (5R,3R,1O), mica (3R,2Z) and iron oxides (3R) inclusions.
LM12	Fine grained fabric with quartz (3R,2Z,1O), mica (3R,2Z), iron oxides (3R,2R) and unidentified white material (3R) inclusions.
LM13	Fine grained fabric with quartz (3R,2Z,1O), mica (3Z,2O) and iron oxides (3R) inclusions.
LM14	Medium grained fabric with quartz (3R,2O,1O), mica (3R,2Z) and iron oxides (3Z, 2Z) inclusions.
LM15	Medium grained fabric with quartz (3R,2O), mica (3R,2Z), organic matter (3R) and iron oxides (4R,3R,2O) inclusions.
LM16	Medium grained fabric with quartz (3R,2O), mica (3R, 2Z) and iron oxides (3R) inclusions.
LM17	Medium grained fabric with quartz (3Z,2R,1O), mica (3R,2Z) and iron oxides (4R, 3R) inclusions.
LM18	Medium grained fabric with quartz (3Z,2Z,1O), mica (3R,2Z) and iron oxides (3R) inclusions.
LM19	Medium grained fabric with quartz (3Z,2O), mica (2Z) and iron oxides (2R) inclusions.
LM20	Medium grained fabric with quartz (4R,3Z,2Z,1O), mica (3R,2Z), organic matter (3R) and iron oxides (3Z) inclusions.
LM21	Coarse grained fabric with quartz (3O,2O), mica (2Z) and iron oxides (3R) inclusions.
LM22	Very fine grained fabric with quartz (1O), calcium carbonate (3R), mica (2R) and iron oxides (3R) inclusions.
LM23	Very fine grained fabric with quartz (1O), mica (2Z), organic matter (3R) and iron oxides (3R) inclusions.

Fig. 8. Pottery fabrics found in cluster 10 and their macroscopic description. Granularity of inclusions, followed by their frequency per cm² are shown in brackets (according to Horvat 1999).²

Some of these dishes and bowls have spouting nozzles Pls. 5.26, 11.66) or ring-feet (Pl. 6.33).

Chronological evaluation of pottery assemblages from phases 1, 2 and 4

Absolute dates for the three phases of cluster 10 from Radvanje are not available yet. In order to chronologically determine the pottery assemblage, we therefore had to compare and contrast it with pottery assemblages from other sites that have already been dated.

The most convincing comparisons can be found at Neo-Eneolithic sites from central and south-eastern Slovenia and the Late Neolithic site of Ozaljški Stari grad, Croatia.

Moverna vas and Ajdovska jama both yielded preserved and documented stratigraphy and are comparable to the studied site. Phase 1 is comparable with the second earliest, *i.e.* Moverna vas 4, settlement phase. Pottery assemblages show similar hollow, slightly concave feet, covered with slip (compare Pl. 1.1 with *Tomaž 1999.Pl. MV20.1-3*), dishes with a spout hole just below the rim (compare Pl. 1.8 with *Tomaž 1999.Pl. MV19.1*), bowls with beveled lips (compare bowl form Pl. 1.3 with *Tomaž 1999.Pl. MV19.2* and spout with Pl. MV17.4) and decoration of dishes with a line of punctate decoration (compare Pl. 1.8 with *Tomaž 1999.Pl. MV17.4, MV18.1*). Pots with convex shoulders and short cylindrical or slightly sloping necks are popular in both phases (compare Pl. 3.13, 14, 18 with *Tomaž 1999. Pls. MV22.1-3, MV24.1, MV25. 1-2*). It is important

² Granularity of inclusions (1: ≥ 0.25 ; 2: 0.26 to 0.50; 3: 0.51 to 2.00; 4: 2.01 to 3.00; 5: ≤ 3.01 mm), followed by their frequency (R: > 5, Z: 5 to 10, O < 10) are shown in brackets.

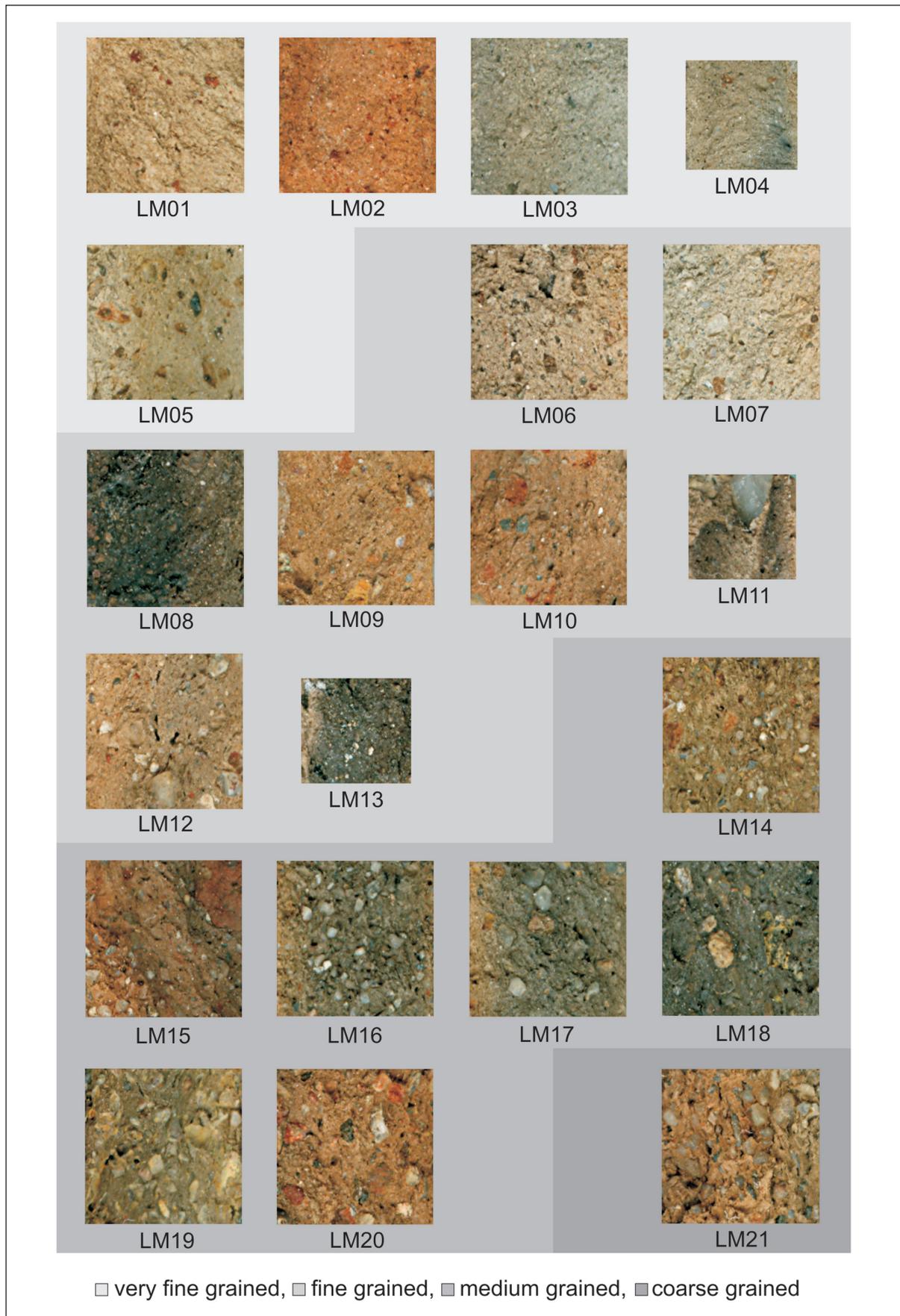


Fig. 9. Neolithic pottery fabrics and their granularity. Scale 3:1

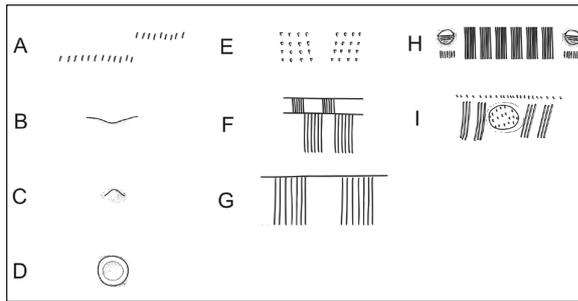


Fig. 10. Decorative motifs. Phase 1.

to note that their necks carry decoration consisting of bunches of vertical incisions (see also *Budja 1992. 103, Fig. 4: Phase 4*).

Pottery from phases 2 and 4 of cluster 10 is comparable to settlement phases 5 and 6 at Moverna vas. These phases show similarities in dishes and bowls with vertical or slightly inverted lips (compare Pls. 4.22, 5.27, 29, 6.34, 36, 10.62 with *Tomaž 1999.Pls. MV33.1-2, MV34.1*), in small dishes and bowls of simple forms (miniature dishes and bowls at Radva-

nje) (compare Pl. 6.38 and Pl. 11.64, 65 with *Tomaž 1999.Pl. MV28.3, 6, 7*), and pitchers, which are not known from earlier phases of Moverna vas (compare Pls. 7.42, 43, 11.70 with *Tomaž 1999.Pls. MV31.2, 3, MV34.5*), and in the decoration of necks and shoulders of pots with bunches of continuous horizontal lines (compare Pls. 9.52, 11.73 with *Tomaž 1999.Pls. MV29.3, MV35.12-13*) (see also *Budja 1992.103, Fig. 4: Phase 5-6*).

Phase 1 of cluster 10 is comparable with the oldest horizon of Ajdovska jama. Both phases are characterised by dishes/bowls with hollow, slightly concave feet, covered with slip (compare Pl. 1.1 with *Horvat 1986.Pl. 1.2*), dishes with a spout hole just below the rim (compare Pl. 1.8 with *Horvat 1986. Pl. 2.1*), pots with short convex shoulders and long steeply sloping necks (compare Pl. 3.17 with *Korošec 1975.Pl. 9.1*), pots with short necks, and necks of pots that carry decoration of bunches of vertical lines (compare Pl. 3.18 with *Horvat 1986.Pls. 1.3, 2.4, 5*).

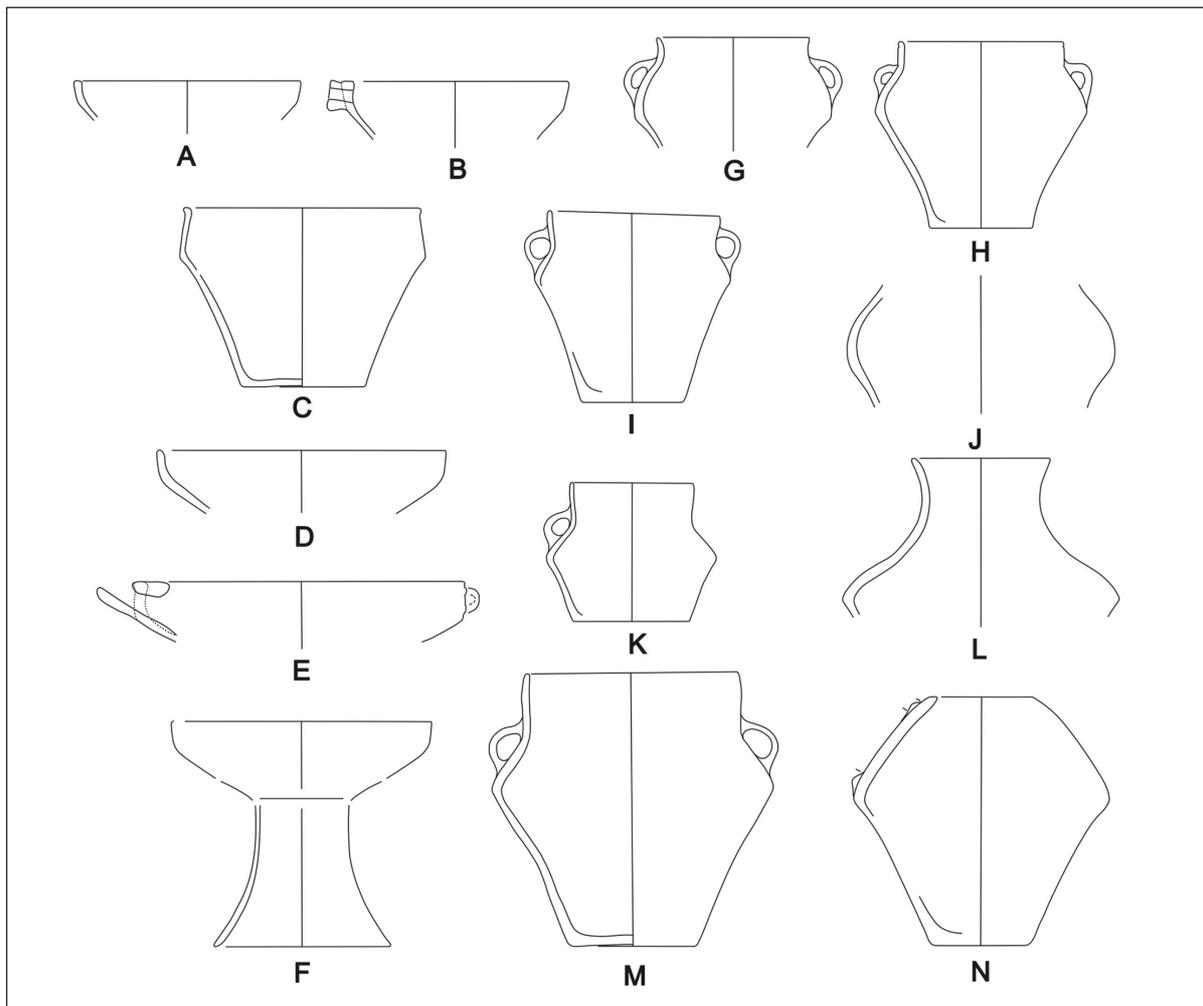


Fig. 11. Vessel forms. Phase 1.

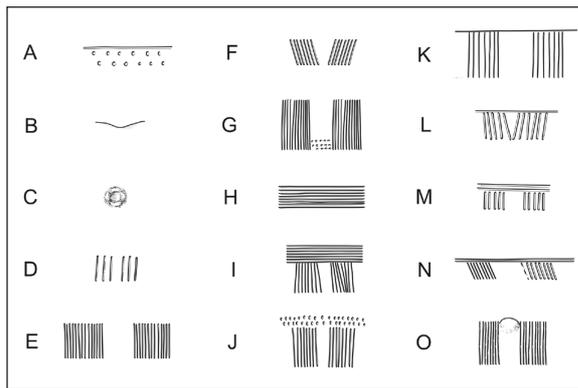


Fig. 12. Decorative motifs. Phase 2.

Pottery from phases 2 and 4 of cluster 10 shows an excellent comparison with the phase of cave burials in Ajdovska jama, which followed the oldest horizon of the site. These phases all contain bowls with verti-

cal or slightly inverted lips and spouting nozzles (compare Pl. 11.66 with *Korošec, Uršič 1965.Pl. 1.2* and Pl. 5.26 with *Korošec 1953.Pl. 11.9*), almost identical dishes with bevelled lips (compare Pl. 6.32 with *Korošec 1975.Pl. 8.3* and Pl. 6.39 with Pl. 6.2), small dishes of simple forms (compare Pl. 11.64 with *Korošec 1975.Pl. 11.4*), similar forms and decoration of pitchers (compare Pl. 7.41-45 and Pl. 11.68-71 with *Horvat 1989.Pl. 1-9*), comparable pots with long sloping necks (compare Pl. 8.50 with *Korošec 1975.Pl. 8.1*) and similar pot decoration (compare Pl. 11.72 with *Horvat 1986.Pl. 3.1* and Pl. 9.52 with *Korošec 1953.Pl. 5.5*).

The Phase 1 pottery of cluster 10 is also comparable with the earliest Late Neolithic finds from Drulovka (compare Pl. 1.4 with *Guštin et al. 2005.45:12*, Pl. 3.18 with 49:24; Pl. 2.12 with *Korošec 1960.Pl.*

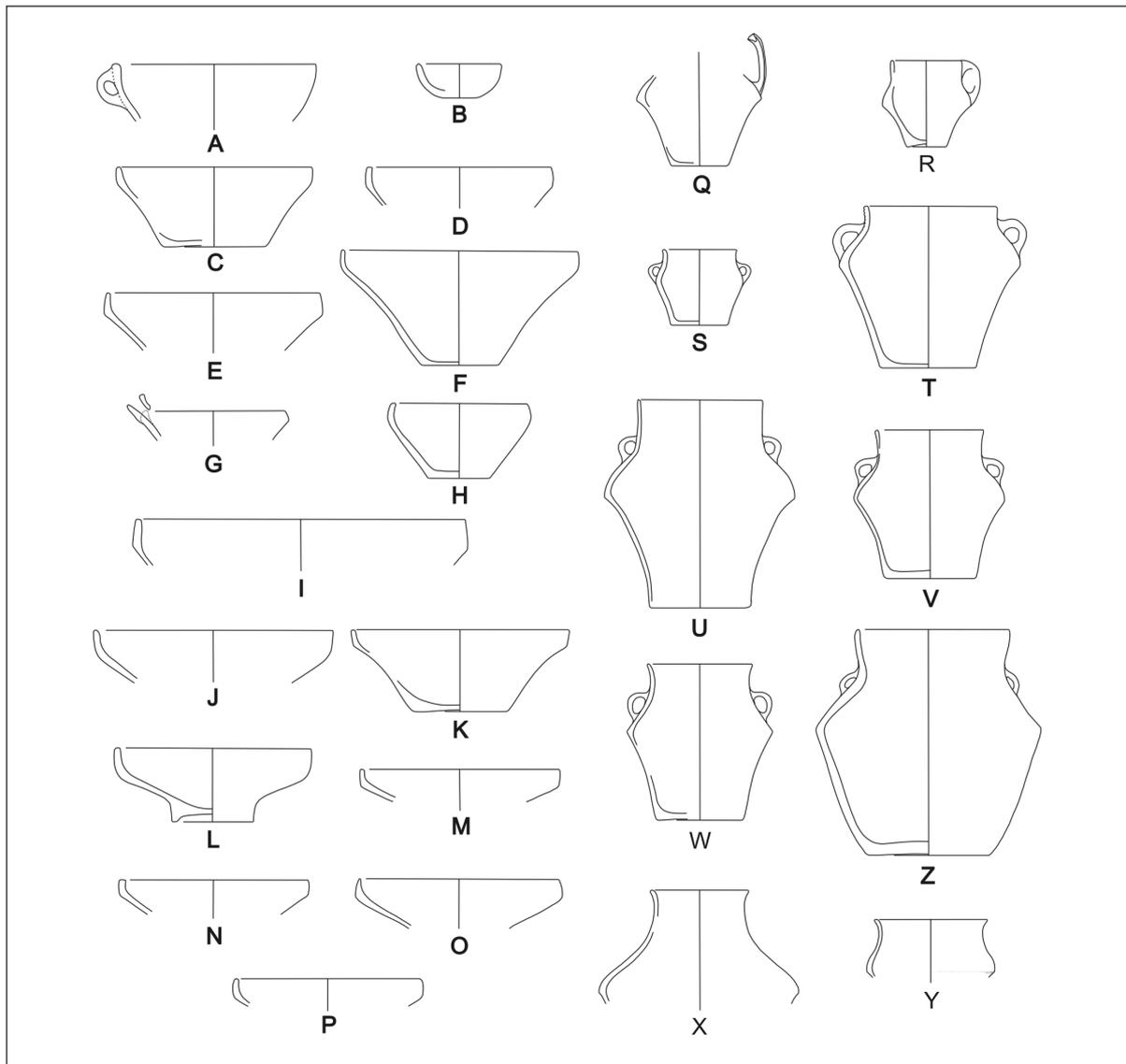


Fig. 13. Vessel forms. Phase 2.



Fig. 14. Lamp with traces of burning.

11.1, 1.7 with Pl. 12.1 and Pl. 3.18 with Pl. 22.6, 9). Moreover, phases 2 and 4 are similar to slightly later finds from Drulovka (Phase Drulovka 2) (compare Pls. 4.22, 5.25, 28 and Pl. 6.37 with *Guštin et al. 2005.43:36–38*, Pl. 7.41, 42 and Pl. 11.70 with 53:39–41; Pl. 4.22 with *Korošec 1960.Pl. 14.2* and Pl. 9.52 with Pls. 17.3, 18.6, 18.8, 19.5, 23.11).

The pottery of cluster 10 can furthermore be correlated with sites Col 1 near Podgračeno (compare Pl. 1.1 with *Horvat 2005.Fig. 6.12, 13*, Pl. 6.34 with Fig. 6.11, Pl. 5.31 with Fig. 11.16, Pl. 3.15 with Fig. 11.21, Pl. 7.42 with Fig. 11.23, Pl. 7.44 with Fig. 11.25 and Pl. 11.69 with Fig. 11.24), the Neo-Eneolithic horizon of Čatež-Sredno polje (compare Pl. 11.67 with *Tiefengraber 2006.233:5* and Pl. 7.43 with 233:6), Grac near Sela pri Zajčjem Vrhu (compare for example Pl. 7.42 with *Pavlin 2006.221:64*, and Pl. 10.59 with 215:17), Kamnik-Mali Grad (compare T. 5.26 with *Sagadin 2005.30:5*, Pl. 11.66 with 30:6 and decoration of the pot Pl. 9.52 with 30:8), Gradišče near Stiška vas and Kratna above Kamnik (compare Pl. 4.22 with *Velušček 2005.25:21*, Pl. 10.8 with 25:19, Pl. 11.73 with 24:4, Pl. 1.1 with 24:5 and Pl. 4.22 with 24:2).

The Phase 1 pottery of cluster 10 is well comparable to pottery from the Late Neolithic site of Ozaljški Stari Grad in nearby Croatia. Both contain similar hollow, slightly sloping feet (compare Pl. 1.1 with *Težak-Gregl 1993.Pl. 1.1*), biconical bowls with circular applied decoration (compare Pl. 1.7 with *Težak-Gregl 2001.Pl.3.1* and Pl. 1.6 with *Težak-Gregl 2005.159:15*), bowls with a spout hole just below the rim (compare Pl. 1.8 with *Težak-Gregl 2001.Pl.4.7*) and short-necked pots decorated with bunches of vertical lines on their shoulders and necks (compare Pl. 3.18 with *Težak-Gregl 2001.159:17, 20, 21*).

Pottery found at some Late Neolithic sites of central and south-eastern Slovenia is not comparable to the pottery from cluster 10. These are Čatež-Sredno polje (*Tomaž 2005; Tomaž, Kavur 2006*), Dragomelj (*Turk, Svetličič 2005*) and Resnikov Prekop (*Korošec 1964; Tomaž, Velušček 2005; Velušček 2006*). These sites are comparable with the earliest phase of Movernas vas. Pots with no shoulders and with long, sloping necks, pots with convex shoulders and steeply sloping necks, and bowls with bevelled lips frequently occur at these sites. Their maximum girths are commonly decorated with applied decoration, often in combination with impressions (compare *Tomaž 2005.117:4–5, 119:9,10,13, 121:21, 123:28–31, 125:38,41; Tomaž, Kavur 2006.84:5–7, 85:10, 12–14, 86:17,18, 87:19; Turk, Svetličič 2005.75:21, 23, 29, 34–35, 77:43, 44, 46; Tomaž, Velušček 2005.95:23, 25, 97:35; Velušček 2006.Pl. 2.2–4, Pl. 5.1–Pl. 7.1, Pls. 13.1, 14.2, 3.5, 17.13, 14, 18.1–7, 19.4 with Tomaž 1999.Pl. MV5.1, 3, MV9.4, MV10.4, MV11.3, MV14.1*). In addition to dishes/bowls with hollow,

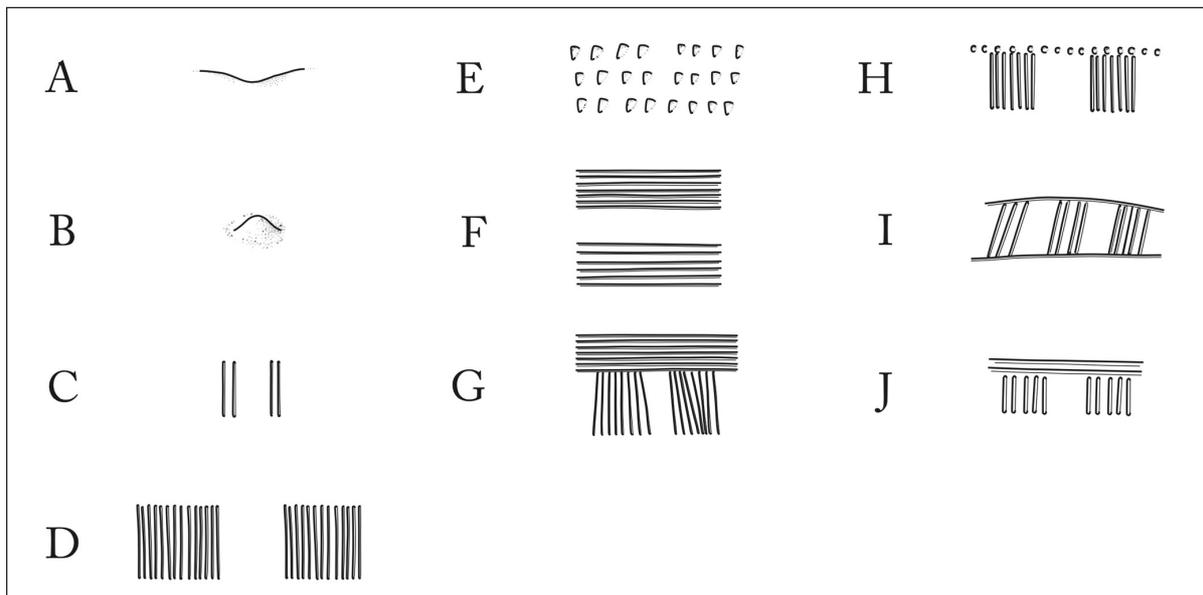


Fig. 15. Decorative motifs. Phase 4.

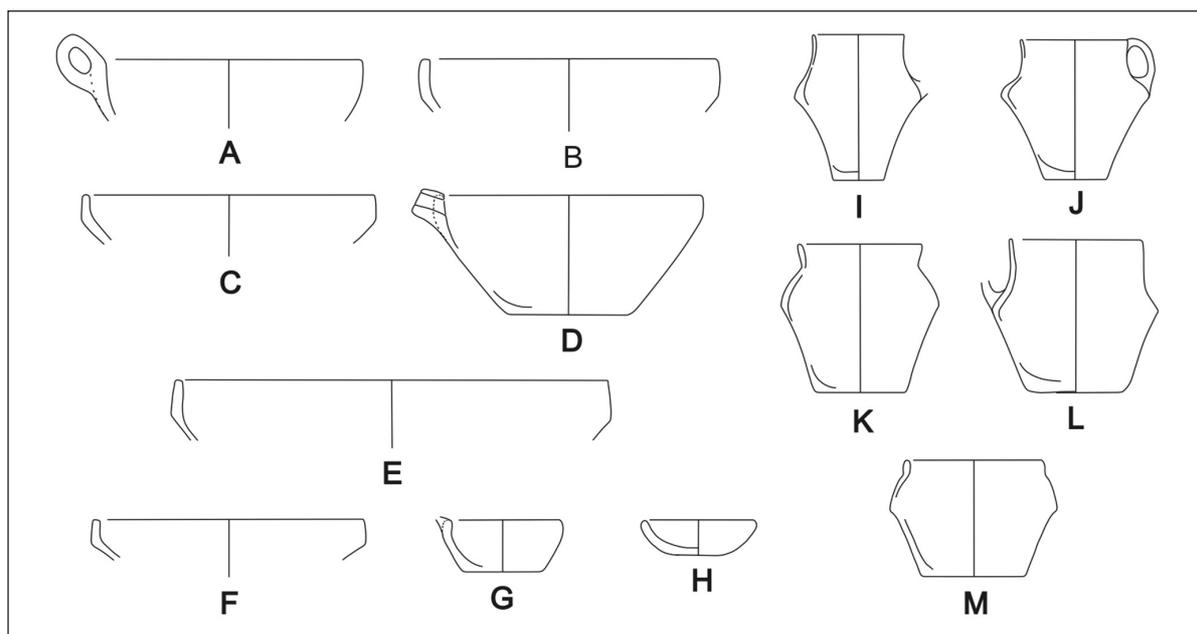


Fig. 16. Vessel forms. Phase 4.

slightly sloping feet, hollow, almost cylindrical feet (compare *Tomaž 2005.123:36; 2006.85:10, 86:16; Turk, Svetličič 2005.75:32; Korošec 1964.Pl. 14.5* with *Tomaž 1999.Pl. MV3.3, 4*) and hollow, cone-shaped and short feet are present (*Tomaž 2005.117: 7, 123:37; Tomaž, Kavur 2006.85:11, 12, 14, 15; Turk, Svetličič 2005.75: 22*).

Conclusion

Six phases were recognised within the settlement deposit of Radvanje. Four of them are associated with the settlement, construction and destruction of the recognised structure and everyday activities. Two are related to flowing water activity, and are documented with a layer of alluvium and a palaeo-channel.

We noted a great similarity in the pottery assemblages of phases 2 and 4. However, they both slightly differ from the assemblage of Phase 1. The differences can be seen mainly in pottery forms and their decoration. Certain deviations also occur in pottery manufacturing technology.

Comparisons with other sites indicate that the Radvanje pottery from phases 1, 2 and 4 of cluster 10

dates to the Late Neolithic. The best comparisons can be found at some sites from central and south-eastern Slovenia. The Phase 1 pottery can be correlated with pottery of the 4th settlement phase of Moverna vas, the earliest pottery from Drulovka and Ozalj-Stari Grad in Croatia, and it is also similar to the pottery from the earliest horizon of Ajdovska jama. The pottery from phases 2 and 4 of cluster 10 is somewhat later. The best comparisons can be made with pottery from Drulovka, which dates to the late Neo-Eneolithic period (Phase Drulovka 2), pottery from the phase of cave burials in Ajdovska jama and pottery from the 5th and 6th settlement phase of Moverna vas.^{3,4}

³ I sincerely thank to Mira Strmčnik Gulič from the Maribor Unit of the Institute for the Protection of Cultural Heritage (ZVKDS), Head of the archaeological excavation, who made it possible for me to publish this summary of my undergraduate thesis, which was written under supervision of Prof. Dr. Mihael Budja and submitted to the Department of Archaeology at the University of Ljubljana in 2010.

⁴ I would like to thank Nives Kokeza for English translation of the text.

fabric	Phase 1		Phase 2		Phase 4	
	pcs.	%	pcs.	%	pcs.	%
LMo1	5	18,5	58	35,8	41	44,6
LMo2	/	0,0	3	1,9	/	0,0
LMo3	/	0,0	1	0,6	3	3,3
LMo4	/	0,0	3	1,9	/	0,0
LMo5	/	0,0	1	0,6	/	0,0
LMo6	1	3,7	/	0,0	/	0,0
LMo7	/	0,0	11	6,8	5	5,4
LMo8	3	11,1	41	25,3	20	21,7
LMo9	8	29,6	/	0,0	/	0,0
LM10	/	0,0	/	0,0	1	1,1
LM11	1	3,7	/	0,0	/	0,0
LM12	7	25,9	3	1,9	/	0,0

fabric	Phase 1		Phase 2		Phase 4	
	pcs.	%	pcs.	%	pcs.	%
LM13	/	0,0	2	1,2	1	1,1
LM14	/	0,0	/	0,0	1	1,1
LM15	/	0,0	/	0,0	1	1,1
LM16	1	3,7	10	6,2	3	3,3
LM17	/	0,0	2	1,2	3	3,3
LM18	1	3,7	19	11,7	6	6,5
LM19	/	0,0	4	2,5	3	3,3
LM20	/	0,0	3	1,9	2	2,2
LM21	/	0,0	1	0,6	2	2,2
LM22	/	0,0	/	0,0	/	0,0
LM23	/	0,0	/	0,0	/	0,0

Fig. 17. Quantity and percentage of fabrics (LM). Phases 1, 2 and 4.

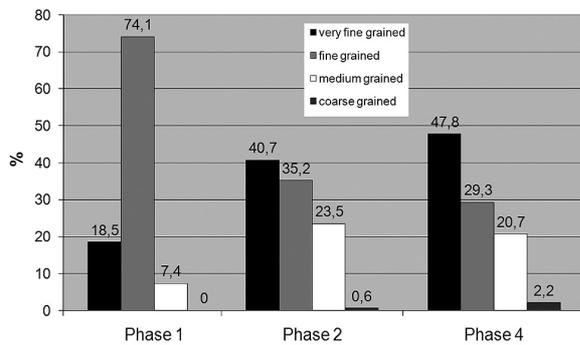


Fig. 18. Percentage of different granularity groups. Phases 1, 2 and 4.

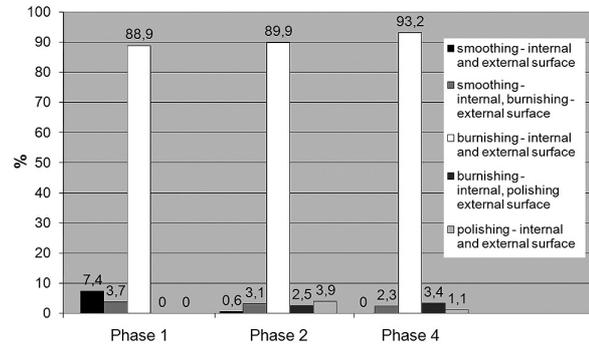


Fig. 19. Percentage of unfired surface treatment of pottery. Phases 1, 2 and 4.

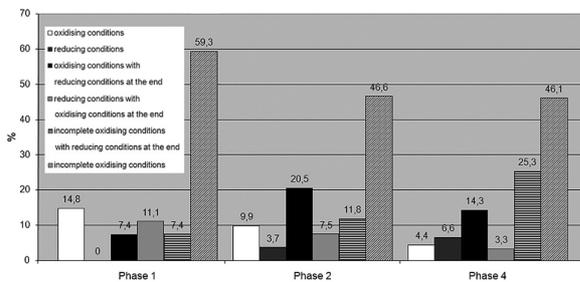


Fig. 20. Percentage of types of firing of pottery. Phases 1, 2 and 4.

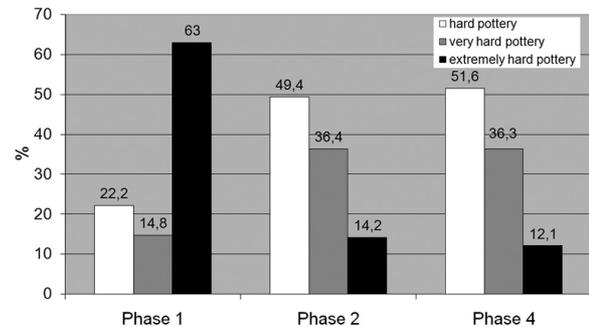


Fig. 21. Percentage of hardness groups. Phases 1, 2 and 4.

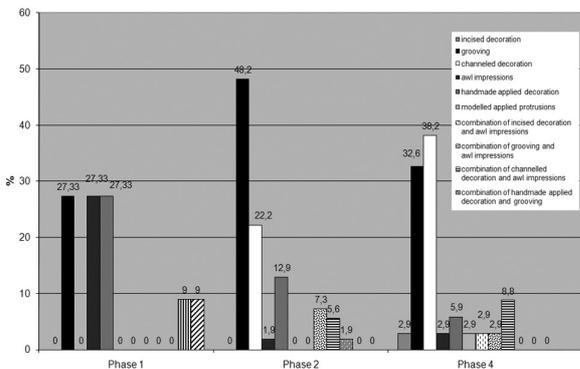


Fig. 22. Percentage of pottery decoration techniques. Phases 1, 2 and 4.

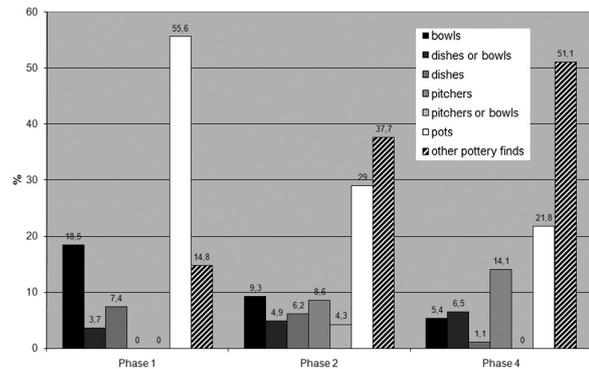


Fig. 23. Percentage of basic vessel forms. Phases 1, 2 and 4.

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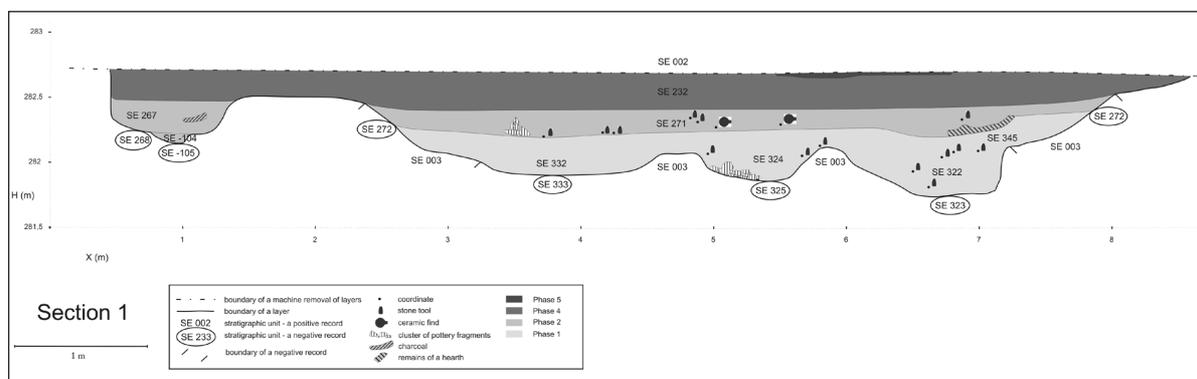
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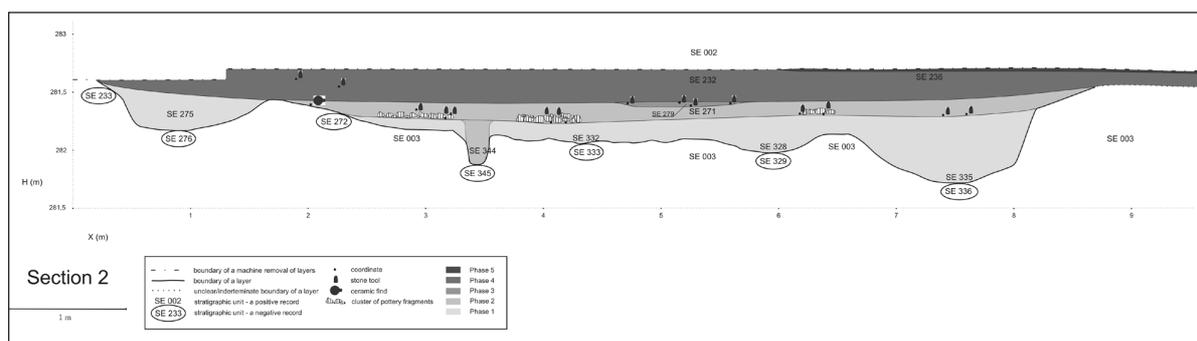
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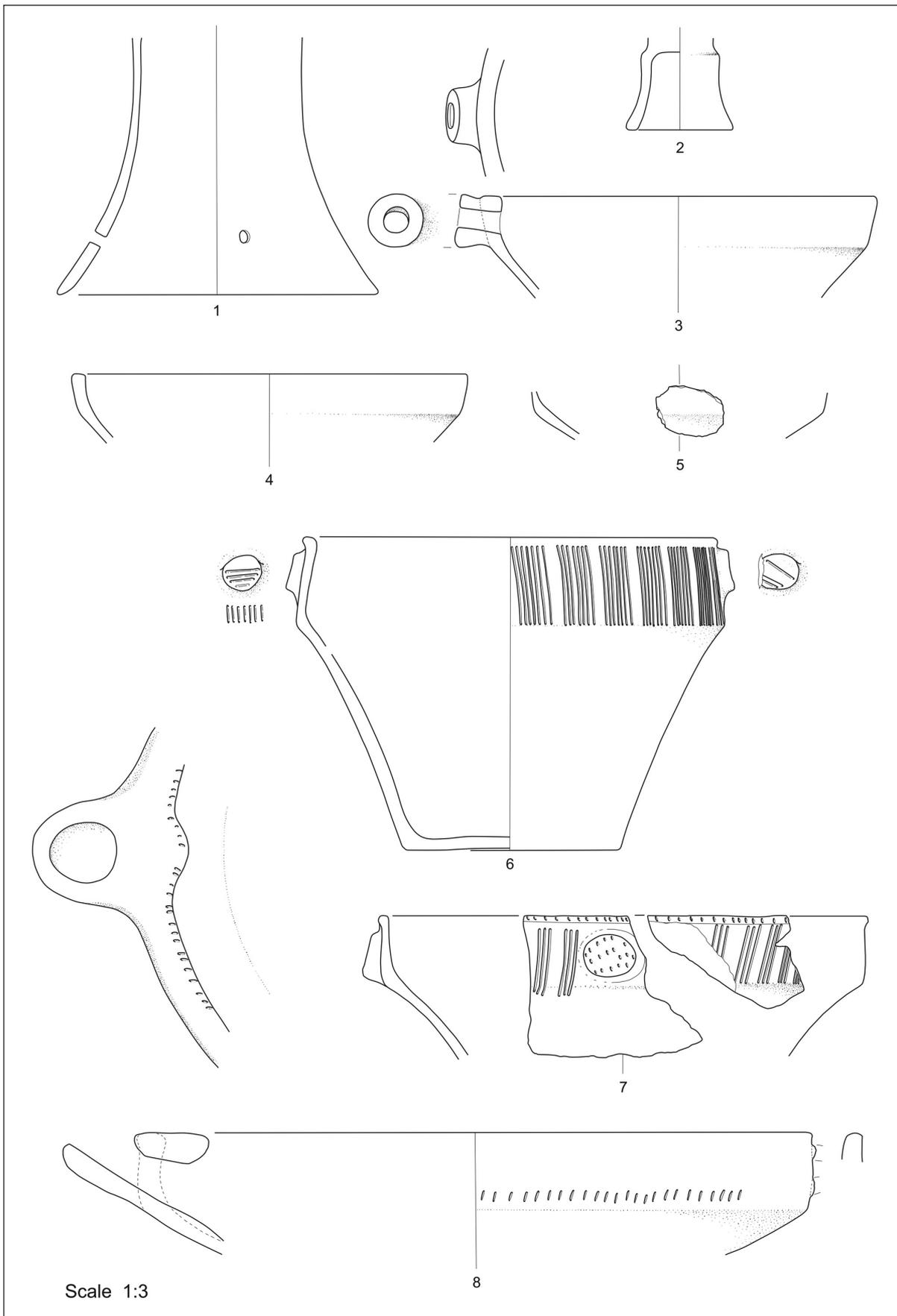
Appendix



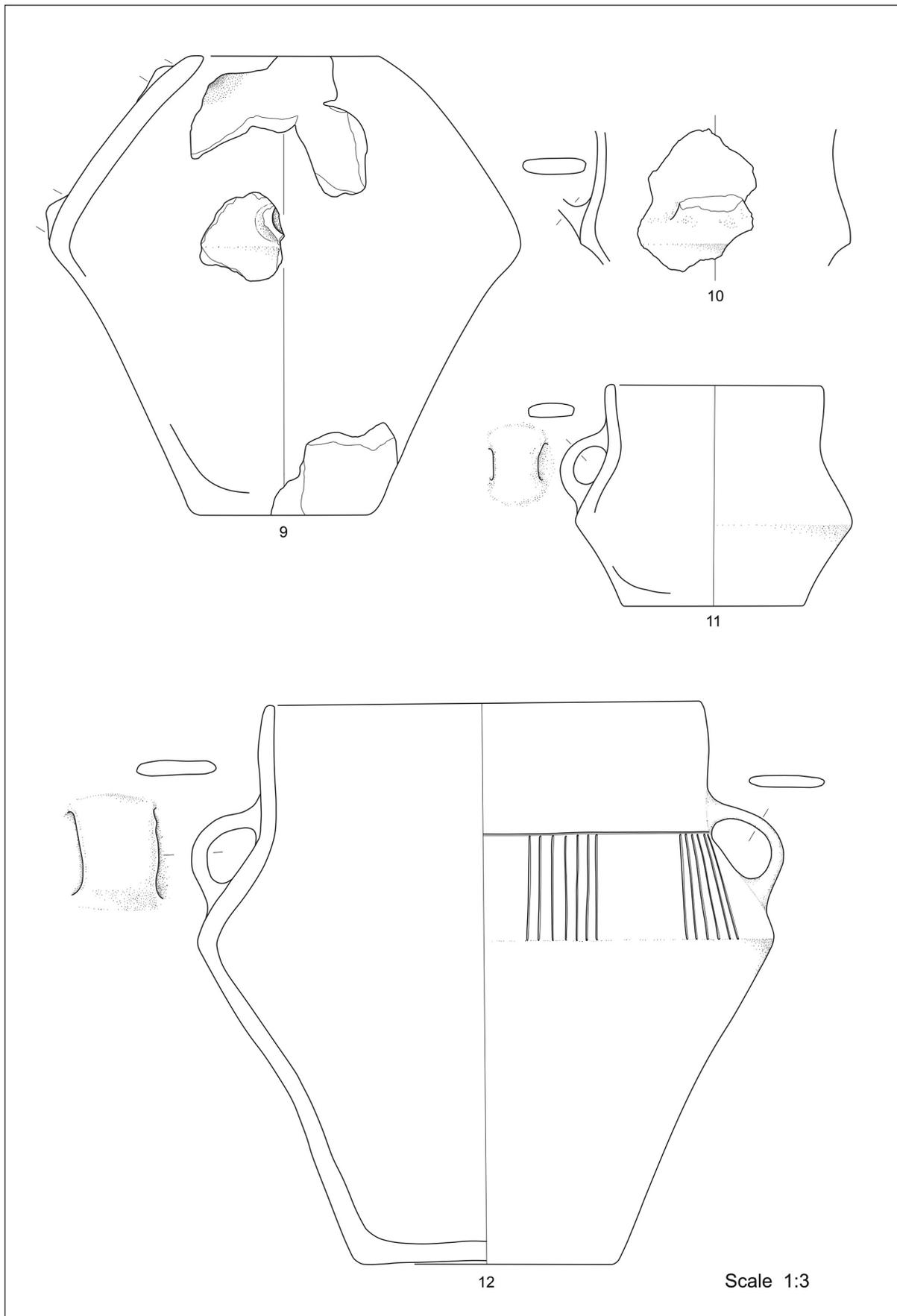
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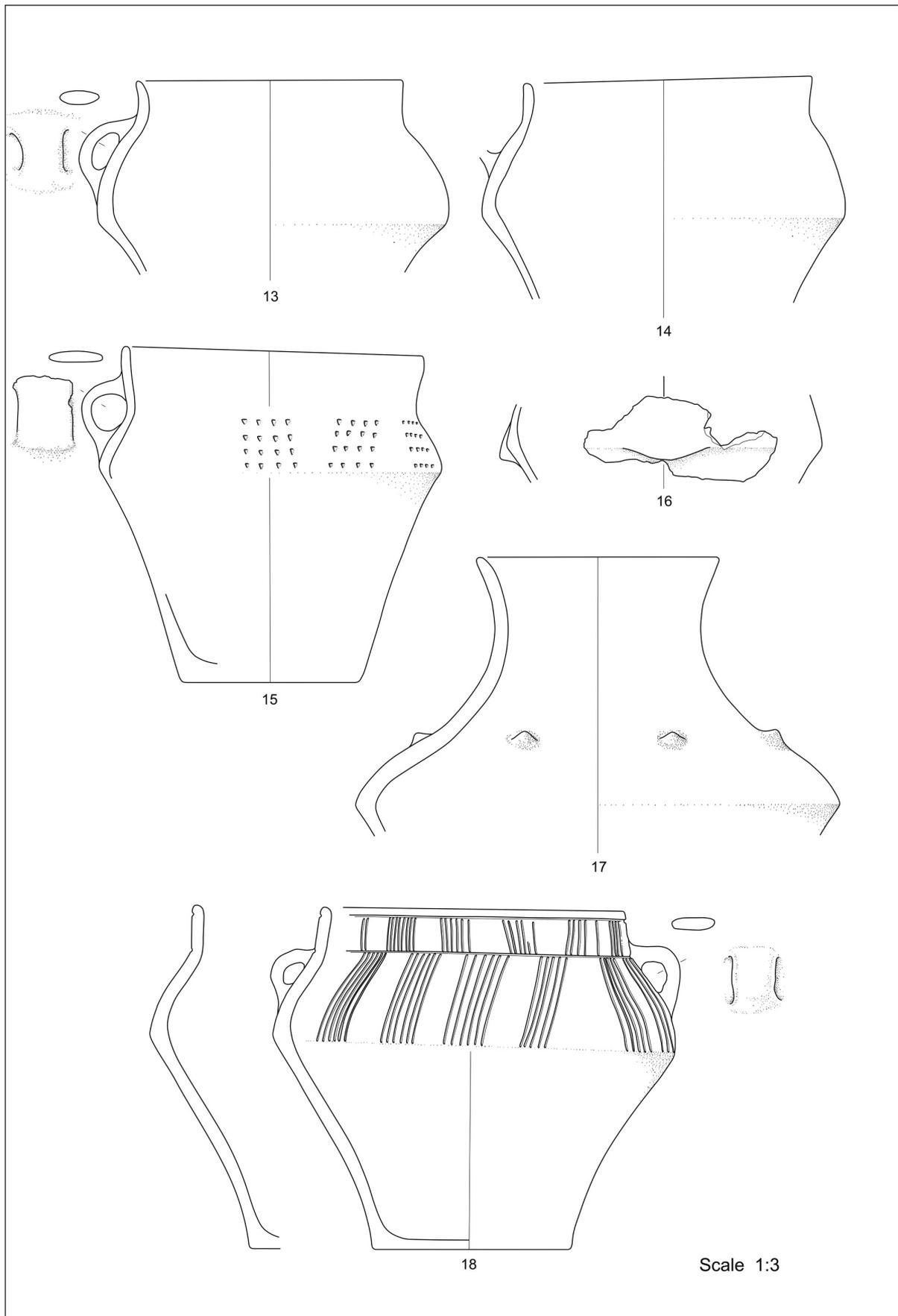
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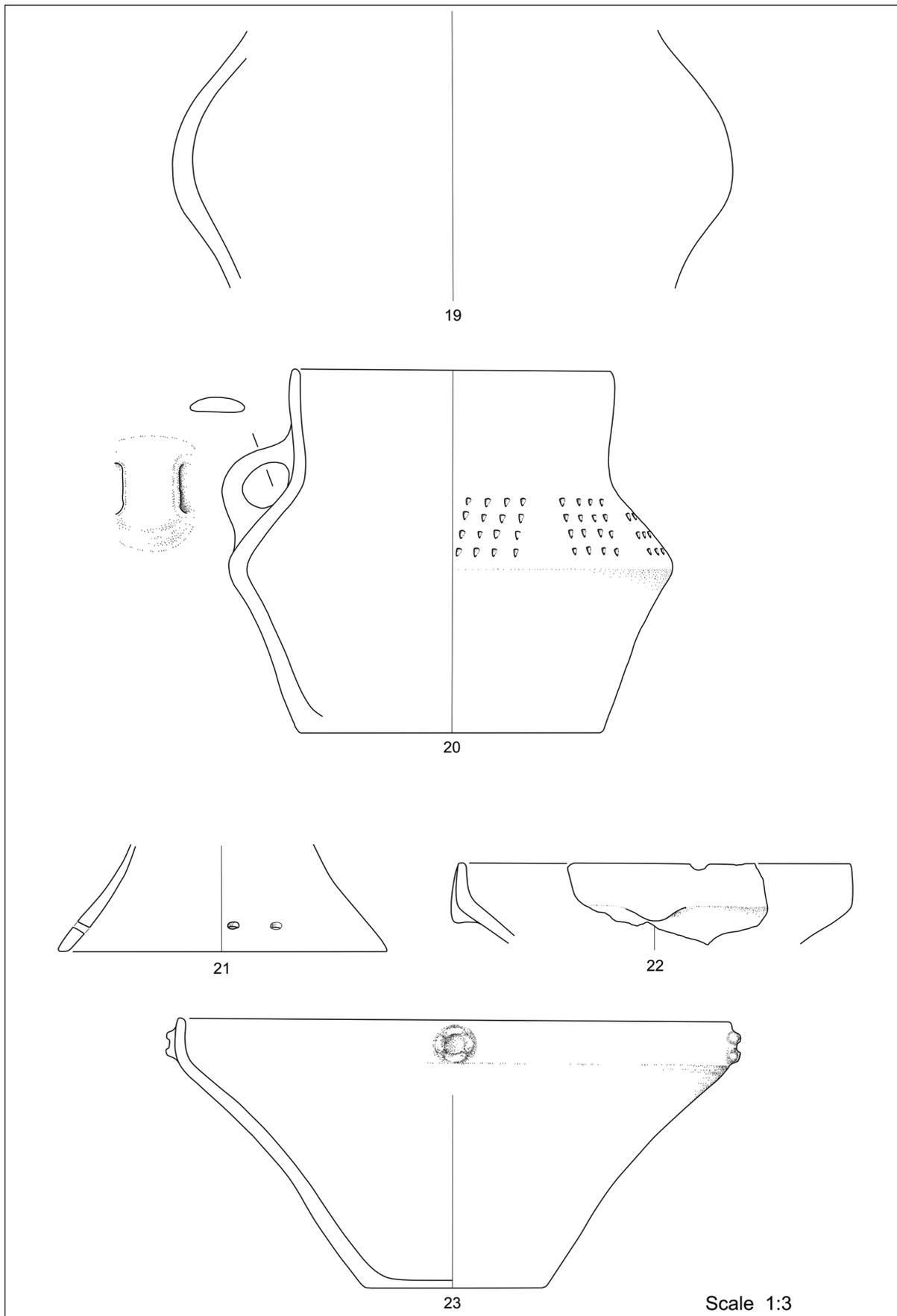
Pl. 1. Zgornje Radvanje, Cluster 10. Ceramic. SE 322 (1-2), SE 324 (5-6), SE ? (3-4, 7-8). Phase 1.



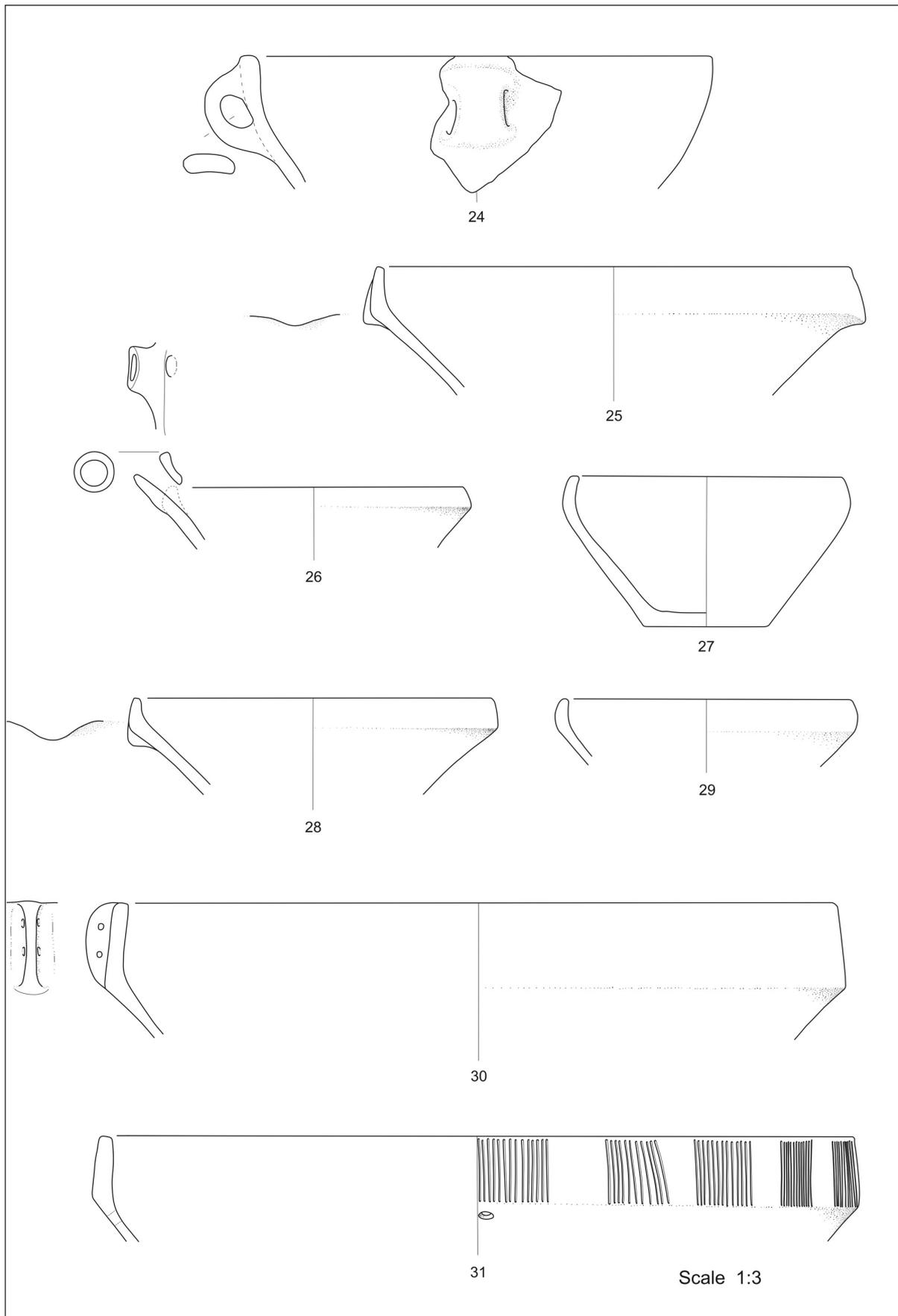
Pl. 2. Zgornje Radvanje, Cluster 10. Ceramic. SE 322 (9-11), SE 324 (12). Phase 1.



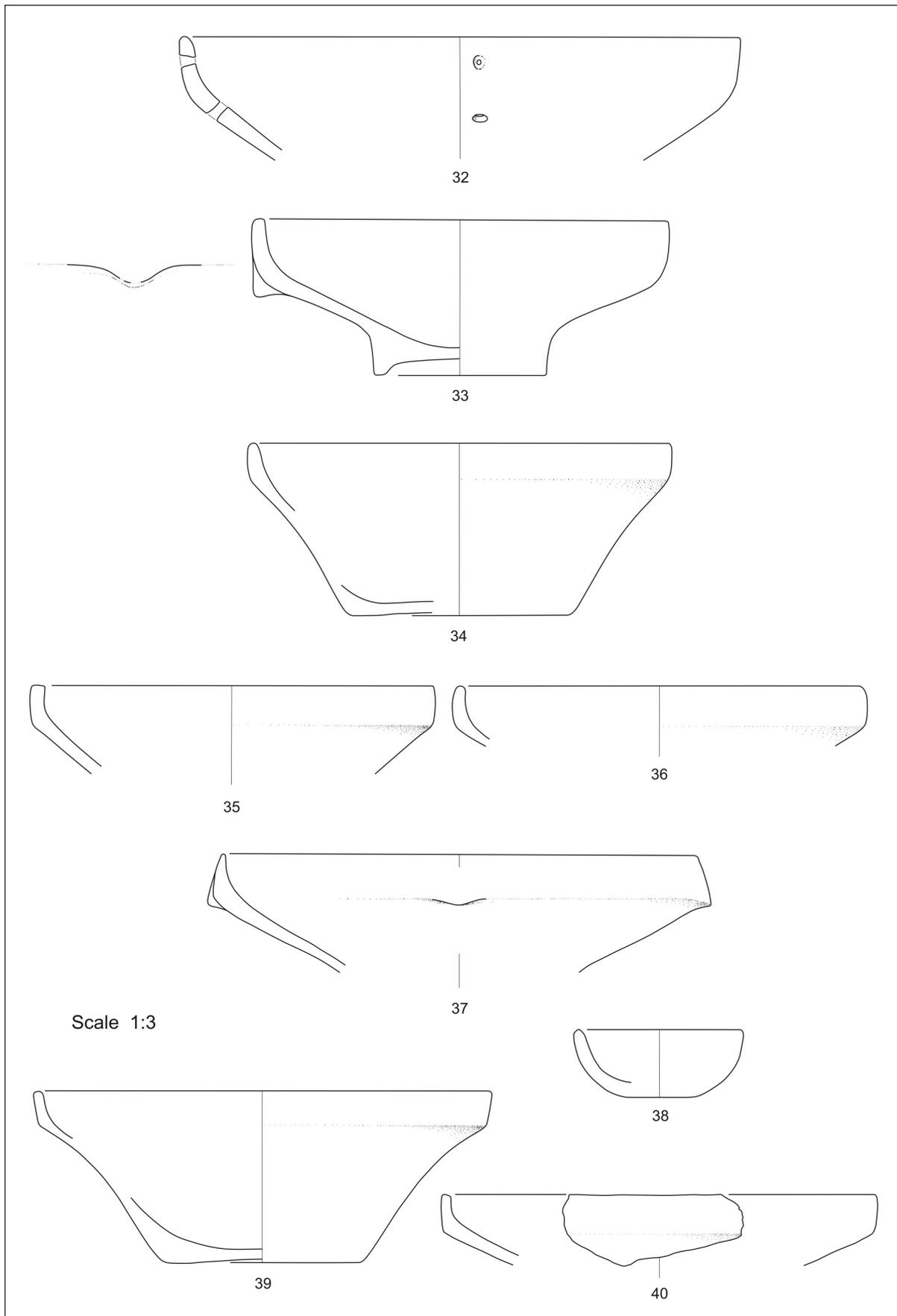
Pl. 3. Zgornje Radvanje, Cluster 10. Ceramic. SE 322 (13), SE 324 (15, 17-18), SE 332 (14, 16). Phase 1.



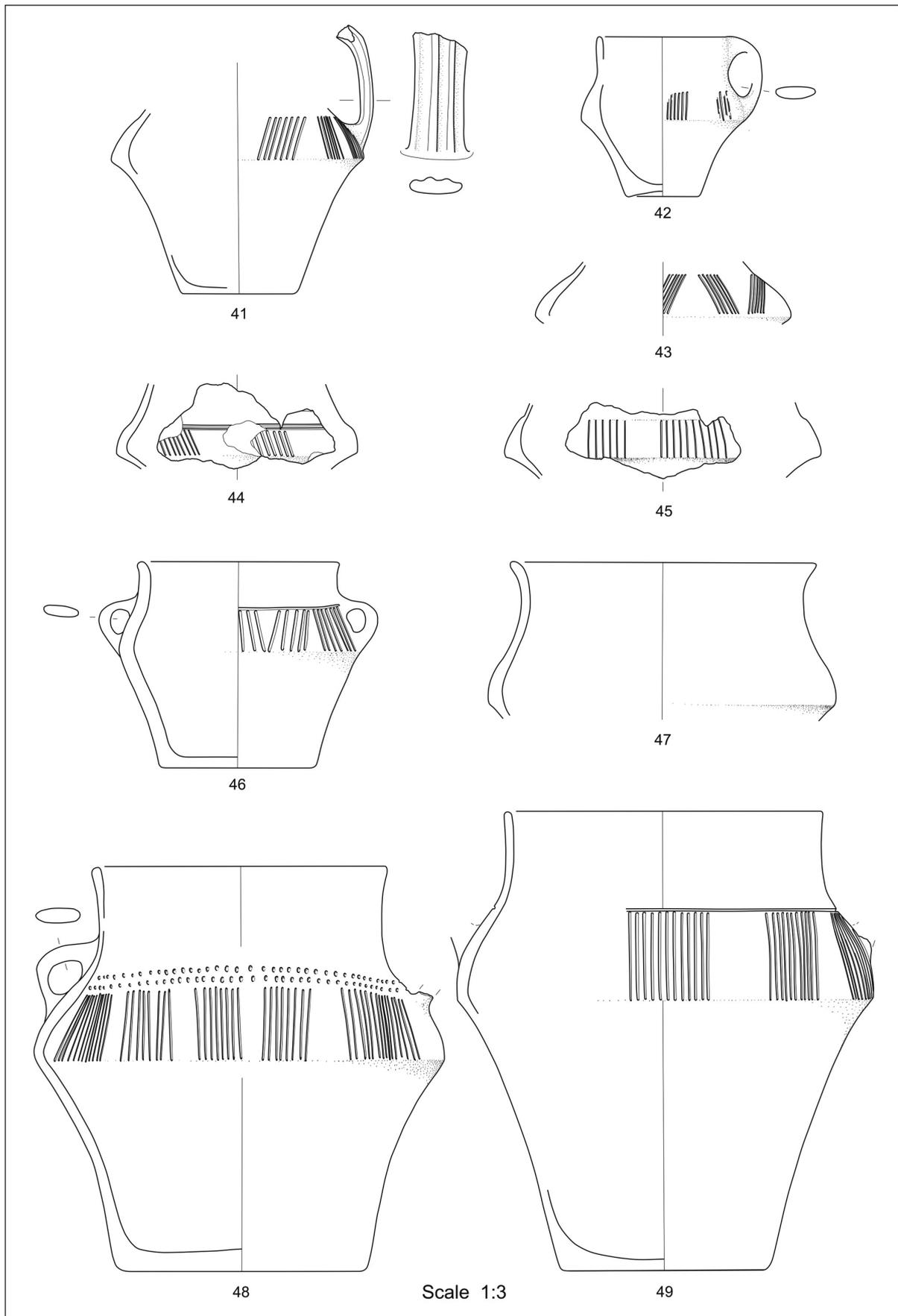
Pl. 4. Zgornje Radvanje, Cluster 10. Ceramic. SE 330 (19-20). Phase 1. SE 271 (21-23). Phase 2.



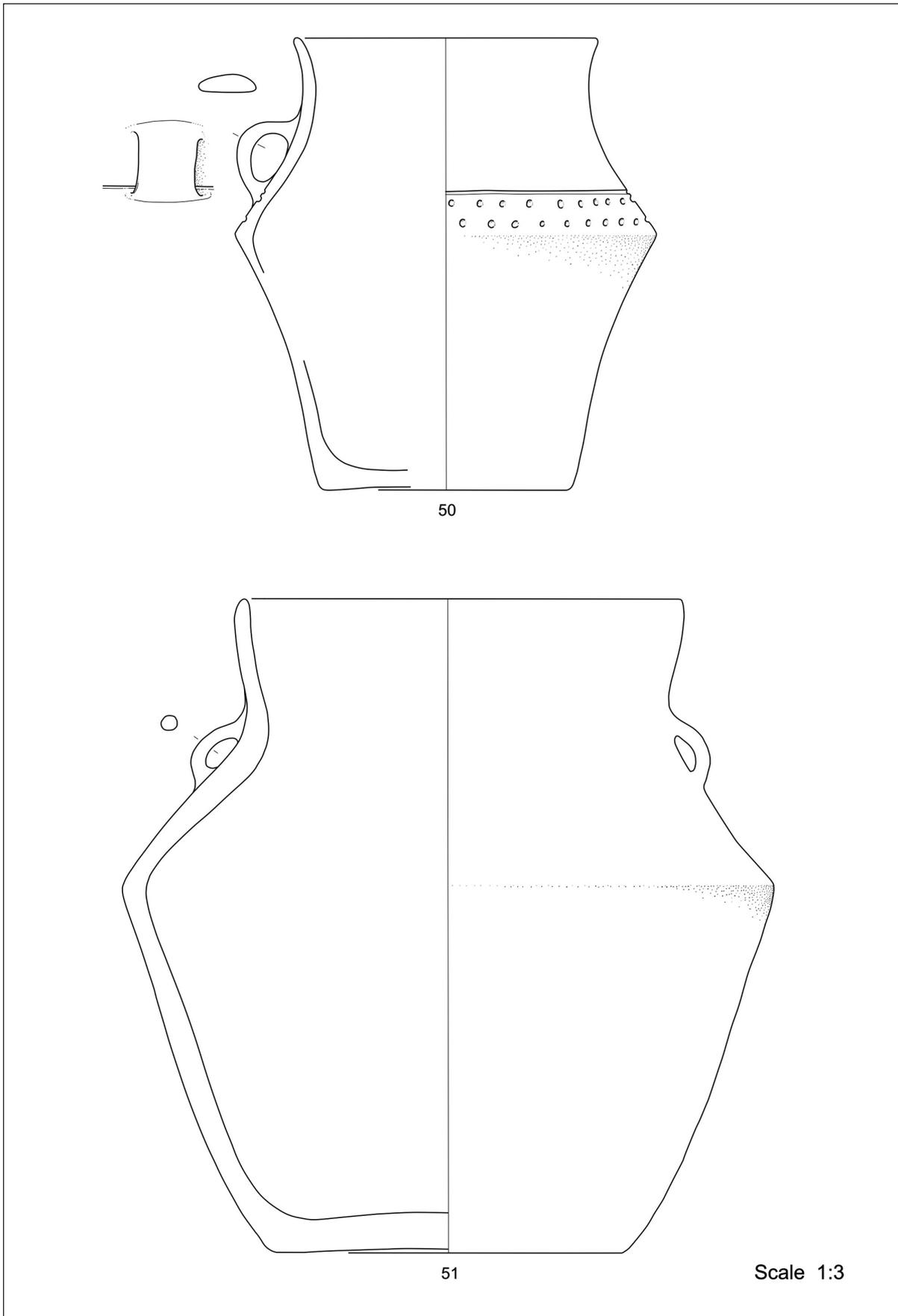
Pl. 5. Zgornje Radvanje, Cluster 10. Ceramic. SE 271. Phase 2.



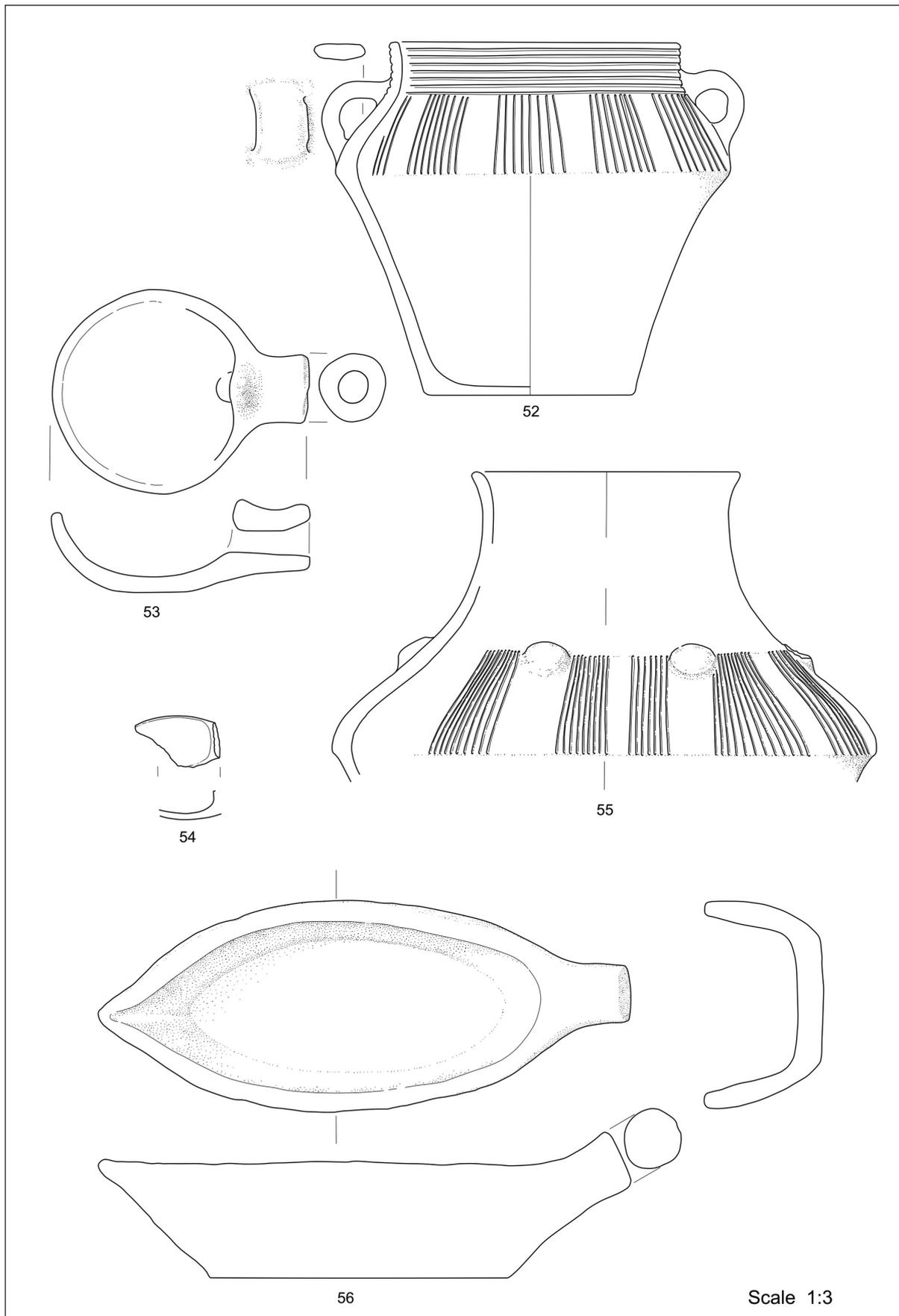
Pl. 6. Zgornje Radvanje, Cluster 10. Ceramic. SE 271. Phase 2.



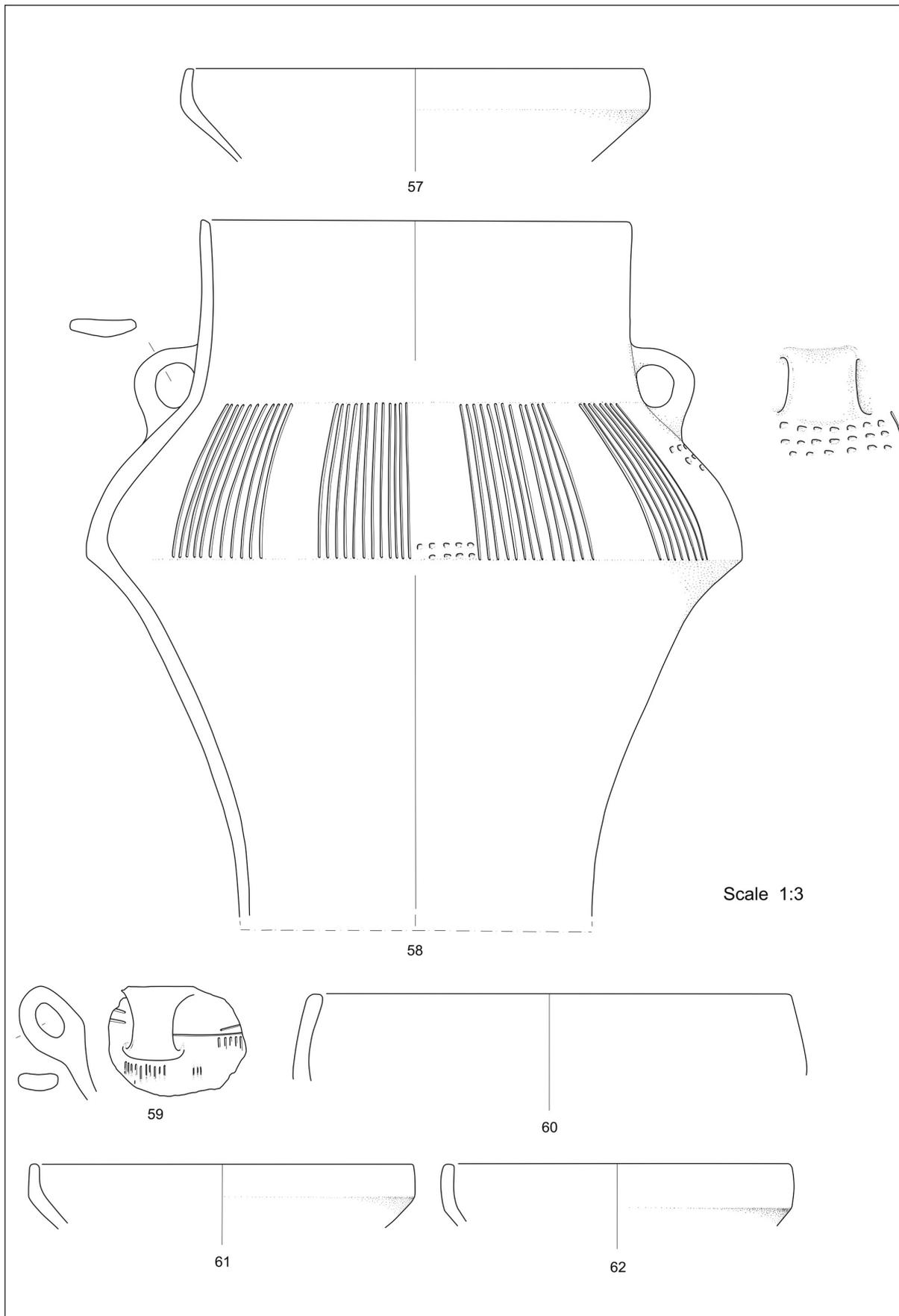
Pl. 7. Zgornje Radvanje, Cluster 10. Ceramic. SE 271. Phase 2.



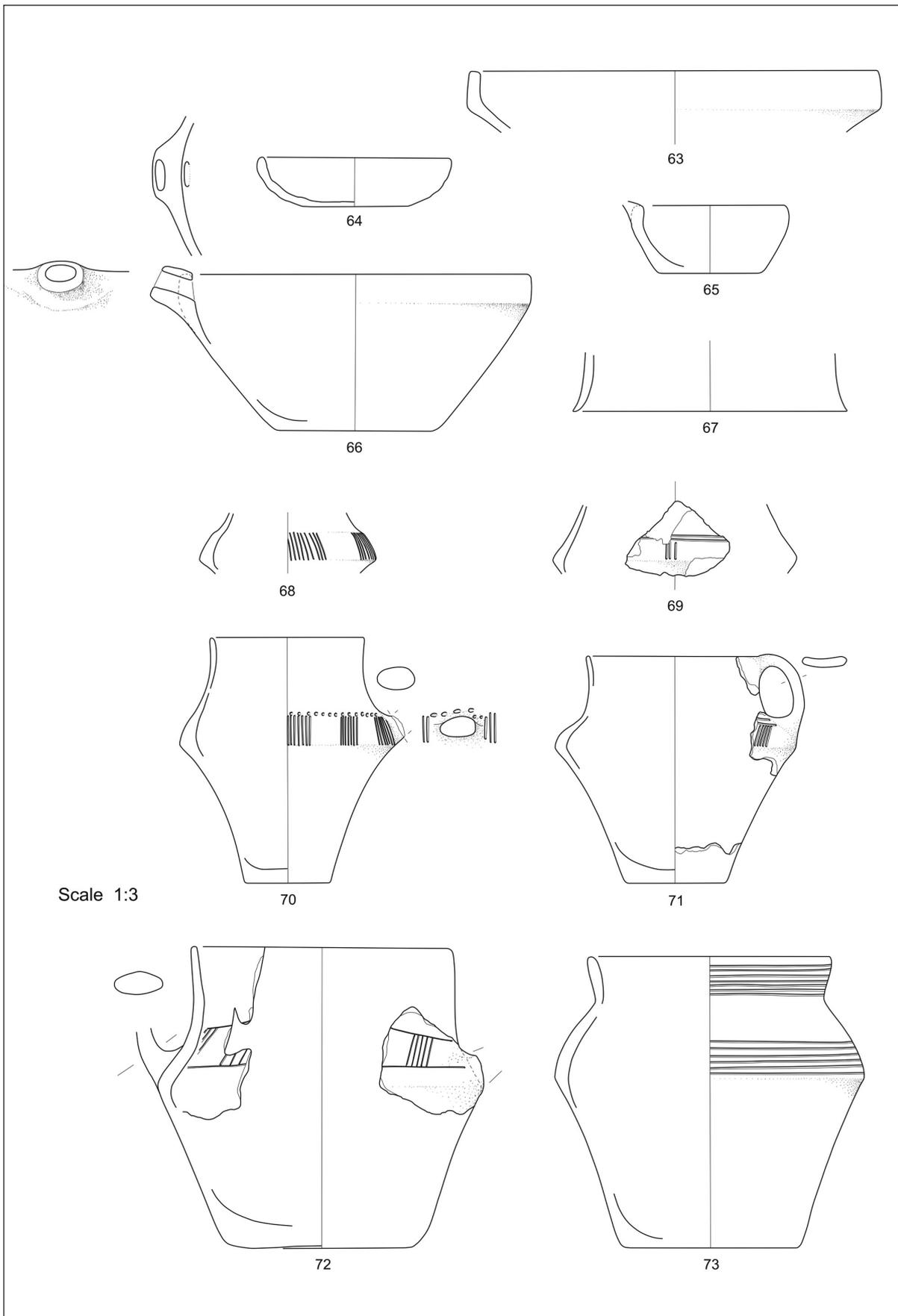
Pl. 8. Zgornje Radvanje, Cluster 10. Ceramic. SE 271. Phase 2.



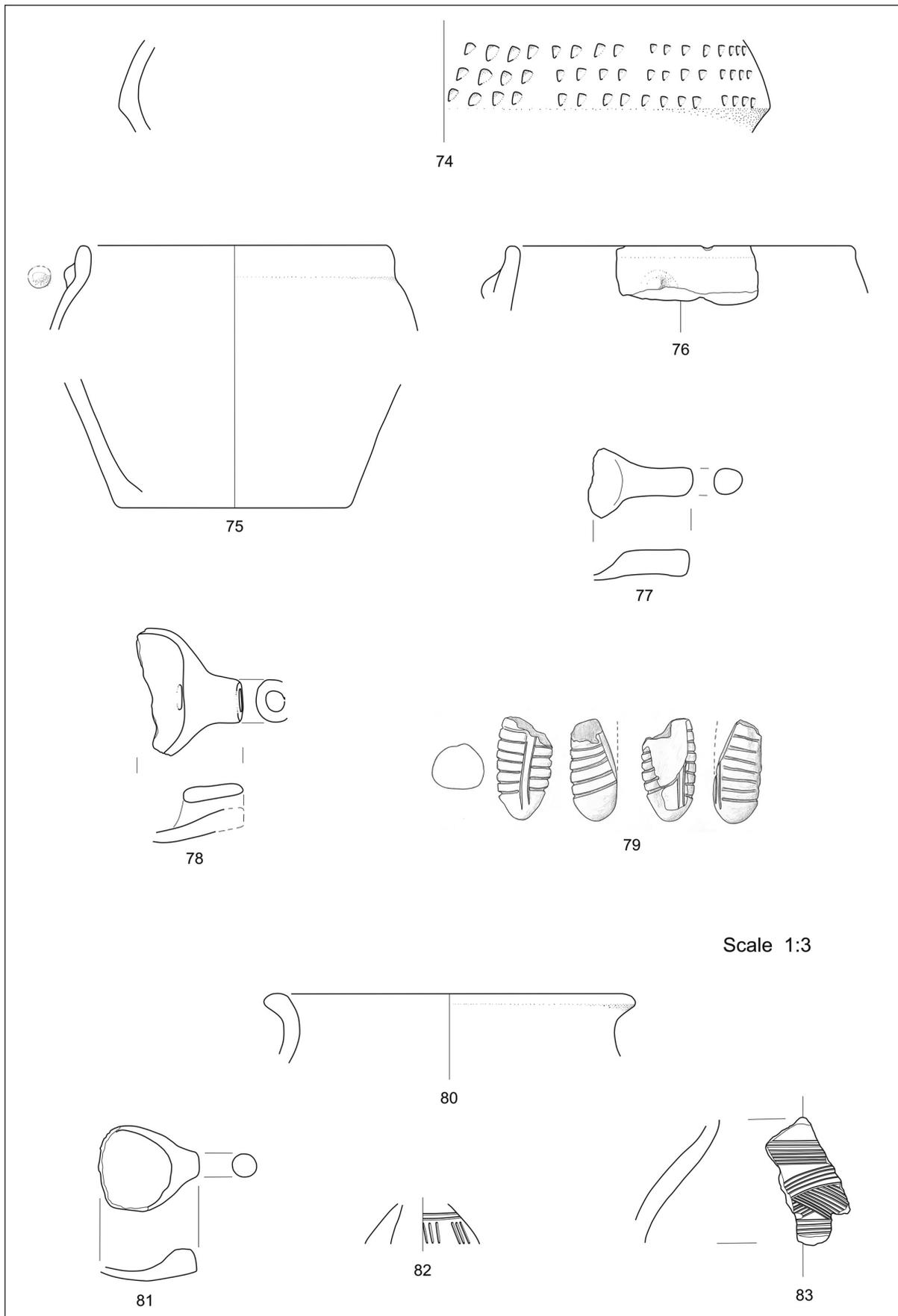
Pl. 9. Zgornje Radvanje, Cluster 10. Ceramic. SE 271. Phase 2.



Pl. 10. Zgornje Radvanje, Cluster 10. Ceramic. SE 238 (57-58). Phase 2. SE 232 (59-62). Phase 4.



Pl. 11. Zgornje Radvanje, Cluster 10. Ceramic. SE 232. Phase 4.



Pl. 12. Zgornje Radvanje, Cluster 10. Ceramic. SE 232 (74-79). Phase 4. SE 234 (80-83). Phase 5.

Book reviews

Dušan Borić (ed.)

Archaeology and Memory. 210 pages, 78 figures. 2010. Oxford: Oxbow Books; ISBN 978-1-84217-363-3 hardback.

Stimulated by a growing interest in the issue of memory, remembering and forgetting in the various fields of humanities and social studies, this volume illuminates the relationship between archaeology and memory. In doing so, it raises some perennial but also novel questions. What is the relationship between materiality and memory? What diverse mnemonic systems for inscribing the 'past in the past' can be discerned through archaeological records? How does archaeology understand time and, consequently, represent the past? What are the consequences of the interplay between the uses of memory and archaeological practice? Varied answers are provided by eleven contributors from the fields of archaeology, anthropology and the arts. As far as the organisation of the volume is concerned, twelve papers are organised into three sections. Following a theoretical introduction that gives an historical overview of the development of the concept of memory in philosophy (Borić), there are seven papers (Whittle, Borić, Tringham, Jones, Hanks, Boozer and Gutteridge) which are concerned with the theme of the 'past in the past'. Six of these elaborate on diverse prehistoric and classical case studies from the Eurasian regional contexts. The seventh, on the other hand, is written as a personal recollection of how the creation of the archaeological record has changed through time with the development of digital media (Tringham). The final section in the book comprises four papers which explore the archaeologies and memories of the contemporary past, three of them through selected case studies (Filippucci, Weiss, Bajić) and the fourth from a theoretical perspectives (Buchli).

A number of key points arise throughout the twelve chapters. First, memory which can be seen as a curated and fragmented past embedded in the present is expressed through incorporated bodily actions and performances. However, it can be also inscribed as a text into material objects, monuments, landscapes and places by the practical engagements of people with the world. Several philosophical concepts, particularly concepts of trace, citation and repetition/re-capitulation (Borić p. 16–21, 24–26) which are of

practical relevance for examining the relation between remembering, forgetting, and materiality, allow the contributors to present a number of case studies of materialised memories embodied in the forms of dwelling structures (Whittle, Borić, Boozer), monumental public architecture (Gutteridge), burial structures (Whittle, Borić, Jones, Hanks), votive offerings (Jones), landscapes of conflict, violence and war (Filippucci, Weiss), as well as digital archaeological archives (Tringham) and virtual museum (Bajić).

Second, singularity is not in the nature of time – on the contrary, it is inherent to each segment of time to be composite. Hence, the present (also the present in the past) is formed as a palimpsest, consisting not only of the present time, but also of fragments of different pasts. This phenomenon is most readily observed in our physical environment, as is shown by an illustrative case study by Gutteridge. The author describes the locale of the Arch of Constantine as a place where past and present conjoin in the form of historical topography, peopled by tourists, street merchants and men dressed as gladiators and centurions equipped with 21st century gadgets such as mobile phones. Similarly, the distinction between the past and the present is dissolved in the Arch itself: spoliated reliefs from at least three older monuments are used intentionally to achieve an effect of timelessness along with the elision of biographical and cosmic time. As Gutteridge stresses, this principle of selective curation negates the linear temporal principle of historic time and instead creates a bricolage of events and their material manifestations that are “*moved, shuffled, and relocated in the spatial and temporal landscape, ... never fully out-of-time*” (p. 168).

Third, following the sociological distinction between individual and collective memory, the majority of authors seek to examine diverse engagements with the world that are involved in creating collective identities and collective memories. When, for example, Whittle (p. 38) writes on dwelling and the everyday activities of “*building structures, herding animals, tending crops, procuring raw materials, in-*

teracting with co-residents, neighbours and others, and attending to the level of floodwaters when they came” that came about in the Neolithic settlement of Ecsegfalva 23 in the Great Hungarian Plain, he brings to the forefront social knowledge and collective memories as preconditions for daily life. On the other hand, as shown by Boozer, archaeology is able (in particular instances) also to touch upon the topic of memory in relation to personal identity construction and maintenance. The case study of an elite male who decorated his Roman Egyptian house in Amheida by the end of third century with Homeric mythological scenes reveals the particular strategies used by a wealthy individual to define his position within the imperial framework.

Fourth, the past living on in the form of materialised memories returns and is never completely gone. Weiss’s paper, which explores the landscapes of conflict and violence created in the 1990s Balkan wars, presents the immense power of mutilated landscape and how these are able to pull victims into a loop of reliving past atrocities. The author asks that a more equitable role for material evidence be given in relation to written documents and witness testimonies in international criminal tribunals, since “*there is a profound tenacity inherent in certain objects, markers and monuments in the landscape – a tenacity tending towards the continual recapitulation of the intentions and agendas of power*” (p. 192).

Fifth, similar to memory itself, archaeological objects, places and landscapes often convey traces of repetition/recapitulation. This is illustrated by two Meso/Neolithic contexts of the Danube gorges (Borić): in the case of Lepenski Vir, older, Early Mesolithic hearths were (partially) superimposed by later trapezoidal structures; while in the case of Vlasac, burials were superimposed at the same location for several generations. According to the author, both examples convey the principle of reproduction which enables the past to live on in disguised form in the present, yet, on the other hand, this brings with it – besides tradition – innovation and change.

Sixth, the nature of historical time is dissimilar to the nature of archaeological time: while the former consists of dates and chronologies which arrange singular events into a unilinear sequence, the latter represents the fusion of fragmented and materialised pasts and the present entwined in a continual dialogue. Gutteridge brilliantly illuminates this point by comparing the nature of archaeological narratives with the principle of spoliation: “*In archaeology, this*

spoliation, ... The repetitive rhythmic movement between the past and the present, the removal of individual instants from their embedded layers of context, the shuffling of our kaleidoscopic attempts to combine different pasts to speak to the present, and our refusal to let these fragments fall away silently from the future, all play a role in the ways in which we create and interpret our cacophonous spoliated memorials to the archaeological past” (p. 168).

These are the highlights of this book. Yet I would also like to point out to some of the difficulties that arise when the concept of memory is applied to archaeological discourse. The biggest hindrance stems from the fact that memory is primarily a psychological process and therefore difficult to trace in archaeological records. While the premise of memory embedded in materiality creates a bridge between the material and the immaterial, it does not necessarily help to recognise the fundamental distinctions between influence and memory or repetition/replication and continuity in the archaeological material itself. Indeed, dwellings were built on older dwellings; burials were reused or superimposed over older burials. Yet how can we penetrate behind the general statement that this was a meaningful reuse of space and grasp the actual meanings behind it? Even more so, since the psychological, social and cultural experience behind these acts belongs to a world and time of ‘others’. As exemplified by case studies of prehistoric burials (cf. Whittle, Borić, Jones, Hanks), a vast range of speculations and unknowns is involved in interpreting archaeological traces of past commemorative acts. It is not uncommon that authors adhere to very general statements: a long barrow in Southern Britain is seen as a “*loci of diverse remembrance*” (p. 43); a superposition of burials at the site of Vlasac “*evokes strict rules and closely-followed observances of the ‘ancestral’ ways*” (p. 64); in North-western Scotland “*the deposition of grave goods impress themselves upon memory*” (p. 114); in Iron Age Eurasia “*elaborate tombs, ... provided important physical contexts for both inscribed and embodied memory practices surrounding the lifestyle of the warrior*” (p. 134). This kind of ambiguity in formulations originates from the constraints of archaeological material that inhibit the recognition of a particular and intentional commemorative significance in preserved traces. What becomes obvious when reading through the book is that the concept of memory is used to much greater effect in the case studies of explicit intentionality of monumental public architecture, textual narratives (in this volume,

presented by studies of figurative depictions, digital archives and virtual museum) and our contemporary pasts which allow us to recognise our intense psychological, social and cultural engagement with them.

Archaeology and Memory contains a wealth of interesting case studies and ideas. While the theoretical

chapters (Borić, Buchli) are challenging, the book's subject matter and its interdisciplinary scope make reading highly rewarding. This book should be an indispensable read for anyone ready to expand the range of questions on the past and to reflect on the ethical responsibilities of archaeological narratives.

Paul G. Bahn (ed.)

An Enquiring Mind: Studies in Honor of Alexander Marshack. xix + 332 pages, 180 figures, 4 tables. 2010. Oxford [England]; Oakville [Conn.]: Oxbow Books; ISBN 978-1 84217-383-1 hardback.

This volume represents a tribute to Alexander Marshack – an eminent science journalist and photographer who came into the field of Palaeolithic research in 1963 at the age of forty-five as a self-taught outsider with the idea that “*certain marks, etched in patterns on bone, represented a calendrical system*” (p. 3). In the next forty years, Alexander Marshack contributed enormously to the field of Palaeolithic art research; particularly through his work on the cognitive abilities of early humans and themes such as notational systems, female imagery, finger flutings and net-like motifs, archaeo-astronomy, but also by introducing the new techniques of infrared, ultraviolet and fluorescence light into examining cave paintings.

In accordance with the various research interests of the late Alexander Marshack, twenty seven contributors in twenty two chapters elaborate on such diverse themes and topics as mnemonic systems, rituals, evolution and human cognition, and Palaeolithic art. Their expertise in various fields, ranging from archaeology, anthropology, ethnography, astronomy and economics, along with their personal acknowledgements of the inspiration of Marshack's work, testify to his great legacy. Although the papers in this volume are organised alphabetically, this short overview presents them in four sections as recognised by themes they share.

The first thematic section in the volume comprises two papers (Soffer, Tattersall) that seek to explore evolution and human cognition. Soffer, who is concerned with the ‘Neanderthal enigma’, argues against interpreting the Middle to Upper Palaeolithic transition as a revolution, and against the use of environmental determinism for the last Neanderthal niches, since “*it is not only Neolithic or Bronze Age “man” that made “himself” but so did “his and hers” Middle and Upper Paleolithic predecessors – creating*

both their cultures and biologies through day to day decisions and their intended and unintended consequences” (p. 303). If Soffer stresses as the principal element of modernity “*institutionalized interdependence – the various social ties that create permanent inter-sex bonds between adult individuals through such grouping principles as marriage, kinship, and descent ideologies*” (p. 290), Tattersall seeks to explore modernity through the advent of symbolic cognition in Homo sapiens. The author elaborates on the view that the symbolic intellect is “*the result of a qualitative rather than a quantitative revolution in hominid cognition: something equivalent in scale developmentally to the unanticipated and apparently abrupt appearance of the essentially modern hominid body skeleton much earlier in hominid evolution*” (p. 320–321).

Four papers in the volume (Aveni, Hudson, Krupp and Schmandt-Besserat) are concerned with mnemonic systems. While Hudson tracks the evolution of counting systems from the Palaeolithic to the earliest city-states and stresses the continuous importance of calendrical systems for social structures, Schmandt-Besserat compares and contrasts two major symbolic systems of art and writing to conclude that not only did “*The two communication systems had a different origin, history and evolution*” but also “*art became a universal phenomenon, writing remained the privilege of a few societies*” (p. 266). Aveni contributes to the topic by presenting a particular type of Mesoamerican petroglyph – pecked crosses, whose various uses were connected to celestial phenomena and calendars. A paper by Krupp, on the other hand, explores an ancient Greek constellation myth that captures the seasonality of the rains.

The third thematic section in the volume consists of two chapters (Frank, Lorblanchet) that are concerned with rituals. While Frank examines masked figu-

res visits in Europe during winter and links them to bear ceremonialism, Lorblanchet analyses various types of human traces in caves, some of which tend to imitate claw marks. The author interprets them as ritual remnants and “*evidence for ritual activity in the heart of the paleolithic sanctuaries*” (p. 165).

By far the most extensive section in the book comprises chapters examining Paleolithic and rock art. The contributors present diverse case studies, ranging from portable and parietal art from European and Near Eastern Paleolithic contexts (Belfer-Cohen & Bar-Yosef, Bosinski & Bosinski, Delluc & Delluc, d’Errico, Martin, Mussi, Otte, Pettitt & Bahn & Züchner, Sharpe & Van Gelder) to Altai Bronze age petroglyphs (Okladnikova) and Australian aboriginal rock art (Clegg). The paper by Belfer-Cohen and Bar-Yosef thus focuses on abstract and figurative art in the Near East which is dated to the late Pleistocene. The authors argue that some of the abstract Natufian markings, previously interpreted as decorations, might be notation marks, perhaps “*markers of specific groups*” (p. 32). While Bosinski and Bosinski analyse the representations of seals from the Magdalenian site of Gönnersdorf and interpret them as evidence of the long-range mobility of the group occupying a site 500 km away from the ocean, D’Errico re-examines plaquette 59 from the very same site with the oldest depiction of childbirth. The author draws attention to several new components of the engraved composition, most importantly to a third female figure. According to the author, the depiction of childbirth in an upright position assisted by other women indicates that “*relationships between women had attained a degree of complexity comparable to that of traditional societies in which these practices have been documented*” (p. 107). Delluc and Delluc examine a particular aspect of Paleolithic art – depictions of animal and human eyes to illuminate the mind of Palaeolithic artists. Otte, on the other hand, focuses on the semantic qualities of cave art by an interesting comparison of Paleolithic signs with modern road markings and graffiti. The author aims to penetrate the codified meanings of parietal art by, first, examining primary units or ‘morphemes’ consisting of “*drawings, outlines, colors and textures*” (p. 229) and, second, by analyzing complex compositions and their relationship with the space and

the viewer. While Martin publishes for the first time a detailed study of the engraved and carved block from the cave of Guoy, Mussi, on the other hand analyses the Upper Paleolithic Venus figurine of Macomer from Western Sardinia. Pettitt, Bahn and Züchner question the dating of Chauvet art to the Aurignacian and Gravettian periods as proposed by the Chauvet excavation team and convincingly argues on the basis of features, motifs and techniques ascribable to the later phases of the Upper Paleolithic, problems connected with the radiocarbon dates obtained, and the lack of parallels in the decorated caves of the region that “*while one cannot rule out the possibility of a limited amount of Aurignacian art in Chauvet, by far the greater amount of its parietal figures should be attributed to the Gravettian, Solutrean and Magdalenian*” (p. 257). Lastly, Sharpe and Van Gelder discuss various types of finger flutings – “*the lines that human fingers leave when drawn over a soft surface*” (p. 269) – which have been frequently overlooked in interpretations of Paleolithic art. By differentiating several forms of finger fluting on the basis of body movement and the number of fingers used, as documented in Rouffignac Cave, they open a new avenue for investigations of this particular type of sign.

I put this book down with mixed feelings. Reading through the collection of papers, I did not have the sense of a well integrated volume, primarily for two reasons: first, the quality of the papers varies (which is alluded to also by the editor; *cf.* p. x). Second, the alphabetical organisation of chapters enhances the sense of thematic incongruity. While it is not uncommon for Festschriften to compile heterogeneous themes, it is also common to present the personal recollections of an honoured scientist (in this volume Marshack, Lamberg-Karlovsky) and a complete bibliography of the person whom the book is honouring. Unfortunately, Marshack’s bibliography is missing from this volume. Nevertheless, several well-balanced, theoretically firmly grounded pieces made my reading enjoyable. In spite of the vast range of themes covered, I believe this is a book which will be read primarily by people working in the field of Paleolithic art.

Agni Prijatelj,
Durham University